Index

Align	Total Alignment of all J domains
Data	Calculations of residue conservation for total alignment
I	Alignment of Type I J domains
Data I	Calculations of residue conservation for Type I alignment
II	Alignment of Type II J domains
Data II	Calculations of residue conservation for Type II alignment
III	Alignment of Type III J domains
Data III	Calculations of residue conservation for Type III alignment
No HPD	Alignment of J domains without a HPD motif
Check	Confirmation of calculations of residue conservation
Consensus	Determination of consensus sequence
Graphs	Graphs generated by the data
Composition	Percentage composition of residues in the total alignment
AA comp	Amino acid composition of J domains
Prop	Relative amounts of amino acids at each position; 5 % cut off limit
Loop	Loop region length

Organism	Name	Type	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Acholeplasma	laidnaj	I	d	y	y	d	v	l	g	i	s	k	s	a	s	q	d
Actinobacillus	aDnaJ	I	d	y	y	e	l	l	g	i	s	r	s	a	d	e	k
Agrobacterium	tuAGR_C_1376	III								m	k	r	d	a	r	h	e
Agrobacterium	tuAGR_C_3642	III	d	p	y	v	l	l	g	v	e	r	d	a	d	e	a
Agrobacterium	tuAGR_L_2405	III	k	a	f	d	t	l	g	l	s	s	s	a	k	q	e
Agrobacterium	tuAGR_pAT_76	III	k	a	f	d	t	l	g	l	s	p	d	a	t	s	s
Agrobacterium	tuDjlA	III	d	p	y	r	v	l	g	v	s	p	s	d	d	f	l
Agrobacterium	tuDnaJ	I	d	f	y	e	t	l	g	v	s	k	t	a	d	e	k
Agrobacterium	tuDnaJ-like	III	d	p	y	s	i	l	g	v	k	r	d	a	r	h	e
Agrobacterium	tuDnaJ-like	III	k	a	f	d	t	l	g	l	s	p	d	a	t	s	s
Agrobacterium	tuDnaJ-like	III	k	a	f	d	t	l	g	l	s	s	s	a	k	q	e
Allium	porrum DnaJ	I										k	n	a	s	p	d
Allium	porrum LDJ2	I	k	y	y	e	v	l	g	v	s	k	n	a	t	p	e
Anabaena	sp. DnaJ1	II	d	y	y	e	i	l	g	v	t	k	d	a	t	n	e
Anabaena	variabiDnaJ	II	d	y	y	e	i	l	g	v	t	k	d	a	t	n	e
Anabaena	variabiDnaJ2	III	t	y	y	s	l	l	g	l	h	p	s	a	s	v	i
Anopheles	gambiaagCP10644	III	d	y	y	a	t	l	n	l	p	r	s	a	t	q	e
Anopheles	gambiaagCP11593	II	d	f	y	k	i	l	g	l	r	k	t	a	s	k	n
Anopheles	gambiaagCP11847	III	s	f	y	d	v	l	e	v	s	r	t	a	t	l	e
Anopheles	gambiaagCP12020	II	d	f	y	e	v	l	g	v	t	q	e	a	t	d	s
Anopheles	gambiaagCP12595	III	d	y	y	e	v	l	g	v	a	k	d	a	t	d	s
Anopheles	gambiaagCP13657	III	n	f	y	t	l	l	n	i	n	q	t	a	t	l	a
Anopheles	gambiaagCP13828	III	d	i	y	g	l	l	e	v	d	i	a	a	t	e	q
Anopheles	gambiaagCP1526	III	d	a	y	s	i	l	g	v	s	p	d	c	s	q	e
Anopheles	gambiaagCP1689	III	d	y	y	k	i	l	g	v	k	r	t	a	t	k	q
Anopheles	gambiaagCP2255	III	t	h	y	n	v	l	k	l	q	p	n	c	s	a	r
Anopheles	gambiaagCP2825	III	f	e	l	l	k	l	k	k	d	f	n	i	d	t	l
Anopheles	gambiaagCP3152	I	d	y	y	s	t	l	g	v	t	k	n	a	s	p	k
Anopheles	gambiaagCP3373	III	n	a	y	k	v	l	g	i	s	a	t	a	s	q	v
Anopheles	gambiaagCP3909	III	d	p	y	e	i	l	g	v	p	l	g	s	s	q	k
Anopheles	gambiaagCP3958	II	t	l	y	q	t	l	g	l	q	k	t	a	t	a	d
Anopheles	gambiaagCP4190	III	d	l	y	a	l	l	n	c	s	e	t	s	t	v	d
Anopheles	gambiaagCP4373	III	n	i	y	e	l	f	g	v	e	k	s	a	s	d	q
Anopheles	gambiaagCP4755	III	d	y	y	k	i	l	g	v	t	k	q	a	s	e	d
Anopheles	gambiaagCP5985	I	g	f	y	d	v	l	g	v	k	p	g	c	s	p	e
Anopheles	gambiaagCP6258	III	d	f	y	a	v	l	g	v	s	r	t	a	s	f	n
Anopheles	gambiaagCP6733	III	s	h	y	d	s	l	g	v	t	p	s	a	t	q	n
Anopheles	gambiaagCP6760	III	n	p	f	e	v	l	q	l	d	c	d	t	p	l	e
Anopheles	gambiaagCP7537	II	d	y	y	k	i	l	d	v	s	r	t	a	t	e	a
Anopheles	gambiaagCP7787	III	e	a	s	l	i	l	g	v	s	p	s	a	s	k	a
Anopheles	gambiaagCP8307	II	c	h	y	e	v	l	g	v	t	r	t	a	d	s	d
Anopheles	gambiaagCP8805	III	k	c	y	r	l	l	g	v	n	e	q	s	d	q	n
Anopheles	gambiaagCP8926	III	n	y	f	r	v	l	g	v	k	s	n	a	s	e	n
Anopheles	gambiaagCP9096	II	n	c	y	e	l	l	g	v	s	r	e	s	t	k	q
Anopheles	gambiaagCP9770	II															
Anopheles	gambiaebiP1755	III	d	p	y	s	i	l	g	v	h	k	r	a	s	m	q
Anopheles	gambiaebiP4417	III	d	l	d	f	d	v	s	k	n	p	h	p	e	e	s
Anopheles	gambiaebiP5528	III	a	k	w	t	k	c	e	m	h	q	l	v	s	a	a
Anopheles	gambiaebiP5613	III															k
Anopheles	gambiaebiP9397	III	h	v	l	g	l	n	k	m	r	f	t	a	t	d	e
Aquifex	aeolicusDnaJ	I	d	y	y	e	i	l	g	v	n	r	d	a	t	k	e
Aquifex	aeolicusDnaJ-2	I	d	y	y	e	i	l	g	v	p	r	n	a	s	q	e
Arabidopsis	thalARG1	III	d	p	y	e	v	l	c	v	s	k	d	a	n	d	q
Arabidopsis	thalAt1g02650	III	d	y	y	s	l	m	g	i	e	r	g	c	s	r	s
Arabidopsis	thalAt1g10350	III	d	y	y	n	v	l	k	v	n	r	n	a	n	e	d
Arabidopsis	thalAt1g16680	III	y	e	a	l	g	l	p	l	f	k	k	i	d	a	a
Arabidopsis	thalAt1g21080	III	e	f	y	d	v	l	g	v	s	p	t	a	t	e	a

Arabidopsis thalAt1g24120 III	d	p	y	e	v	l	g	v	l	r	n	s	t	d	q
Arabidopsis thalAt1g24120 III	y	e	a	l	g	l	p	l	f	k	k	i	d	a	a
Arabidopsis thalAt1g56300 III	s	y	y	t	i	l	g	i	r	k	d	a	s	v	s
Arabidopsis thalAt1g59725 III	d	y	y	n	v	l	n	v	n	p	s	a	t	e	d
Arabidopsis thalAt1g59725 III	s	y	y	t	i	l	g	i	r	k	d	a	s	v	s
Arabidopsis thalAt1g59980 III	n	p	y	e	v	l	g	i	p	s	n	s	t	d	q
Arabidopsis thalAt1g61770 III	d	c	y	a	l	l	g	v	a	q	d	a	n	a	s
Arabidopsis thalAt1g62970 III	d	y	y	n	v	l	n	v	n	p	s	a	t	e	d
Arabidopsis thalAt1g65280 III	s	p	y	d	v	l	g	v	n	h	n	m	a	a	d
Arabidopsis thalAt1g69070 III	g	l	g	i	q	v	g	g	g	i	s	p	l	p	n
Arabidopsis thalAt1g71000 III	t	y	y	e	i	l	g	v	a	v	d	s	s	a	e
Arabidopsis thalAt1g72070 III	s	h	y	t	v	l	g	l	t	p	l	a	s	q	t
Arabidopsis thalAt1g74250 II	c	h	y	e	v	l	g	i	s	k	e	s	s	p	d
Arabidopsis thalAt1g76700 II	e	y	y	d	v	l	g	v	s	p	t	a	t	e	s
Arabidopsis thalAt1g77020 II	v	y	y	d	v	l	g	v	t	p	s	a	s	m	e
Arabidopsis thalAt1g77930 III	s	p	y	d	t	l	e	l	d	r	n	a	e	e	e
Arabidopsis thalAt1g79030 III	y	e	a	l	g	v	p	r	h	k	k	i	d	a	a
Arabidopsis thalAt1g79940 III	d	p	f	s	i	l	g	l	e	p	g	v	t	d	s
Arabidopsis thalAt1g80030 I	d	y	y	a	t	l	g	v	s	k	s	a	n	n	k
Arabidopsis thalAt1g80920 III	d	p	y	k	t	l	k	i	r	p	d	s	s	e	y
Arabidopsis thalAt2g01710 III	i	l	q	i	e	d	l	t	e	s	s	t	d	n	d
Arabidopsis thalAt2g05230 III	d	y	y	a	v	l	g	l	k	p	s	a	g	k	r
Arabidopsis thalAt2g17880 III	s	l	y	e	i	l	e	i	p	v	g	s	t	s	q
Arabidopsis thalAt2g20560 II	d	y	y	k	v	l	q	v	d	r	s	a	s	d	d
Arabidopsis thalAt2g21510 II	e	y	y	e	i	l	g	v	k	t	d	a	s	d	a
Arabidopsis thalAt2g22360 III	d	y	y	s	v	l	g	v	s	k	n	a	t	k	a
Arabidopsis thalAt2g25560 III	d	h	y	g	v	l	g	l	n	p	e	a	d	d	e
Arabidopsis thalAt2g26890 III	e	i	s	n	i	s	k	q	i	q	n	l	d	e	e
Arabidopsis thalAt2g33735 III	d	h	y	k	v	l	e	l	n	c	d	a	s	d	d
Arabidopsis thalAt2g35540 III	e	w	y	k	v	l	k	v	e	p	f	s	h	i	n
Arabidopsis thalAt2g35720 III	e	l	y	a	l	l	n	l	s	p	e	a	s	d	e
Arabidopsis thalAt2g35795 III	e	a	a	l	i	l	g	v	r	e	s	v	a	a	e
Arabidopsis thalAt2g41000 III	d	h	y	q	v	l	g	v	t	r	n	a	t	k	k
Arabidopsis thalAt2g41520 III	d	f	f	l	i	m	g	v	k	t	s	d	s	a	a
Arabidopsis thalAt2g42080 III	r	q	a	l	g	l	s	p	s	g	p	l	n	l	k
Arabidopsis thalAt2g42750 III	d	y	y	a	v	l	g	l	l	p	d	a	t	q	e
Arabidopsis thalAt2g47440 III	d	y	y	g	l	i	g	v	r	r	g	c	t	r	s
Arabidopsis thalAt3g04980 III	d	w	y	g	v	l	q	v	q	p	y	a	d	a	d
Arabidopsis thalAt3g06340 III	d	w	y	g	i	l	q	v	e	q	i	a	n	d	v
Arabidopsis thalAt3g08910 II	d	y	y	k	v	l	q	v	d	r	n	a	k	d	d
Arabidopsis thalAt3g08970 II	d	p	y	k	v	l	g	v	s	k	d	a	k	q	r
Arabidopsis thalAt3g11450 III	a	l	l	g	l	s	n	l	r	y	l	a	t	e	d
Arabidopsis thalAt3g12170 III	n	l	y	e	v	l	g	v	e	a	t	a	s	p	q
Arabidopsis thalAt3g13310 III	s	l	y	e	l	l	k	v	n	e	t	a	s	l	t
Arabidopsis thalAt3g14200 III	n	l	y	a	v	l	g	l	k	k	e	c	s	k	t
Arabidopsis thalAt3g17830 I	d	h	y	s	t	l	n	v	n	r	n	a	t	l	q
Arabidopsis thalAt3g47940 III	d	y	y	n	i	l	k	v	n	h	n	a	t	e	d
Arabidopsis thalAt3g57340 II	d	y	y	e	i	l	g	l	e	s	n	c	s	v	d
Arabidopsis thalAt3g58020 III	r	q	t	l	g	l	s	s	s	g	p	l	n	l	e
Arabidopsis thalAt3g62190 III	k	i	l	l	g	f	p	p	n	s	r	p	d	p	s
Arabidopsis thalAt3g62570 III	d	y	y	g	l	v	g	v	r	r	g	c	t	r	s
Arabidopsis thalAt3g62600 II	s	y	y	d	v	l	q	v	p	k	g	a	s	d	e
Arabidopsis thalAt4g02100 III	d	y	y	a	l	m	g	i	r	r	d	c	s	r	s
Arabidopsis thalAt4g07990 III	v	l	g	l	s	r	s	r	a	t	p	y	t	e	a
Arabidopsis thalAt4g09350 III	s	h	y	q	f	l	g	v	s	t	d	a	d	l	e
Arabidopsis thalAt4g10130 III	t	y	y	e	i	l	s	v	k	e	d	a	s	y	e
Arabidopsis thalAT4g13830 III	s	f	y	d	l	l	g	v	t	e	s	v	t	l	p
Arabidopsis thalAt4g19580 III	d	w	y	g	i	l	g	i	d	p	l	a	d	e	e

Arabidopsis thalAt4g19590	III	d	w	y	g	i	l	g	v	d	p	l	a	d	e	e
Arabidopsis thalAT4g21180	III	e	p	f	g	i	l	g	l	e	p	g	a	s	d	s
Arabidopsis thalAT4g28480	II	d	y	y	k	v	l	q	v	d	r	s	a	n	d	d
Arabidopsis thalAt4g36040	III	s	l	y	d	v	l	e	v	p	l	g	a	t	s	q
Arabidopsis thalAt4g37480	III	n	a	y	d	i	l	n	v	s	e	t	s	s	i	a
Arabidopsis thalAt4g39150	II	e	y	y	d	i	l	g	v	k	i	d	a	s	g	a
Arabidopsis thalAT4g39960	I	d	f	y	s	v	l	g	v	s	k	n	a	t	k	a
Arabidopsis thalAt5g01390	II	d	f	y	k	v	l	e	v	d	r	s	a	n	d	d
Arabidopsis thalAt5g03160	III	d	w	y	k	i	l	g	i	s	r	t	a	s	i	s
Arabidopsis thalAt5g05750	III	d	y	y	e	i	l	g	l	k	s	n	c	s	v	e
Arabidopsis thalAt5g06110	III	a	l	l	g	l	g	n	l	r	y	l	a	t	d	d
Arabidopsis thalAt5g06410	III	f	q	i	f	g	l	e	k	k	y	e	i	d	p	g
Arabidopsis thalAt5g09540	III	w	y	a	v	l	r	i	s	r	l	t	q	s	p	e
Arabidopsis thalAt5g12430	III	d	m	y	l	v	l	g	v	v	p	s	c	s	a	s
Arabidopsis thalAt5g16650	III	d	y	y	k	i	l	e	v	d	y	d	a	t	e	e
Arabidopsis thalAt5g18140	III	n	h	y	a	v	l	g	i	a	r	n	a	t	q	g
Arabidopsis thalAt5g18750	III	d	w	y	k	i	l	q	v	e	q	t	a	d	e	n
Arabidopsis thalAt5g22080	III	n	p	f	e	h	l	n	l	s	f	d	s	s	t	d
Arabidopsis thalAt5g23240	III	d	l	y	d	l	l	g	i	d	r	s	s	d	k	s
Arabidopsis thalAt5g23590	III	l	g	l	a	s	g	e	e	a	l	k	l	t	e	k
Arabidopsis thalAt5g25530	III	d	y	y	d	i	l	k	v	n	r	n	a	t	e	d
Arabidopsis thalAt5g27240	III	n	w	y	g	i	l	q	v	m	h	f	a	d	d	a
Arabidopsis thalAT5g37380	III	d	w	y	g	i	l	n	a	s	p	r	d	d	d	e
Arabidopsis thalAt5g37440	III	d	w	y	g	v	l	g	v	d	p	l	s	d	d	e
Arabidopsis thalAt5g37760	III	l	y	p	k	l	d	g	l	k	t	s	v	d	d	d
Arabidopsis thalAt5g48030	I	d	y	y	s	v	l	g	v	s	k	n	a	q	e	g
Arabidopsis thalAt5g49060	III	d	y	y	a	i	l	g	l	e	k	n	c	s	v	d
Arabidopsis thalAt5g49580	III	y	s	a	l	g	l	a	r	y	g	n	v	d	m	a
Arabidopsis thalAt5g53150	III	d	w	y	g	v	l	g	v	d	p	f	a	s	d	e
Arabidopsis thalAt5g59610	III	s	p	y	e	i	l	g	v	s	p	s	a	t	p	q
Arabidopsis thalAt5g62780	III	d	w	y	g	i	l	g	v	d	p	l	a	d	d	e
Arabidopsis thalAt5g64360	III	d	w	y	a	v	l	r	l	g	r	l	a	q	n	p
Arabidopsis thalATJ1	I	n	y	y	d	v	l	g	v	s	p	k	a	t	r	e
Arabidopsis thalATJ2	I	k	f	y	e	i	l	g	v	p	k	t	a	a	p	e
Arabidopsis thalATJ3	I	k	f	y	e	i	l	g	v	p	k	s	a	s	p	e
Arabidopsis thalATJ6	III	s	l	y	e	v	l	g	v	e	r	r	a	t	s	q
Arabidopsis thalAuxilin-li	III	c	g	w	e	a	v	s	i	t	d	l	i	t	s	s
Arabidopsis thalF16P17.12	III	d	w	y	a	v	l	r	l	v	r	l	t	h	n	p
Arabidopsis thalF18B13.2	III	d	p	f	s	i	l	g	l	e	p	g	v	t	d	s
Arabidopsis thalF19K19.3	III	y	e	a	l	g	l	p	l	f	k	k	i	d	a	a
Arabidopsis thalF22K20.12	III	v	y	y	d	v	l	g	v	t	p	s	a	s	e	e
Arabidopsis thalF24J7.130	III	d	w	y	r	v	l	g	v	d	p	l	a	d	d	e
Arabidopsis thalJ8	III	d	p	y	k	t	l	k	i	r	p	d	s	s	e	y
Arabidopsis thalMDN11.11	II	d	y	y	s	v	l	g	v	s	k	n	a	q	e	g
Arabidopsis thalMQB2.10	III	d	w	y	g	i	l	g	v	d	p	l	a	d	d	e
Arabidopsis thalPutative 2	III	s	y	y	t	v	l	g	i	r	k	d	a	s	v	s
Arabidopsis thalYUP8H12R.3	III	y	e	a	l	g	v	p	r	h	k	k	i	d	a	a
Aspergillus fumiJ domain c	III	f	l	y	a	v	l	d	l	q	p	g	v	p	e	s
Atriplex nummulaANJ1	I	r	y	y	e	i	l	g	v	p	k	d	a	s	p	e
Azotobacter vineHscB	III	f	a	l	f	d	l	e	p	d	f	r	l	d	q	d
Babesia bovis DnaJ	I	k	f	y	k	v	l	g	l	s	r	d	c	s	e	s
Bacillus anthracDnaJ	I	d	y	y	e	v	l	g	l	s	k	g	a	s	k	d
Bacillus halodurDnaJ	I	d	y	y	e	v	l	g	v	d	r	n	a	s	a	d
Bacillus sphaeriDnaJ	I	d	y	y	e	v	l	g	l	t	k	d	e	i	k	k
Bacillus stearotDnaJ	I	d	y	y	e	i	l	g	v	s	k	n	a	t	k	e
Bacillus subtiliDnaJ	I	d	y	y	e	v	l	g	v	s	k	s	a	s	k	d
Bacillus thermogDnaJ	I	d	y	y	e	i	l	g	v	s	k	n	a	t	k	e
BK virus Large T an	III	m	d	l	l	g	l	e	r	a	a	w	g	n	l	p

BK virus	Small T an	III	m	d	l	l	g	l	e	r	a	a	w	g	n	l	p
Bombyx mori	JDP	III	d	y	y	a	l	l	g	c	d	e	n	s	t	v	e
Borrelia burgdor	BB0602	III	n	p	y	s	v	l	g	l	t	y	s	a	s	d	d
Borrelia burgdor	DnaJ	I	d	y	y	e	i	l	g	l	s	k	g	a	s	k	d
Borrelia burgdor	DnaJ-2	III	d	y	y	n	i	l	g	i	q	k	n	a	s	n	e
Bos taurus	Auxilin	III	t	k	w	k	p	v	g	m	a	d	l	v	t	p	e
Bos taurus	DnaJ1	III	n	p	f	h	v	l	g	v	e	a	t	a	s	d	v
Bos taurus	Jdp1	III	d	y	y	t	l	l	g	c	d	e	l	s	s	v	e
Bos taurus	MRJ	III	d	y	y	e	v	l	g	v	q	r	h	a	s	a	e
Bos taurus	CSP1	III	s	l	y	h	v	l	g	l	d	k	n	a	t	s	d
Bos taurus	CSP2	III	s	l	y	h	v	l	g	l	d	k	n	a	t	s	d
Bos taurus	PKR inhibi	III	d	y	y	k	i	l	g	v	k	r	n	a	k	k	q
Bovine polyomavi	T antigen	III	e	l	r	g	l	l	g	t	p	d	i	g	n	a	d
Bradyrhizobium j	ID370	III	k	a	l	q	v	m	g	l	n	v	d	a	t	l	g
Bradyrhizobium j	DnaJ	I	c	y	y	e	t	l	e	v	e	r	d	a	d	e	s
Brassica rapa	SP5	III	y	e	a	l	g	f	p	r	h	k	r	i	d	d	a
Brevibacillus ch	DnaJ	I	d	y	y	e	v	l	g	v	g	k	g	a	d	a	d
Brucella melitens	CbpA	II	d	p	y	s	v	l	g	v	a	k	t	a	k	p	e
Brucella melitens	DJLA	III	d	p	y	a	i	l	g	i	d	r	g	a	s	f	e
Brucella melitens	DnaJ	I	d	y	y	e	a	l	g	v	t	r	t	a	d	d	k
Brucella melitens	DnaJ-like	III	k	a	l	a	t	l	g	l	d	a	n	s	t	g	d
Brucella ovis	DnaJ	I	d	y	y	e	a	l	g	v	t	r	t	a	d	d	k
Buchnera	DnaJ	I	d	y	y	q	i	l	g	i	p	k	s	a	e	e	r
Buchnera aphidic	HscB	III	f	a	l	f	n	l	p	k	k	y	i	i	d	k	f
Buchnera aphidic	HscB homol	III	f	t	l	f	d	l	p	r	k	f	n	i	d	k	k
Buchnera aphidic	DnaJ	I	d	y	y	q	i	l	g	i	p	k	s	a	e	e	r
Budgerigar fledg	large T an	III	r	l	t	e	l	l	c	l	p	v	t	a	t	a	a
Budgerigar fledg	Small T an	III	r	l	t	e	l	l	c	l	p	v	t	a	t	a	a
Budgerigar fledg	Large T an	III	r	l	t	e	l	l	g	l	p	v	t	a	t	a	a
Caenorhabditis e	C01G10.12	III	n	y	y	e	i	i	g	v	s	a	s	a	t	r	q
Caenorhabditis e	C04A2.7	III	d	a	y	s	v	f	g	l	r	s	d	c	s	d	d
Caenorhabditis e	C25D7.10	III	n	y	y	e	i	i	g	v	s	a	s	a	t	r	q
Caenorhabditis e	DNJ-11	III	k	v	l	g	l	s	k	l	r	w	q	a	t	s	d
Caenorhabditis e	DNJ-15	III															m
Caenorhabditis e	DNJ-2	III	c	y	d	v	l	e	v	n	r	e	e	f	d	k	q
Caenorhabditis e	DNJ-21	III	e	a	a	k	i	l	g	v	a	p	s	a	k	p	a
Caenorhabditis e	DNJ-22	III	n	p	y	k	i	l	h	l	e	k	g	c	t	d	k
Caenorhabditis e	DNJ-24	III	y	f	p	i	y	f	f	v	l	p	a	l	e	t	l
Caenorhabditis e	DNJ-4	III	t	h	y	e	v	l	g	v	e	s	t	a	t	l	s
Caenorhabditis e	DNJ-8	III	k	p	s	d	i	k	k	r	k	p	k	a	n	d	v
Caenorhabditis e	RME-8	III	i	l	s	v	d	l	t	n	e	e	h	r	k	p	a
Caenorhabditis e	Y39C12A.8	III	d	f	y	k	i	l	n	v	d	k	k	a	s	p	d
Caenorhabditis e	Y63D3A.6a	III	d	p	y	q	i	l	g	l	d	q	g	a	d	e	k
Caenorhabditis e	Y63D3A.6b	III	d	p	y	q	i	l	g	l	d	q	g	a	d	e	k
Caenorhabditis e	B0035.14	III	d	y	y	e	i	l	k	i	d	k	k	a	s	d	d
Caenorhabditis e	C24G6.5	I	t	l	y	t	t	l	n	v	r	p	d	a	s	q	a
Caenorhabditis e	C55B6.2	III	d	y	y	k	i	l	g	v	k	r	n	a	s	k	r
Caenorhabditis e	C56C10.11	III	d	p	y	k	v	l	g	i	s	r	r	a	s	a	k
Caenorhabditis e	F11G11.7	III	d	f	y	a	i	l	n	v	p	k	d	a	t	d	d
Caenorhabditis e	F22B7.5	I	d	y	y	k	t	l	g	v	d	k	k	s	d	a	k
Caenorhabditis e	F39B2.10	I	g	y	y	d	v	l	g	v	k	p	d	a	s	d	n
Caenorhabditis e	F54D5.8	II	d	y	y	k	v	l	g	i	s	k	g	a	t	d	d
Caenorhabditis e	K02G10.8	III	h	l	y	n	v	l	g	i	q	k	n	a	t	d	d
Caenorhabditis e	R74.4	III	d	f	y	q	l	l	g	v	e	k	m	a	s	e	a
Caenorhabditis e	T03F6.2	III	c	h	y	e	v	l	e	v	e	r	d	a	d	d	d
Caenorhabditis e	T04A8.9	III	d	h	y	k	v	l	g	l	a	q	s	a	s	q	k
Caenorhabditis e	T05C3.5	II	t	l	y	t	t	l	n	v	r	p	d	a	s	q	a
Caenorhabditis e	T15H9.1	II	d	f	y	k	i	l	g	v	a	k	n	a	n	a	n

Caenorhabditis eT24H10.3	III	c	l	y	e	l	l	g	v	k	k	d	c	d	e	k
Caenorhabditis eY47H9C.5	III	d	y	y	e	l	l	g	v	e	r	d	a	d	d	r
Caenorhabditis eY54E10BL.4	III	d	y	y	k	i	l	g	v	r	r	n	a	n	k	r
Campylobacter jeCj1034c	III	n	y	f	n	t	l	e	c	t	p	q	n	d	l	s
Campylobacter jeCbpA	II	s	l	y	e	t	l	g	v	s	k	n	a	s	a	d
Campylobacter jeDjlA	III	e	a	f	a	i	l	e	l	p	n	n	a	d	l	n
Campylobacter jeDnaJ	I	s	y	y	e	i	l	e	i	t	q	n	a	d	k	e
Caulobacter cresCC0917	III	a	a	r	a	l	l	g	v	a	a	d	a	d	e	r
Caulobacter cresCC2164	III	e	a	r	a	i	l	g	v	g	p	e	a	s	l	a
Caulobacter cresCC2772	II	d	p	y	q	e	l	g	v	t	r	t	a	s	a	d
Caulobacter cresDjlA	III	d	p	y	a	i	l	e	v	p	p	d	a	d	d	a
Caulobacter cresDnaJ	I	d	y	y	e	i	l	g	v	t	r	t	i	d	e	a
Cercopithecus aeDJ2	I	t	y	y	d	v	l	g	v	k	p	n	a	t	q	e
Chlamydia muridaDnaJ	I	d	y	y	t	i	l	g	v	a	k	t	a	t	p	e
Chlamydia trachoDnaJ	I	d	y	y	t	i	l	g	v	a	k	t	a	t	p	e
Chlamydophila pnDnaJ	I	d	y	y	s	i	l	g	i	s	k	t	a	s	a	e
Chlorobium tepidDnaJ	I	d	y	y	e	i	l	g	v	a	r	s	a	d	k	d
Ciona intestinalHsp40	II	d	y	y	a	i	l	g	l	t	r	n	a	t	d	a
Clostridium acetDnaJ-like	III	n	p	y	k	v	l	g	l	n	e	n	a	s	p	d
Clostridium acetDnaJ	I	d	y	y	e	v	l	g	l	e	k	g	a	s	d	d
Clostridium perfCPE0218	III	d	y	y	e	i	l	g	v	s	e	g	a	s	k	e
Clostridium perfCPE0246	III	d	y	f	k	e	l	n	i	q	i	d	a	s	d	n
Clostridium perfDnaJ	I	d	y	y	e	v	l	g	l	q	k	g	a	s	d	d
Corynebacterium DnaJ	I	d	y	y	g	i	l	g	v	d	r	n	a	t	e	s
Corynebacterium DnaJ-2	I	n	y	y	a	d	l	g	v	s	s	s	a	s	e	d
Coxiella burnetiDjlA	III	d	a	y	k	v	l	g	l	t	s	a	a	t	d	s
Coxiella burnetiDnaJ	I	d	y	y	e	v	l	g	v	n	l	n	a	t	e	a
Cryptococcus curSIS1	II	e	y	y	k	t	l	g	l	s	k	d	a	s	e	a
Cryptosporidium DnaJ-like	III	n	a	y	e	v	i	g	i	p	v	d	s	d	d	s
Cucumis sativus DnaJ-1	I	k	y	y	e	i	l	g	v	s	k	n	a	s	q	d
Danio rerio PRKRI	III	d	y	y	k	i	l	g	v	s	r	s	a	n	k	q
Daucus carota DnaJ	I	k	y	y	e	i	l	g	v	p	k	t	a	s	p	d
Deinococcus protDnaJ	II	d	y	y	e	v	l	g	v	s	r	s	a	s	d	s
Deinococcus radiDnaJ	I	d	y	y	e	l	l	g	v	s	r	t	a	s	a	d
Dictyostelium diDDJ1	I	k	f	y	d	i	l	g	v	a	r	d	a	s	e	t
Drosophila heterTPR	III	d	y	y	k	i	l	g	v	s	r	r	a	t	e	d
Drosophila melanAuxilin	III	a	k	w	q	r	c	e	m	s	t	m	v	t	p	t
Drosophila melanAuxilin 2	III	a	k	w	q	r	c	e	m	s	t	m	v	t	p	t
Drosophila melanCG10375	III	n	p	f	e	v	l	q	i	e	p	e	v	e	l	a
Drosophila melanCG12020	III	t	r	f	c	f	k	e	e	g	d	r	y	p	a	t
Drosophila melanCG13776	III	e	c	f	r	i	l	g	v	h	e	s	a	d	q	n
Drosophila melanCG2790	III	c	y	y	e	e	l	e	l	q	r	n	a	n	d	g
Drosophila melanCG2911	III	d	f	y	e	l	l	n	v	p	s	t	a	s	f	d
Drosophila melanCG30156	III	n	h	y	e	v	l	r	i	s	h	h	a	t	y	s
Drosophila melanCG7394	III	e	a	s	l	i	l	g	v	s	p	s	a	s	k	i
Drosophila melanCG8014	III	e	r	q	r	f	g	k	f	s	g	d	q	f	q	t
Drosophila melanCG8476	III	n	h	y	q	v	l	n	v	p	v	g	s	s	d	r
Drosophila melanCG8531	III	n	y	y	t	f	l	n	l	p	r	d	a	t	a	e
Drosophila melanCG9089	III	n	s	y	k	v	l	g	v	s	a	t	a	s	q	a
Drosophila melanDnaJ-60	III	t	h	y	e	v	l	n	i	r	n	d	c	s	t	r
Drosophila melanGH27269p	III	d	a	y	s	i	l	g	v	p	p	d	s	s	q	e
Drosophila melanMTJ1 homol	III	a	v	l	g	l	g	k	l	r	y	e	a	s	e	d
Drosophila melanSD10289p	I	d	y	y	a	t	l	g	v	a	k	n	a	n	g	k
Drosophila melanCG11035	III	s	h	y	d	a	l	g	i	r	r	q	c	t	q	n
Drosophila melanCG14650	III	d	a	y	s	i	l	g	v	p	p	d	s	s	q	e
Drosophila melanCG17187	III		l	y	d	l	l	g	i	s	l	e	s	d	q	n
Drosophila melanCG2887	II	d	y	y	k	i	l	g	i	q	r	t	a	n	d	g
Drosophila melanCG3061	III	d	y	y	e	v	l	g	v	s	k	t	a	t	d	s

Drosophila melanCG4164	II	d	f	y	k	i	l	n	v	k	k	n	a	n	t	n
Drosophila melanCG5001	III	d	y	y	k	i	l	g	l	p	k	t	a	t	d	d
Drosophila melanCG6693	III	d	v	y	k	l	m	e	l	a	r	g	a	g	e	k
Drosophila melanCG7130	III	d	y	y	k	i	l	g	i	e	r	n	a	s	s	e
Drosophila melanCG7133	II	d	h	y	q	v	l	g	l	p	r	n	a	t	d	s
Drosophila melanCG7387	III	y	y	y	k	v	l	g	v	n	r	h	a	t	i	q
Drosophila melanCG7556	III	n	f	y	e	f	m	g	i	n	q	t	a	t	g	a
Drosophila melanCG7872	III	n	c	y	d	v	l	g	v	t	r	e	s	s	k	s
Drosophila melanCG8286	III	d	y	y	k	i	l	g	v	k	r	s	a	s	k	q
Drosophila melanCG8583	III	d	p	f	e	i	l	n	v	p	p	t	s	s	q	a
Drosophila melanCG8863	I	g	y	y	d	i	l	g	v	k	p	n	a	t	p	d
Drosophila melanCG9828	III	n	l	y	d	v	l	k	v	a	p	d	a	t	d	e
Drosophila melanCSP1	III	s	l	y	e	i	l	g	l	p	k	t	a	t	g	d
Drosophila melanCSP2	III	s	l	y	e	i	l	g	l	p	k	t	a	t	g	d
Drosophila melanCSP3/ Csp2	III	s	l	y	e	i	l	g	l	p	k	t	a	t	g	d
Drosophila melanCsp32	III	s	l	y	e	i	l	g	l	p	k	t	a	t	g	d
Drosophila melandJDPa	III	d	f	y	g	l	l	h	c	d	e	n	s	s	p	e
Drosophila melandJDPb	III	d	f	y	g	l	l	h	c	d	e	n	s	s	p	e
Drosophila melanDnaJ-1 / DI	I	d	f	y	k	i	l	g	l	e	r	k	a	s	d	d
Drosophila melanGH03108	III	c	y	y	e	e	l	e	l	q	r	n	a	n	d	g
Drosophila melanTid1	I	d	y	y	a	t	l	g	v	a	k	n	a	n	g	k
Drosophila melanTid56	I	d	y	y	a	t	l	g	v	a	k	n	a	n	g	k
Drosophila melanTpr2	III	d	y	y	k	i	l	g	i	g	r	n	a	s	d	d
Ectocarpus silicDnaJ	I				e	f	l	g	v	d	a	g	a	g	d	e
Encephalitozoon DnaJ-like	III	d	y	y	g	i	l	g	v	s	r	n	a	s	q	t
Encephalitozoon DnaJ-like	III	d	p	y	n	i	l	g	v	k	r	t	s	t	d	v
Encephalitozoon DnaJ-like	III	y	k	l	l	g	f	k	e	g	e	k	p	d	e	k
Encephalitozoon DnaJ-like	III	s	i	f	n	l	l	g	l	k	k	g	a	s	k	g
Encephalitozoon DnaJ-like	III	m	s	l	y	d	v	l	k	i	p	k	d	a	t	k
Encephalitozoon DnaJ-like	III	g	y	y	k	v	l	e	l	s	p	g	a	s	v	a
Encephalitozoon DnaJ-like	III	s	p	h	e	v	l	g	l	s	p	v	s	t	r	k
Encephalitozoon Sec63-like	III	d	p	l	e	v	l	g	i	d	q	d	t	g	e	r
Enterococcus faeEF0028	III					m	k	f	i	k	d	v	t	t	l	e
Entosiphon sulcaDnaJ	II	c	h	y	t	t	l	g	i	a	k	s	a	q	a	k
Erysipelothrix rDnaJ	I	d	f	y	e	i	l	g	v	s	k	s	a	t	d	a
Escherichia coliHscB	III	f	t	l	f	g	l	p	a	r	y	q	l	d	t	q
Escherichia coliCbpA	II	d	y	y	a	i	m	g	v	k	p	t	d	d	l	k
Escherichia coliDjlA	III	d	a	c	n	v	l	g	v	k	p	t	d	d	a	t
Escherichia coliDnaJ	*I*	*d*	*y*	***y***	*e*	*i*	***l***	*g*	*v*	*s*	*k*	*t*	***a***	*e*	*e*	*r*
Escherichia coliYbeS	III	n	c	w	k	i	l	d	i	e	e	t	t	d	v	d
Escherichia coliYbeV	III	t	c	w	q	i	l	e	i	e	s	t	t	q	i	d
Euphorbia esula DnaJ	I	k	y	y	e	i	l	g	v	s	k	s	a	s	q	d
Francisella tulaDnaJ	I	c	y	y	e	i	l	n	i	s	k	t	a	s	g	v
Fusobacterium nuDnaJ	I	d	y	y	e	v	l	g	i	d	k	s	a	s	e	n
Fusobacterium nuTPR1	III	k	y	y	s	i	l	g	v	s	r	g	a	s	q	d
Geodia cydonium DnaJ	I	d	l	y	e	v	l	e	l	p	k	g	a	s	f	s
Giardia intestinDnaJ	I	e	f	y	d	l	l	g	v	s	p	s	a	d	p	q
Glycine max PM37	I	r	y	y	e	i	l	g	v	s	k	n	a	s	q	d
Haemophilus ducrDnaJ	I	d	y	y	e	v	l	g	l	q	k	g	a	t	e	k
Haemophilus inflHscB	III	f	q	i	f	d	l	p	v	d	f	q	l	d	e	k
Haemophilus inflTransketol	III	k	s	g	s	h	d	s	h	g	a	p	l	g	d	e
Haemophilus inflDjlA	III	d	a	y	k	v	l	g	v	t	e	s	d	e	q	s
Haemophilus inflDnaJ	I	d	y	y	e	v	l	g	l	q	k	g	a	s	e	d
Haemophilus inflBpl34	III	e	a	l	n	l	l	n	i	s	d	k	a	t	k	e
Halobacterium saDnaJ	I	d	f	y	d	v	l	g	v	s	r	d	a	t	e	d
Halobacterium spDnaJ	I	d	f	y	d	v	l	g	v	s	r	d	a	t	e	d
Halobacterium spFerredoxin	III	s	p	f	e	v	l	g	v	s	p	d	a	d	e	a
Halobacterium spVng1675h	III	s	d	y	r	v	l	d	l	e	p	g	a	d	e	e

Haloferax mediteHsp40	I	d	f	y	d	v	l	g	v	s	r	d	a	s	k	d
Hamster papovaviMiddle T a	III	i	s	l	l	d	l	e	p	q	y	w	g	d	y	g
Hamster papovaviSmall T an	III	i	s	l	l	d	l	e	p	q	y	w	g	d	y	g
Hamster polyomavLarge T an	III	i	s	l	l	d	l	e	p	q	y	w	g	d	y	g
Helicobacter pylCbpA	II	s	l	y	q	t	l	n	v	s	e	n	a	s	q	d
Helicobacter pylDnaJ	I	s	y	y	e	i	l	e	v	e	k	h	s	n	q	e
Helicobacter pylDnaJ2	II	s	l	y	q	t	l	n	v	s	e	n	a	s	q	d
Helicobacter pylJHP1255	III	e	c	y	k	a	l	g	f	i	k	h	e	n	f	s
Hevea brasiliensDnaJ	I	k	y	y	e	i	l	g	v	s	k	n	a	s	q	d
Homo sapiens adlican	III	e	v	f	l	k	t	k	d	d	a	i	n	g	d	k
Homo sapiens C21orf55	III	e	y	y	r	l	l	n	v	e	e	g	c	s	a	d
Homo sapiens cytokine i	III	n	p	f	h	v	l	g	v	e	a	t	a	s	d	v
Homo sapiens dJ1099D15.	III	w	l	y	w	v	l	g	v	q	r	e	a	s	d	g
Homo sapiens DKFZp434M1	III															
Homo sapiens DnaJA1-lik	III	f	c	y	a	l	g	v	k	l	n	a	a	q	k	y
Homo sapiens DnaJB12-li	III	d	y	y	e	i	l	e	v	r	r	g	a	s	d	e
Homo sapiens DnaJB3-lik	II	d	y	y	e	v	l	d	v	p	r	q	a	s	s	e
Homo sapiens DnaJB8-lik	II	n	y	y	e	v	l	g	v	q	a	s	a	s	p	e
Homo sapiens DnaJB9	III	s	y	y	d	i	l	g	v	p	k	s	a	s	e	r
Homo sapiens DnaJC6	III	t	k	w	k	p	v	g	m	a	d	l	v	t	p	e
Homo sapiens DnaJC8-lik	II	n	p	f	e	v	l	q	i	d	p	e	v	t	d	e
Homo sapiens DnaJL1	III	n	f	y	q	f	l	g	v	q	q	d	a	s	s	a
Homo sapiens FLJ13236	III	l	a	y	q	v	l	g	l	s	e	g	a	t	n	e
Homo sapiens Gamma CSP	III															
Homo sapiens guanine nu	III	d	c	y	e	v	l	g	v	s	r	s	a	g	k	a
Homo sapiens Hsc3	III	d	y	y	e	v	l	g	l	q	r	y	a	s	p	e
Homo sapiens HsGAK	III	s	r	w	t	p	v	g	m	a	d	l	v	a	p	e
Homo sapiens Hspf2	III									m	g	p	g	e	g	q
Homo sapiens Jdp1	III	d	y	y	t	l	l	g	c	d	e	l	s	s	v	e
Homo sapiens KIAA0678	III	e	v	l	n	l	p	q	g	q	g	p	h	d	e	s
Homo sapiens KIAA0962	III	d	p	y	r	v	l	g	v	s	r	t	a	s	q	a
Homo sapiens KIAA1530	III	r	l	r	q	a	t	t	r	a	v	e	g	w	n	e
Homo sapiens LOC120526	III	d	w	y	s	i	l	g	a	d	p	s	a	n	i	s
Homo sapiens LOC127784	III	d	y	y	e	i	l	g	v	w	r	e	a	s	p	e
Homo sapiens LOC130410	III	l	n	d	r	a	l	w	v	k	q	s	t	t	k	e
Homo sapiens LOC131118	III	e	a	a	l	i	l	g	v	s	p	t	a	n	k	g
Homo sapiens LOC134218	III	c	h	y	e	a	l	g	v	r	r	d	a	s	e	e
Homo sapiens MCJ	III	e	a	g	l	i	l	g	v	s	p	s	a	g	k	a
Homo sapiens MDG1-like	III															
Homo sapiens MGC29463	III	n	y	y	e	i	l	g	v	s	r	d	a	s	d	e
Homo sapiens MIDA1-like	III	a	v	l	g	l	g	h	v	r	y	k	a	t	q	r
Homo sapiens Putative 2	III															
Homo sapiens Rap1	III	d	s	w	d	m	l	g	v	k	p	g	a	s	r	d
Homo sapiens Sacsin	III	e	v	t	s	v	v	e	q	a	w	k	l	p	e	s
Homo sapiens SB73	III	d	l	y	r	v	l	g	v	r	r	e	a	s	d	g
Homo sapiens Sec63	III	n	p	y	e	v	l	n	l	d	p	g	a	t	v	a
Homo sapiens TPR2	III	d	y	y	k	i	l	g	v	d	n	n	a	s	e	d
Homo sapiens TPR2-like	III	w	g	h	l	r	e	g	n	d	k	n	a	s	e	d
Homo sapiens WBSCR18	III	a	l	y	d	l	l	g	v	p	s	t	a	t	q	a
Homo sapiens Zrf1	III	a	v	l	g	l	g	h	v	r	y	k	a	t	q	r
Homo sapiens ZRF1-like	III	a	v	l	g	l	g	h	v	r	y	k	a	t	q	r
Homo sapiens CSP1	III	s	l	y	h	v	l	g	l	d	k	n	a	t	s	d
Homo sapiens CSP2	III	s	l	y	h	v	l	g	l	d	k	n	a	t	s	d
Homo sapiens CSP-beta	III	a	l	y	e	i	l	g	l	h	k	g	a	s	n	e
Homo sapiens DnaJA1	I	t	y	y	d	v	l	g	v	k	p	n	a	t	q	e
Homo sapiens DnaJA2	I	k	l	y	d	i	l	g	v	p	p	g	a	s	e	n
Homo sapiens DnaJA3	I	d	y	y	q	i	l	g	v	p	r	n	a	s	q	k
Homo sapiens DnaJB11	II	d	f	y	k	i	l	g	v	p	r	s	a	s	i	k

Homo sapiens	DnaJB12	III	d	y	y	e	i	l	g	v	s	r	g	a	s	d	e
Homo sapiens	DnaJB2 / HII		s	y	y	e	i	l	d	v	p	r	s	a	s	a	d
Homo sapiens	DnaJC4 / MIII		t	y	y	e	l	l	g	v	h	p	g	a	s	t	e
Homo sapiens	Dnj3 / CprI		k	l	y	d	i	l	g	v	p	a	g	a	s	e	n
Homo sapiens	FLJ10634	III	d	l	y	a	l	l	g	i	e	e	k	a	a	d	k
Homo sapiens	FLJ10737	III	d	y	y	s	l	l	n	v	r	r	e	a	s	s	e
Homo sapiens	Hsc40	II	d	y	y	k	i	l	g	i	p	s	g	a	n	e	d
Homo sapiens	Hsp40	II	d	y	y	c	i	l	g	i	e	k	g	a	s	d	e
Homo sapiens	Hsp40 / Dn	II	d	y	y	q	t	l	g	l	a	r	g	a	s	d	e
Homo sapiens	MRJ / Hsj2	II	d	y	y	e	v	l	g	v	q	r	h	a	s	p	e
Homo sapiens	p58k / Dna	III	d	y	y	k	i	l	g	v	k	r	n	a	k	k	q
Homo sapiens	Thioredoxi	III	d	f	y	s	l	l	g	v	s	k	t	a	s	s	r
JC virus	Large T an	III	m	d	l	l	g	l	d	r	s	a	w	g	n	i	p
JC virus	small t an	III	m	d	l	l	g	l	d	r	s	a	w	g	n	i	p
Lactobacillus ac	DnaJ-like	III	d	y	y	k	v	l	g	v	d	r	d	a	s	d	q
Lactobacillus sa	DnaJ	I	d	y	y	d	v	l	g	v	g	r	d	a	s	d	d
Lactococcus lact	DnaJ	I	e	y	y	e	r	l	g	v	d	k	n	a	s	q	d
Legionella pneum	DjlA	III	h	a	f	a	l	l	e	v	s	p	n	a	n	k	q
Legionella pneum	DnaJ	I	d	y	y	e	l	l	e	v	s	r	n	a	s	d	a
Leishmania major	DnaJ3	III	d	p	h	a	i	l	g	l	p	s	s	a	s	t	a
Leishmania major	L2027.03	III	e	a	l	q	v	l	e	v	s	i	d	v	d	p	k
Leishmania major	L2027.07	III	a	a	l	r	t	l	g	l	a	e	e	s	t	d	a
Leishmania major	L490.08	III	d	p	l	v	p	p	e	v	l	l	r	d	s	a	e
Leishmania major	L490.11	III	e	l	l	g	l	k	g	k	e	f	s	a	t	a	k
Leishmania major	L6520.01	I	e	l	y	e	v	l	n	v	s	v	e	a	n	e	h
Leishmania major	LM12.127	III	r	c	y	r	t	l	g	l	d	r	g	a	a	e	a
Leishmania major	Mdj6	III	n	y	y	e	v	l	g	v	t	m	h	y	k	v	a
Leishmania major	protein ki	III	d	y	y	k	i	l	g	l	k	k	t	a	s	a	q
Leishmania major	Tcj4	I	g	l	y	d	e	l	g	i	s	p	d	a	t	e	p
Leishmania major	L4830.06	III	e	l	y	q	v	l	e	l	d	a	q	c	t	t	a
Leishmania major	L7610.08	I	d	l	y	s	v	l	g	v	a	r	n	s	t	p	e
Leishmania major	L796.7	III	d	y	y	a	i	l	d	v	l	p	r	a	s	g	e
Leptospira inter	DnaJ	I	s	y	y	d	i	l	g	v	s	k	s	a	n	d	e
Listeria innocua	DnaJ	I	d	y	y	e	v	l	g	i	s	k	s	a	s	a	d
Listeria monocyt	DnaJ	I	d	y	y	e	v	l	g	i	s	k	s	a	s	a	d
Lycopersicon esc	DnaJ	I	k	y	y	e	i	l	g	v	p	k	a	a	s	q	e
Lycopersicon esc	DnaJ like	II	d	y	y	k	v	l	g	v	d	k	n	a	t	d	d
Lymphotropic pol	Large T an	III	m	d	l	l	q	i	t	r	a	a	w	g	n	l	s
Macaca fasciculaP	utative 1	III	e	v	t	s	v	v	e	q	a	w	k	l	p	e	s
Macaca fasciculahypothetic		III	n	y	y	e	i	l	g	v	s	r	d	a	s	d	e
Manduca Sexta	JDP	III	d	y	y	a	l	l	g	c	d	e	n	s	t	v	e
Mannheimia haemo	DnaJ	I	d	y	y	e	v	l	g	l	s	k	g	a	s	e	k
Marine archaeal	DnaJ2	III	e	a	l	t	i	l	k	i	e	q	n	s	s	q	e
Marine archaeal	DnaJ	III	n	y	y	l	i	l	g	l	t	n	d	s	s	q	t
Marine group II	DnaJ	I	d	y	y	e	v	l	d	v	e	r	t	a	t	e	k
Medicago sativa	Msj1	I	k	y	y	d	i	l	g	v	s	k	s	a	s	e	d
Meiothermus rube	DnaJ	II	d	y	y	k	i	l	g	v	p	k	n	a	s	e	d
Mesorhizobium lo	DjlA	III	d	p	y	v	v	l	g	i	e	r	g	r	p	f	e
Mesorhizobium lo	DnaJ	I	d	f	y	e	t	l	g	v	q	k	g	a	d	e	k
Mesorhizobium lo	DnaJ	II	d	p	y	e	v	l	g	v	a	k	n	a	s	a	k
Mesorhizobium lo	mll0667	III	e	a	y	k	v	l	g	l	e	a	g	a	a	a	a
Mesorhizobium lo	mll3564	III	k	a	l	e	t	l	g	l	d	t	k	a	t	g	k
Mesorhizobium lo	mll4676	III	d	w	h	v	v	l	n	v	v	p	t	a	s	p	d
Mesorhizobium lo	mlr0945	III	d	y	y	e	l	l	e	i	s	p	n	a	n	s	e
MethanobacteriumDnaJ		I	d	y	y	e	i	l	g	v	d	r	g	a	d	k	k
Methanosarcina a	MA0088	III	d	y	y	q	l	f	d	i	p	r	g	a	n	p	e
Methanosarcina m	DnaJ	I	d	y	y	e	i	l	g	l	s	k	d	s	s	v	e
Methanosarcina m	DnaJ	III	d	y	y	q	l	f	d	i	p	r	s	a	g	l	e

Methanosarcina tDnaJ		I	d	y	y	e	i	l	g	l	s	r	d	a	t	p	e
MethanothermobacDnaJ		I	d	y	y	e	i	l	g	v	d	r	g	a	d	k	k
Methylovorus sp.DnaJ		I	d	y	y	e	v	l	g	v	n	r	d	a	s	d	e
Molluscum contagMC013L		III	d	p	h	e	v	l	g	l	p	a	g	s	s	p	d
Monkey B-lymphotlarge T an		III	m	d	l	l	q	i	t	r	a	a	w	g	n	l	s
Monkey B-lymphotSmall T an		III	m	d	l	l	q	i	t	r	a	a	w	g	n	l	s
Mouse plasmid L Large T an		III	l	e	l	l	k	l	p	r	q	l	w	g	d	f	g
Mouse polyomavirLarge T an		III	l	e	l	l	k	l	p	r	q	l	w	g	d	f	g
Mus musculus	1700014P03	III	d	y	y	a	v	l	q	v	t	r	n	s	e	d	a
Mus musculus	1810055D05	III	e	a	a	l	i	l	g	v	s	p	t	a	n	k	g
Mus musculus	1810055D05	III	e	a	a	l	i	l	g	v	s	p	t	a	n	k	g
Mus musculus	2010306G19	II	d	y	y	h	i	l	g	i	d	k	g	a	t	d	e
Mus musculus	2700075B01	III	n	y	y	d	i	l	g	v	s	h	n	a	s	d	e
Mus musculus	2810401H12	III			m	s	c	w	g	v	p	s	t	a	t	q	a
Mus musculus	4930503B20	III	n	y	y	k	v	l	g	v	p	r	n	a	s	s	s
Mus musculus	4930571C17	III	n	f	y	s	l	l	g	v	s	k	t	a	s	s	r
Mus musculus	4933407H18	III	i	p	r	d	d	k	g	q	p	l	n	p	e	d	r
Mus musculus	5730496F10	III	n	y	y	e	v	l	g	v	t	k	d	a	g	d	e
Mus musculus	5730551F12	III	n	p	f	h	v	l	g	v	e	a	t	a	s	d	t
Mus musculus	Abbp2	III	d	f	y	k	i	l	g	v	p	r	s	a	s	i	k
Mus musculus	CSP-Beta	III	s	l	y	e	i	l	g	l	h	k	g	a	s	c	e
Mus musculus	DnaJA2	I	k	l	y	d	i	l	g	v	p	p	g	a	s	e	n
Mus musculus	DnaJB10	II	s	y	y	e	i	l	d	v	p	r	s	a	s	p	d
Mus musculus	DnaJB11	II	d	f	y	k	i	l	g	v	p	r	s	a	s	i	k
Mus musculus	DnaJB6	II	d	y	y	e	v	l	g	v	q	r	h	a	s	p	e
Mus musculus	DnaJB7	II	d	y	y	e	v	l	g	v	q	r	y	a	s	p	e
Mus musculus	DnaJC3	III	d	y	y	k	i	l	g	v	k	r	n	a	k	k	q
Mus musculus	DnaJC8	III	n	p	f	e	v	l	q	i	d	p	e	v	t	d	e
Mus musculus	Fxr1h	III	e	a	a	l	i	l	g	v	s	p	t	a	n	k	g
Mus musculus	GAK	III	s	r	w	t	p	v	s	m	a	d	l	v	t	p	e
Mus musculus	Jdp1	III	d	y	y	a	l	l	g	c	d	e	l	s	s	v	e
Mus musculus	LOC194335	III	y	f	y	f	v	l	p	e	t	k	n	r	t	h	a
Mus musculus	LOC194858	II	s	y	f	d	f	l	g	v	p	k	s	a	s	e	r
Mus musculus	LOC213472	III	s	t	d	t	e	y	t	e	v	q	m	y	v	l	v
Mus musculus	LOC218853	III	l	r	i	e	t	q	k	q	t	l	n	a	r	d	e
Mus musculus	LOC223891	III	l	a	h	q	v	l	g	v	p	e	g	a	t	n	e
Mus musculus	LOC228540	III	d	l	y	a	l	l	g	i	e	e	k	a	a	d	k
Mus musculus	LOC230935	III	d	y	y	s	l	l	n	v	r	r	e	a	s	s	e
Mus musculus	LOC235394	III							m	k	c	w	a	c	r	d	m
Mus musculus	MGC27620	III	e	y	y	r	l	l	n	l	d	e	g	c	s	v	d
Mus musculus	MIDA1	III	a	v	l	g	l	g	h	v	r	y	t	a	t	q	r
Mus musculus	mmDjC7	III	d	w	y	s	i	l	g	a	d	p	s	a	n	m	s
Mus musculus	Rab-relate	III	d	s	w	e	m	l	g	v	r	p	g	a	s	r	e
Mus musculus	Rab-relate	III	v	s	w	e	m	l	g	v	r	p	g	a	s	r	e
Mus musculus	Sacsin	III	e	v	t	s	v	v	e	q	a	w	k	l	p	e	s
Mus musculus	Sb73	III	d	l	y	q	v	l	g	v	r	r	e	a	s	d	g
Mus musculus	Sec63	III	n	p	y	e	v	l	n	l	d	p	g	a	t	v	a
Mus musculus	WBSCR18	III	a	l	y	e	l	l	g	v	p	s	t	a	t	q	a
Mus musculus	xylanase B	III	s	l	y	a	v	l	e	l	k	k	g	a	e	t	a
Mus musculus	Zrf1	III	a	v	l	g	l	g	h	v	r	y	t	a	t	q	r
Mus musculus	Zrf2	III	a	v	l	g	l	g	h	v	r	y	t	a	t	q	r
Mus musculus	Csp	III	s	l	y	h	v	l	g	l	d	k	n	a	t	s	d
Mus musculus	DnaJB10-li	II	s	y	y	e	i	l	d	v	p	r	s	a	f	p	d
Mus musculus	DnaJB12	III	d	y	y	e	i	l	g	v	s	r	s	a	s	d	e
Mus musculus	DnaJB3	II	d	y	y	e	v	l	g	v	p	r	q	a	s	a	e
Mus musculus	DnaJB9	III	s	y	y	d	i	l	g	v	p	k	s	a	s	e	r
Mus musculus	DnaJC7	III	d	y	y	k	i	l	g	v	d	k	n	a	s	e	d
Mus musculus	hDj9 / Erj	III	d	f	y	k	i	l	g	v	p	r	s	a	s	i	k

Mus musculus	Hsj2 / RDJ	I	t	y	y	d	v	l	g	v	k	p	n	a	t	q	e
Mus musculus	Hsp40 / Dn	II	d	y	y	q	t	l	g	l	a	r	g	a	s	d	d
Mus musculus	Hsp40-3	II	d	y	y	k	i	l	g	i	p	s	g	a	n	e	d
Mus musculus	MCG18 / Hs	III	n	y	y	e	l	l	g	v	h	p	g	a	s	a	e
Mus musculus	mDj4	II	d	y	y	e	v	l	g	v	q	r	h	a	s	p	e
Mus musculus	mDj5	III	d	y	y	e	v	l	g	v	q	r	y	a	s	p	e
Mus musculus	mDj6	III	n	y	y	e	v	l	g	v	q	s	s	a	s	p	e
Mus musculus	mmDj4	I	q	y	y	d	i	l	g	v	k	p	s	a	s	p	e
Mus musculus	MTJ1	III	n	f	y	e	f	l	g	v	q	q	d	a	s	s	a
Mus musculus	p58k / Dna	III	d	y	y	k	i	l	g	v	k	r	n	t	k	k	q
Mus musculus	Tid1	I	d	y	y	q	i	l	g	v	p	r	n	a	s	q	k
Mus musculus	Tid56	I	d	y	y	q	i	l	g	v	p	r	n	a	s	q	k
Mycobacterium leDnaJ		I	d	f	y	k	e	l	g	v	s	s	d	a	s	p	e
Mycobacterium leDnaJ-2		I	d	y	y	g	l	l	g	v	s	r	n	a	s	d	a
Mycobacterium tuDnaJ		I	d	f	y	q	e	l	g	v	s	s	d	a	s	p	e
Mycobacterium tuDnaJ-2		I	d	y	y	g	l	l	g	v	s	k	n	a	s	d	a
Mycoplasma genitDnaJ		I	d	y	y	e	v	l	g	i	s	k	n	a	s	s	q
Mycoplasma genitDnaJ		I								i	s	k	n	a	s	s	q
Mycoplasma genitMG002		III	n	l	y	d	l	l	e	l	p	t	t	a	s	i	k
Mycoplasma genitMG200		III	d	y	y	e	v	l	g	i	t	p	d	a	d	q	s
Mycoplasma genitOrf311		III	n	l	y	d	l	l	e	l	p	t	t	a	s	i	k
Mycoplasma hyopnp16		II	d	f	y	k	i	l	g	v	e	k	s	a	s	l	t
Mycoplasma pneumDnaJ		I	d	y	y	e	v	l	g	v	s	r	s	a	t	a	q
Mycoplasma pneumMG002 / XD		II	t	l	y	d	l	l	e	l	p	q	t	a	t	l	q
Mycoplasma pneumMG200		III	d	y	y	e	v	l	g	l	s	r	d	a	d	d	n
Mycoplasma pulmoDnaJ		I	d	y	y	k	i	l	g	i	d	k	s	a	n	e	k
Myxococcus xanthDnaJ		I	d	y	y	q	t	l	g	v	d	r	s	a	s	a	e
Neisseria meningNMA1461		III	d	l	y	a	v	l	g	v	s	p	q	a	g	a	d
Neisseria meningHscB		III	f	t	l	f	r	i	e	p	a	f	d	i	d	t	e
Neisseria meningDnaJ		I	d	f	y	a	t	l	g	v	a	r	t	a	t	d	d
Neurospora crassZuotin		III	k	v	l	g	l	s	k	y	r	w	r	a	t	e	e
Neurospora crass9G6.140		III	d	p	w	q	v	l	g	i	a	k	t	a	d	k	t
Neurospora crassDnaJ		II	k	l	y	d	l	l	g	i	s	p	t	a	t	q	d
Nicotiana tabacuDnaJ		I	r	y	y	e	i	l	g	v	s	k	n	a	s	d	d
Nicotiana tabacuDnaJ-like		II	d	y	y	k	v	l	g	v	d	k	n	a	t	d	d
Nitrosomonas eurDnaJ		I	d	y	y	e	v	l	g	v	g	r	d	a	d	e	n
Nostoc sp. PCC 7all1488		II	d	y	y	a	v	l	g	v	s	k	t	a	t	p	e
Nostoc sp. PCC 7all2707		III	d	y	y	r	i	l	g	l	p	l	a	a	s	d	e
Nostoc sp. PCC 7all2916		III	d	h	h	a	i	l	c	v	a	v	d	a	d	a	k
Nostoc sp. PCC 7all3048		III	r	y	y	r	v	l	e	l	e	v	g	a	t	l	e
Nostoc sp. PCC 7all4355		III	d	c	y	r	l	l	g	l	r	s	g	a	s	f	a
Nostoc sp. PCC 7all4413		III	h	a	y	k	v	l	g	l	p	q	d	a	a	f	a
Nostoc sp. PCC 7all4643		III	d	y	y	a	i	l	g	v	s	k	t	a	t	p	e
Nostoc sp. PCC 7alr0246		III	h	a	y	e	i	l	g	l	k	p	g	a	s	q	v
Nostoc sp. PCC 7alr2979		III	d	p	y	a	v	l	g	i	p	v	t	a	d	e	k
Nostoc sp. PCC 7alr2991		III	d	y	y	e	i	l	g	v	t	k	d	a	t	n	e
Nostoc sp. PCC 7alr2993		III	t	y	y	s	l	l	g	l	h	p	s	a	s	v	i
Nostoc sp. PCC 7alr4553		III	n	h	y	e	i	l	k	v	s	p	k	a	s	q	a
Oryza sativa	ARG1	III	d	p	y	e	v	l	s	v	p	r	d	s	s	d	q
Oryza sativa	B1045D11.2	III	d	f	y	g	v	l	q	v	d	v	m	a	d	e	a
Oryza sativa	DnaJ	I	k	y	y	e	v	l	g	v	s	k	t	a	t	q	d
Oryza sativa	Hsp40	II	d	y	y	k	v	l	g	v	d	r	g	a	g	d	d
Oryza sativa	OJ1014_G12	III	d	y	y	q	i	l	g	l	e	k	d	c	t	v	e
Oryza sativa	Os DnaJ	II	d	f	y	s	t	l	g	v	s	r	n	a	s	k	s
Oryza sativa	OSJNBa0003	III	s	s	g	n	l	t	n	n	i	e	n	i	d	e	e
Oryza sativa	OSJNBa0027	III	s	s	g	n	l	t	n	n	i	e	n	i	d	e	e
Oryza sativa	OSJNBa0056	III	d	w	h	t	l	l	g	v	r	r	g	d	g	l	d
Oryza sativa	OSJNBa0090	III	s	y	y	a	v	l	g	v	h	p	g	a	s	a	a

Oryza sativa OSJNBa0090III	d	w	y	s	i	l	s	v	e	s	s	a	d	d	e
Oryza sativa OSJNBa0093III	d	w	y	r	i	l	q	v	l	p	r	d	d	a	a
Oryza sativa OSJNBb0031III	l	g	l	p	q	p	r	s	d	l	v	t	h	h	d
Oryza sativa OSJNBb0048III	s	a	y	e	v	l	g	v	g	e	t	s	s	s	a
Oryza sativa P0025D05 III	d	y	y	r	t	l	g	i	e	r	g	a	s	k	a
Oryza sativa P0402A09.1III	t	l	y	d	l	l	g	i	s	s	e	g	t	l	d
Oryza sativa P0431G05 II	s	y	y	d	v	l	q	v	p	k	g	a	s	e	d
Oryza sativa P0435H01.2III	d	y	y	a	v	l	g	v	m	p	d	a	t	p	q
Oryza sativa P0516D04.3III	s	p	y	d	v	v	g	i	n	w	k	m	s	s	d
Oryza sativa P0592G05.1III	d	l	y	g	i	l	d	i	s	a	s	d	d	d	e
Oryza sativa P0648C09.2III	l	y	h	r	i	l	n	i	p	r	e	t	s	p	q
Oryza sativa subDnaJ III	a	y	y	d	t	l	g	v	s	v	d	a	s	p	a
Pasteurella multDjlA III	d	a	y	k	v	l	g	v	s	a	t	d	d	q	q
Pasteurella multDnaJ I	d	y	y	d	v	l	g	v	e	r	g	a	d	e	k
Peanut witches-bDnaJ I	d	y	y	e	v	l	e	l	s	r	d	a	k	l	d
Phaseolus vulgarDnaJ III	s	l	y	d	i	l	g	i	p	a	g	a	s	s	q
Picea glauca EMB1 III	t	f	y	s	i	l	g	v	n	k	d	s	s	s	a
Pisum sativum DnaJ I	d	y	y	a	t	l	g	v	p	k	s	a	t	v	k
Plasmodium falciRESA precuIII	l	y	y	d	i	l	g	v	g	v	n	a	d	m	n
Plasmodium falciRESA2 III	r	f	y	d	i	l	g	v	d	i	n	a	d	m	n
Plasmodium falciRESA-like III	l	y	y	d	i	l	g	v	g	v	n	a	d	m	n
Plasmodium falciDnJ1 / SiSII	d	y	y	s	i	l	g	v	s	r	d	c	t	t	n
Plasmodium falciPfj1 I	d	p	y	t	v	l	g	l	s	r	n	a	t	t	n
Plasmodium falciPfj2 II	d	y	y	k	r	l	g	v	k	r	n	a	t	k	e
Plasmodium falciPfj4 II	n	y	y	e	v	l	g	v	p	q	d	a	d	l	t
Plasmodium falciputative DII	d	y	y	s	i	l	g	v	s	r	d	c	t	n	e
Plasmodium falciRESA III	t	y	y	d	i	l	n	i	n	a	n	s	k	l	e
Plasmodium falciRESA-like III	t	y	y	d	l	l	n	v	e	p	d	a	s	f	d
Plasmodium falciRESA-like III	t	y	y	d	i	l	n	v	y	p	t	s	e	l	s
Polyomavirus cerLarge T anIII	m	d	l	l	q	i	t	r	a	a	w	g	n	l	s
Polyomavirus cerSmall T anIII	m	d	l	l	q	i	t	r	a	a	w	g	n	l	s
Polyomavirus murLarge T anIII	m	h	l	l	k	l	p	m	e	q	y	g	n	f	p
Polyomavirus sp Large T anIII	l	e	l	l	k	l	p	r	q	l	w	g	d	f	g
Porphyromonas giDnaJ I	d	y	y	e	v	l	g	v	s	k	n	a	t	d	d
Pseudomonas aeruHscB III	f	a	l	f	d	l	q	p	g	f	r	i	d	l	e
Pseudomonas aeruHscB-2 III	f	a	q	f	d	l	q	p	a	f	l	v	d	l	d
Pseudomonas aeruPA0598 III	e	a	l	l	l	l	g	v	e	a	g	s	e	p	a
Pseudomonas aeruDjlA III	e	a	l	l	l	l	g	v	e	a	g	s	e	p	a
Pseudomonas aeruDnaJ I	d	f	y	e	v	l	g	v	e	r	g	a	s	e	a
Pseudomonas deniORF2 III	k	a	f	e	t	l	g	l	g	a	s	a	t	t	a
Pseudomonas syriHopPmaI III	l	y	e	w	l	g	l	s	d	m	t	a	s	p	a
Ralstonia solanaHscB III	f	s	l	f	g	l	p	e	h	f	e	v	d	d	g
Rattus norvegicudopamine rIII	n	p	f	h	v	l	g	v	e	a	t	a	s	d	i
Rattus norvegicuGAK III	s	r	w	t	p	v	s	m	a	d	l	v	t	p	e
Rattus norvegicuJdp1 III	d	y	y	t	l	l	g	c	d	e	l	s	s	v	e
Rattus norvegicuMIDA1 III	a	v	l	g	l	g	h	v	r	y	k	a	t	q	r
Rattus norvegicuCSP III	s	l	y	h	v	l	g	l	d	k	n	a	t	s	d
Rattus norvegicuDnaJ-like III	n	y	y	k	v	l	g	v	p	q	d	a	s	s	s
Rattus norvegicuMDG1 II	n	y	y	d	i	l	g	v	p	k	s	a	s	e	r
Rattus norvegicup58k III	d	y	y	k	i	l	g	v	k	r	n	a	k	k	q
Rattus norvegicuRDJ1 / HsjI	t	y	y	d	v	l	g	v	k	p	n	a	t	q	e
Rattus norvegicuRDJ2 I	k	l	y	d	i	l	g	v	p	p	g	a	s	e	n
Rhesus polyomaviLarge T anIII	m	d	l	l	g	l	e	r	s	a	w	g	n	i	p
Rhizobium frediiNolC I	d	l	y	e	t	l	g	v	a	r	n	a	d	e	k
Rhizobium legumiDnaJ I	d	f	y	e	t	l	g	v	a	k	s	a	d	e	k
Rhodobacter capsDnaJ I	d	f	y	e	v	l	g	v	s	k	g	a	s	a	e
RhodopseudomonasDnaJ I	c	y	y	e	t	l	e	v	e	r	n	a	d	d	s
Rhodothermus marDnaJ II	d	y	y	e	i	l	g	v	p	e	n	a	t	e	e

Rickettsia conorDnaJ	I	n	y	y	q	i	l	g	v	s	k	t	a	s	q	a
Rickettsia conorHscB	III	f	q	l	l	g	l	p	q	e	y	n	i	n	l	k
Rickettsia prowaDnaJ	I	d	y	y	q	v	l	g	v	s	k	t	a	s	q	a
Saccharomyces ceJac1p	III	k	t	f	p	k	k	l	p	i	w	t	i	d	q	s
Saccharomyces ceYFR041c	II	y	k	f	l	k	l	p	k	l	q	n	s	s	t	k
Saccharomyces ceYGL128c	III	l	p	t	p	l	d	v	h	t	i	y	d	d	l	p
Saccharomyces ceYJL162c	III	t	y	y	s	i	l	g	l	t	s	n	a	t	s	s
Saccharomyces ceYJR097w	III	t	h	y	e	i	l	r	i	p	s	d	a	t	q	d
Saccharomyces ceYPR061C	III	g	i	p	k	a	g	s	g	n	p	k	l	d	k	k
Saccharomyces ceCaj1	II	e	y	y	d	i	l	g	i	k	p	e	a	t	p	t
Saccharomyces ceDjp1	II	e	y	y	d	l	l	g	v	s	t	t	a	s	s	i
Saccharomyces ceHlj1	II	e	f	y	e	i	l	k	v	d	r	k	a	t	d	s
Saccharomyces ceJem1	III	d	y	y	k	i	l	g	v	s	p	s	a	s	s	k
Saccharomyces ceMDJ1	I	d	p	y	d	t	l	g	l	k	k	s	a	t	g	a
Saccharomyces ceScj1	I	d	y	y	a	i	l	e	i	d	k	d	a	t	e	k
Saccharomyces ceSec63	III	d	p	y	e	i	l	g	i	s	t	s	a	s	d	r
Saccharomyces ceSis1	II	k	l	y	d	l	l	g	v	s	p	s	a	n	e	q
Saccharomyces ceXDJ1	I	r	l	y	d	v	l	g	v	t	r	d	a	t	v	q
Saccharomyces ceYDJ1 / MasI		k	f	y	d	i	l	g	v	p	v	t	a	t	d	v
Saccharomyces ceYJL073w	III	d	y	y	k	i	l	g	v	s	p	s	a	s	s	k
Saccharomyces ceYNL077w	I	s	l	y	d	s	l	n	v	t	a	a	a	s	t	s
Saccharomyces ceYNL227c	III	c	y	y	e	l	l	g	v	e	t	h	a	s	d	l
Saccharomyces ceZuotin	III	a	a	m	g	l	s	k	l	r	f	r	a	t	e	s
Salix gilgiana DnaJ	I	k	y	y	e	v	l	g	v	s	k	s	a	s	q	d
Salmonella enterDjlA	III	d	a	c	n	v	l	g	v	k	t	t	d	d	a	t
Salmonella typhiCbpA	II	d	y	y	a	i	m	g	v	k	p	t	d	d	l	k
Salmonella typhiDnaJ	I	d	y	y	e	i	l	g	v	s	k	t	a	e	e	r
Salmonella typhiYbeS	III	t	c	w	q	v	l	g	i	e	a	t	t	d	t	d
Salmonella typhiYbeV	III	i	c	w	e	i	l	g	i	e	p	t	t	d	l	e
SchizosaccharomyC4G9.19	III	t	p	y	e	i	l	e	l	p	r	t	c	t	a	n
Schizosaccharomycwf23	III	d	y	y	e	l	l	g	i	n	e	d	a	q	d	q
SchizosaccharomyPutative 1	III	d	y	y	a	i	l	k	l	q	k	n	a	t	f	q
SchizosaccharomySPAC2E1P5.I	III	t	f	y	e	l	l	e	v	p	t	k	a	s	i	k
SchizosaccharomySPAC926.05	III	y	s	v	l	n	l	k	d	g	k	t	y	t	d	d
SchizosaccharomySPBC1734.0	III	n	a	y	d	v	l	d	i	l	p	g	m	s	v	d
SchizosaccharomySPBC1734.1	III	k	l	y	e	v	l	n	v	d	v	t	a	s	q	a
SchizosaccharomySPBC543.02	III	d	h	y	k	i	l	g	v	s	k	e	a	t	d	i
SchizosaccharomyDnaJ	III	d	y	y	t	i	l	g	a	e	s	t	s	s	y	v
SchizosaccharomyDnaJ	III	t	f	y	e	l	l	e	v	p	t	k	a	s	i	k
SchizosaccharomyDnaJ	III	d	y	y	e	l	l	g	i	n	e	d	a	q	d	q
SchizosaccharomyDnaJ 1	III	d	p	y	s	v	l	g	v	e	k	d	a	s	d	e
SchizosaccharomyDnaJ relat	I	k	l	y	d	i	l	e	v	h	f	e	a	s	a	e
SchizosaccharomyDnaJ-relat	I	s	q	k	q	i	l	g	v	s	k	d	a	s	e	s
SchizosaccharomyHlj1	II	q	y	y	e	i	l	d	l	k	k	t	c	t	d	t
Schizosaccharomymitochondr	I	k	l	y	e	v	l	n	v	d	v	t	a	s	q	a
SchizosaccharomyPsi protei	II	k	l	y	d	c	l	e	v	r	p	e	a	s	e	a
SchizosaccharomySPAC4H3.01	II	e	y	y	d	l	l	g	i	s	t	d	a	t	a	v
SchizosaccharomySPAC6B12.0	III	d	c	y	e	i	l	q	v	n	h	d	s	d	l	q
SchizosaccharomySPBC1773.0	III	d	y	y	a	i	l	k	l	q	k	n	a	t	f	q
SchizosaccharomySPBC36B7.0	III	d	p	y	e	i	l	g	i	a	k	g	t	s	v	d
SchizosaccharomySPBC3E7.11	II	d	y	y	d	i	l	n	i	s	v	d	a	d	g	d
SchizosaccharomySPCC4G3.14	III	d	p	y	k	t	l	g	v	s	k	s	a	s	a	s
SchizosaccharomySPCC63.03	III	e	l	y	l	a	l	g	l	p	k	d	a	t	s	d
SchizosaccharomySPCC63.13	III	d	y	y	a	i	l	n	i	t	p	k	a	s	a	e
SchizosaccharomySpj1	I	s	q	k	q	i	l	g	v	s	k	d	a	s	e	s
SchizosaccharomyZuotin	III	a	v	l	g	l	s	k	y	r	y	k	a	d	t	e
Simian virus 40 Large T an	III	m	d	l	l	g	l	e	r	s	a	w	g	n	i	p
Simian virus 40 Small T an	III	m	d	l	l	g	l	e	r	s	a	w	g	n	i	p

Sinorhizobium meCbpA	II	d	p	y	q	i	l	g	v	p	r	t	g	k	p	d
Sinorhizobium meDnaJ	I	d	l	y	e	t	l	g	v	q	k	n	a	d	e	k
Sinorhizobium meSMc00003	III	d	p	y	a	i	l	g	v	r	r	t	a	g	q	e
Sinorhizobium meSMc00699	III	k	a	f	e	t	l	g	l	a	a	s	a	t	t	a
Sinorhizobium meSMc01853	III	d	p	y	q	v	l	g	v	s	p	k	d	d	f	s
Sinorhizobium meSMc04233	III	d	p	y	a	l	l	g	i	e	r	d	a	d	e	r
Solanum tuberosuDnaJ	I	k	y	y	e	i	l	g	v	p	k	t	a	a	q	e
Spodoptera exigubJDP	III	d	y	y	t	v	l	g	l	k	p	t	a	t	r	e
Staphylococcus aDnaJ	I	d	y	y	e	v	l	g	i	s	k	d	a	s	k	d
Streptococcus pnDnaJ	I	e	f	y	d	r	l	g	v	s	k	n	a	s	a	d
Streptococcus pyDnaJ	I	e	y	y	d	r	l	g	v	s	k	d	a	s	q	d
Streptomyces albDnaJ2	I	d	y	y	a	v	l	g	v	r	r	d	a	s	q	d
Streptomyces coeDnaJ	I	d	y	y	k	v	l	g	v	p	k	d	a	t	e	a
Streptomyces coeDnaJ2	I	d	y	y	a	v	l	g	v	r	r	d	a	s	q	d
Synechococcus spDnaJ	III	d	y	y	a	l	l	g	i	p	q	s	a	d	q	a
Synechocystis spDnaJ	II	n	y	y	q	i	l	g	v	p	r	n	a	t	a	e
Synechocystis spDnaJ-like	II	d	y	y	q	i	l	g	v	t	k	t	a	s	e	a
Synechocystis spDnaJ-like	III	s	y	y	g	v	l	e	l	h	p	a	a	s	p	v
Synechocystis spsll1011	III	h	y	y	e	i	l	g	l	e	v	g	a	s	l	e
Synechocystis spsll1384	III	d	h	h	a	i	l	g	c	p	l	d	a	t	p	e
Takifugu rubripeUnknown	III	d	a	l	q	i	l	s	l	e	v	e	a	s	l	q
Tetragenococcus DnaJ	I	d	y	y	e	v	l	g	v	d	k	g	a	s	d	d
Thermoplasma aciDnaJ	I	d	y	y	k	i	l	g	v	d	r	n	a	t	d	e
Thermoplasma volDnaJ	I	d	y	y	k	i	l	g	v	d	r	n	a	s	e	e
Thermotoga maritDnaJ-like	III	n	p	y	e	v	l	g	v	p	p	g	a	s	k	e
Thermotoga maritDnaJ	I	d	y	y	e	i	l	g	v	p	r	d	a	t	q	e
Thermus thermophDnaJ	II	d	y	y	a	i	l	g	v	p	r	n	a	t	q	e
Torpedo californCCCS1	III	s	l	y	i	v	l	g	l	d	k	n	a	s	p	e
Treponema pallidHsp	II	d	y	y	e	v	l	g	i	s	k	t	a	s	g	e
Treponema pallidTP0843	III	d	y	y	r	v	l	g	v	s	h	r	a	s	t	p
Treponema pallidDnaJ	II	d	h	y	a	i	l	g	v	a	a	d	a	s	e	e
Treponema pallidDnaJ2	II	d	y	y	e	v	l	g	i	s	k	t	a	s	g	e
Trypanosoma brucCHR1.177	III	y	e	i	l	g	l	e	q	s	g	g	a	t	d	e
Trypanosoma brucDnaJ	II	d	y	y	k	v	l	g	v	s	r	d	a	s	p	s
Trypanosoma cruzPutative	III	v	h	f	r	v	l	g	l	p	r	g	c	d	e	a
Trypanosoma cruzPutative 2	III	y	y	h	r	l	g	f	c	e	e	v	h	d	l	q
Trypanosoma cruzDnaJ	II	d	y	y	k	v	l	g	v	g	r	n	a	t	p	s
Trypanosoma cruzTCJ1	III	a	l	y	d	v	l	g	v	p	r	t	a	s	d	v
Trypanosoma cruzTCJ2	I	k	f	y	d	s	l	g	v	s	p	d	a	s	v	d
Trypanosoma cruz TCJ3	I	e	y	y	e	i	l	g	l	e	a	e	a	t	e	h
Trypanosoma cruz TCJ4	I	s	l	y	d	e	l	g	i	l	p	s	a	a	t	d
Trypanosoma cruzTcJ6	II	d	y	y	k	v	l	g	v	g	r	n	a	t	p	s
uncultured proteDnaJ	I	d	y	y	e	t	l	g	i	s	k	g	a	t	a	e
Ureaplasma urealDnaJ	I	d	y	y	e	i	l	g	v	s	k	s	a	t	p	e
Vibrio cholerae DnaJ	I	d	f	y	e	v	l	g	v	g	r	d	a	s	e	r
Vibrio cholerae HscB	III	f	e	l	f	g	l	p	i	q	f	e	l	d	g	s
Vibrio cholerae VCA0788	III	q	a	l	r	l	f	e	l	t	e	e	a	s	a	v
Vibrio cholerae VC0447	III	d	a	y	e	v	l	g	v	s	e	s	a	s	a	q
Vibrio harveyi DnaJ	I	d	f	y	e	v	l	g	v	s	r	d	a	s	e	r
Volvox carteri fGlsA	III	s	l	l	g	l	a	n	e	r	w	t	a	s	e	a
Xanthomonas axonCbpA	II	d	y	y	a	t	l	g	v	e	p	s	a	g	d	a
Xanthomonas axonXAC0471	III	n	p	y	e	a	l	g	l	e	p	d	a	t	t	a
Xanthomonas campCbpA	II	d	y	y	a	t	l	g	v	e	p	s	a	g	e	a
Xanthomonas campDnaJ	I	d	y	y	e	v	l	g	v	a	r	g	a	s	d	e
Xanthomonas campXCC0454	III	n	p	y	e	a	l	g	l	e	a	d	a	t	k	a
Xenopus laevis CSP	III	s	l	y	h	v	l	g	l	d	k	n	a	t	t	d
Xestia c-nigrum ORF23	III	e	d	l	q	f	i	q	h	s	v	d	d	n	q	t
Xylella fastidioDnaJ	I	d	y	y	q	v	l	g	v	p	r	t	a	s	e	d

Xylella fastidioXF0207	III	d	p	y	r	v	m	g	l	g	a	g	a	t	n	a
Xylella fastidioXF2233	II	d	y	y	a	t	l	g	v	e	p	s	a	g	e	a
Yersinia pestis DjlA	III	d	a	c	k	v	l	g	v	n	s	s	d	d	s	v
Yersinia pestis DnaJ	I	d	y	y	e	v	l	g	v	s	r	d	a	e	e	r
Yersinia pestis HscB	III	f	t	l	f	g	l	p	a	r	y	l	i	d	g	n
Zea mays ZmDj1	I	k	y	y	e	i	l	g	v	p	k	s	a	s	q	d

16	17	18	19	20	20a	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
e	i	k	k	a		y	r	s	l	a	k	k	y	h	p	d	v	s	k	e	k
e	i	k	r	a		y	k	k	l	a	m	q	y	h	p	d	r	t	k	g	d
d	i	k	a	a		w	r	t	k	a	k	t	v	h	p	d	a	n	r	d	d
a	i	k	t	a		y	r	k	v	a	k	a	a	h	p	d	s	g	g	d	g
e	i	k	r	r		y	k	e	l	v	k	k	h	h	p	d	a	n	g	g	d
e	i	r	s	r		y	k	e	r	l	k	m	h	h	p	d	a	n	d	g	d
d	i	r	k	r		y	r	s	l	v	a	e	h	h	p	d	k	l	i	a	r
e	l	k	s	a		f	r	k	l	a	m	k	f	h	p	d	k	n	p	d	d
d	i	k	a	a		w	r	t	k	a	k	t	v	h	p	d	a	n	r	d	d
e	i	r	s	r		y	k	e	r	l	k	m	h	h	p	d	a	n	d	g	d
e	i	k	r	r		y	k	e	l	v	k	k	h	h	p	d	a	n	g	g	d
d	l	k	k	a		y	r	k	a	a	i	k	n	h	p	d	k	g	g	d	p
d	l	k	k	a		y	r	k	a	a	i	k	n	h	p	d	k	g	g	d	p
d	i	k	k	n		y	r	r	l	a	r	q	y	h	p	d	l	n	p	g	n
d	i	k	k	n		y	r	r	l	a	r	q	y	h	p	d	l	n	p	g	n
d	i	r	r	a		y	r	e	l	s	k	r	y	h	p	d	t	t	e	l	p
e	i	s	k	a		y	r	n	l	s	k	i	f	h	p	d	k	h	g	n	g
d	v	k	k	a		y	r	k	l	a	k	e	l	h	p	d	k	n	k	d	d
e	i	r	r	s		y	q	t	l	a	l	r	y	h	p	d	k	r	k	a	s
e	i	k	k	c		y	k	k	h	a	l	q	l	h	p	d	k	n	k	a	p
d	i	k	k	a		y	k	k	l	a	l	q	l	h	p	d	k	n	h	a	p
e	i	k	r	a		f	r	t	l	s	v	v	l	h	p	d	k	s	d	a	e
e	i	r	k	a		y	r	k	k	a	l	q	c	h	p	d	k	n	p	d	n
q	i	r	k	h		y	k	k	i	a	v	l	v	h	p	d	k	n	k	q	p
e	i	v	k	a		y	r	k	a	a	q	k	w	h	p	d	n	y	q	g	d
d	v	r	t	a		f	i	q	l	s	k	e	l	h	p	d	a	n	v	s	n
k	l	v	q	n		y	r	h	i	q	s	m	i	h	p	d	k	f	a	q	k
e	i	k	k	a		y	y	q	l	a	k	k	y	h	p	d	t	n	k	d	d
e	i	k	t	l		c	r	n	l	s	k	e	t	h	p	d	k	v	k	d	k
e	i	k	k	a		y	r	t	l	s	v	i	l	h	p	d	k	e	t	g	d
e	i	k	k	t		y	r	k	l	a	l	k	y	h	p	d	k	n	p	n	n
q	i	q	a	e		f	k	i	l	a	l	q	y	h	p	d	k	n	d	g	d
e	i	k	k	a		y	y	r	l	s	l	q	t	h	p	d	r	v	p	e	s
e	i	k	k	a		y	r	k	r	a	l	v	h	h	p	d	r	h	a	n	a
d	l	k	k	a		y	r	k	l	a	m	k	y	h	p	d	k	n	p	n	e
d	i	k	k	a		y	y	e	l	a	k	q	f	h	p	d	r	r	t	a	q
d	i	k	q	a		y	y	k	l	s	k	l	y	h	p	d	k	n	k	g	s
q	i	k	k	k		y	r	s	l	s	i	l	v	h	p	d	k	n	p	d	n
e	i	k	k	a		y	k	k	l	a	l	r	w	h	p	d	k	n	m	d	n
k	v	k	d	a		h	k	k	i	m	l	l	n	h	p	d	r	g	g	s	p
e	i	k	k	s		y	r	k	l	a	l	r	w	h	p	d	k	n	l	d	n
t	v	r	q	a		y	l	t	l	v	k	k	l	h	p	d	s	g	h	p	e
d	i	k	k	a		y	r	r	l	s	n	q	y	h	p	d	k	l	h	g	a
e	i	a	k	s		y	r	q	l	a	r	k	y	h	p	d	l	h	h	g	p
	k	k	r	k		y	k	k	l	a	l	r	w	h	p	d	k	n	m	d	n
d	i	r	r	a		y	k	q	l	a	k	e	w	h	p	d	k	s	k	h	p
a	i	r	k	a		y	y	r	l	a	q	m	y	h	p	d	k	n	p	n	g
d	v	k	k	i		y	r	k	a	c	l	a	v	h	p	d	k	h	t	g	t
q	i	r	k	a		y	r	k	k	a	l	q	c	h	p	d	k	n	p	d	n
d	i	k	r	a		y	r	k	i	v	l	k	h	h	p	d	k	r	k	a	l
e	i	k	k	a		y	r	k	l	v	r	i	y	h	p	d	i	n	p	d	p
e	i	k	k	a		y	r	r	l	v	r	k	y	h	p	d	i	c	k	k	p
e	i	k	s	a		y	r	k	l	a	l	k	y	h	p	d	k	n	a	n	n
e	l	n	r	a		y	l	l	l	n	l	r	y	k	s	e	r	s	m	t	s
d	l	k	k	s		y	r	r	m	a	m	k	w	h	p	d	k	n	p	t	s
l	l	k	k	d		y	r	k	k	a	m	l	v	h	p	d	k	n	m	g	s
e	i	k	k	a		y	y	i	k	a	r	q	v	h	p	d	k	n	p	n	d

e i k s a y r k l a l k y h p d k t a n d
l l k k d y r k l a l k y h p d k t a n d
d i r t a y r k l a m k w h p d r y a r n
d l k k s y r r l a m k w h p d k n p t s
d i r t a y r r l a m k w h p d k n p t s
e i k s a y r r m a l r y h p d k n p d d
d i k r s y y k l s l q h h p d k n p d p
d l k k s q y s r l a v l l n p s r n r y p
n m k k r y w k l s l l v h p d k c s h p
e v h a a y k r a v l k f h p d r a s r g
q i r r a y h k l a k i w h p d r w t k d
e v k r a f k r l a l k y h p d v h k g q
e i r s s y r r l a l q r h p d k l m k a
e i k k a y y i k a r q v h p d k n p n d
e i r k a y y i k a r q v h p d k n q g d
q i k v a y r r l a k f y h p d v y d g k
v l k k e y r k k a m l v h p d k n m g s
e i k k a y r r l s i q y h p d k n p d p
e i k a a y r r l a r q y h p d v n k e p
e v k k a f r q l a k k y h p d v c r g s
l i k k q y r r l a l l l h p d k n r f p
e v k k q y k k m a v l l h p d k n k c i
e i k s a y r r l a r i c h p d v a r n s
d l k k a y r k l a m k w h p d k n p n n
e i k k a y y l k a r k v h p d k n p g d
e i k s a y r k l a r n y h p d v n k d p
i v r k r y r k l a v m l h p d r n k s v
k l k r q y r k l a m r y h p d k n p e g
e i r s s f i r l a l k w h p d k f k e e
t i k q q y r k l a l v l h p d k n p y v
e i r k a y r q w a q v y h p d k i q s p
k v k e a h r k v m v a n h p d a g g s h
e v k d a f r r l a i k y h p d k h a q s
d i k k a y r k a a l r h h p d k a a q i
d v k h a y r t c a l k w h p d r h q g s
e i k k a y y n c m k s c h p d l s g n d
e l d r a h l l l c l r y k p d r a s s f
t i k k q y r k l a l l l h p d k n k f a
i i k k q y k r l a l l l h p d k n k l p
d l k k a y r k l a m k w h p d k n p n n
e i q k a f h k q s l k y h p d k n k d k
q i r k s y r e a a l k h h p d k l a k a
e i r k a y h k l a l r l h p d k n k d d
e i k t a y r s l a k v y h p d a s e s d
e l r s a y k k l a l r w h p d r c s s m
e i k s s y r k l a r k y h p d m n k n p
d l k k a y k r l a m i w h p d k n p s t
d v r k a y r k l s l k v h p d k n q a p
d v k i a y r a c a l k w h p d r h h t s
q v k a a y r k k v w e s h p d l f p d d
e l d r a n l l l c l r h k p d k a l a f
q i k r a y r k l a l k y h p d k n q g n
e l d r a y l l l n l k h k p e r s m s f
e i k k a f r e k a l e f h p d q n q d n
e i k s a y r r l s k e y h p d t t s l p
e i r n s y r s a i l h s h p d k l n n t
e i k q a y k q l a r k y h p d v s p p d
a v k k q y k k l a l l l h p d k n r f n

v v k k q y k r l a l l l h p d k n n c e
e i k k a y r r l s i q y h p d k n p d p
d l k k a y r k l a m k w h p d k n p n n
d i k s a y r r l a r i c h p d v a g t d
e i k a s f r r l a k e t h p d l i e s k
e i k k a y y v q a r q v h p d k n p g d
e i k s a y r k l a r s y h p d v n k d a
e l k k a y r k l a m k w h p d k n p n n
e i k k a y k k l a l q w h p d k n v g n
d l r k s y r k l s l k v h p d k n k a p
q i r k s y r d a a l k h h p d k l a t l
s l e g k y k d w q k k l h p d l v h n k
h v a t q y r r l t l l l k l n i n r l p
d i r k a y r k a a l k h h p d k a g q s
l i r l n y r k l a l k w h p d k h k g d
d i k r a y r l l a r k f h p d v n k d s
t i k k q y k k l a l h l h p d k n k l p
d v k r q y r k i s l m v h p d k c k h p
q i k s a y r a l q k r c h p d i a g d p
e i a k a y k l k a l d l h p d k r p d d
d l k k s y r k l a m k w h p d k n p n t
t i k k q v r k l a l l l h p d k n q f p
t l k r k y r k l a l m l h p d k n k s i
t v k k h y k q l a l l l h p d k n k c y
q l k k q y k k l a l l l h p d k y n l n
e i k k a y y g l a k k l h p d m n k d d
e i r k a y r k l s l k v h p d k n k a p
y l k r e y r k k a m l v h p d k n m g n
a l k k q y r k l v l m l h p d k n k c k
d i k r a y r k l a l k y h p d v n k e a
t v k k h y k t l a l l l h p d k n r f n
e h v a t q y r r l a l l l n p s v n r l p
e i k k s f h e l a k k f h p d t n r n n
d l k k a y k k a a i k n h p d k g g d p
d l k k a y k k a a i k n h p d k g g d p
e i r k a y h k l a l k l h p d k n q d d
a v k k v y r k a t l y v h p d k v q q k
e l v a t q y s r l a v l l n p s r n r y p
e i k k a y r r l s i q y h p d k n p d p
l l k k d y r k k a m l v h p d k n m g s
e i r k a y y i k a r q v h p d k n q g d
a v k k r y r k l a l l l h p d k n r f t
e v k k a f r q l a k k y h p d v c r g s
e i k k a y y g l a k k l h p d m n k d d
t v k k h y k t l a l l l h p d k n r f n
d i r t a y r k l a m k w h p d r y a r n
v l k k e y r k k a m l v h p d k n m g s
d i k l q y r k k s l l i h p d k t k n p
d l k k a y k k a a i k n h p d k g g d p
r l a v r y r e l v r r v h p d r f a g a
e i k k a y r k l a i k h h p d k g g d s
x i k k a y r r l a k k y h p d v s k e e
e v k k a y r k l a r k y h p d v n k a p
a y r k l s k q y h p d l n k e p
e i k k a y r k l s k k y h p d v n k e p
e i k k a y r k l s k k y h p d i n k e a
e i k k a y r k l s k k y h p d i n k e p
l m r k a y l k k c k e f h p d k g g d e

l	m	r	k	a	y	l	k	k	c	k	e	f	h	p	d	k	g	g	d	e
q	i	t	a	e	y	k	i	l	a	l	q	h	h	p	d	k	n	d	g	e
e	v	k	k	a	y	k	s	l	v	i	k	y	h	p	d	k	f	a	n	d
e	i	k	k	a	y	r	k	i	a	i	k	y	h	p	d	r	n	q	g	n
e	i	k	k	a	y	k	k	l	a	i	k	y	h	p	d	k	n	k	g	n
q	v	k	k	v	y	r	k	a	v	l	v	v	h	p	d	k	a	t	g	q
e	l	k	k	a	y	r	q	l	a	v	m	v	h	p	d	k	n	h	h	p
q	i	l	a	e	f	k	v	r	a	l	e	c	h	p	d	k	h	p	e	n
d	i	k	k	a	y	r	k	l	a	l	k	w	h	p	d	k	n	p	e	n
d	i	k	k	s	y	r	k	l	a	l	k	y	h	p	d	k	n	p	d	n
d	i	k	k	s	y	r	k	l	a	l	k	y	h	p	d	k	n	p	d	n
e	i	i	k	a	y	r	k	l	a	l	q	w	h	p	d	n	f	q	n	e
t	l	k	k	a	f	l	k	a	c	k	v	h	h	p	d	k	e	v	p	e
d	i	k	a	r	y	r	a	m	v	k	r	h	h	p	d	a	n	g	g	d
k	l	k	s	s	f	r	k	l	a	m	k	f	h	p	d	r	n	p	g	d
v	l	k	k	e	y	r	k	k	a	m	l	v	h	p	d	k	n	m	g	c
e	i	k	k	a	y	r	k	l	a	r	q	y	h	p	d	v	n	k	a	a
e	i	k	s	a	f	r	k	l	a	k	k	h	h	p	d	q	n	q	d	d
e	a	r	k	r	y	r	s	l	v	k	e	h	h	p	d	r	l	v	a	e
t	l	k	a	a	f	r	k	l	a	m	q	y	h	p	d	r	n	p	d	d
k	i	k	a	r	y	k	e	l	v	k	l	h	h	p	d	a	n	g	g	d
t	l	k	a	a	f	r	k	l	a	m	q	y	h	p	d	r	n	p	d	d
e	i	k	k	a	y	k	k	l	a	m	k	y	h	p	d	r	n	q	g	d
l	l	s	k	n	f	y	k	l	q	l	k	f	h	p	d	l	f	i	h	h
l	l	s	q	n	f	y	k	l	q	l	k	f	h	p	d	l	f	i	n	d
e	i	k	k	a	y	k	r	l	a	m	k	y	h	p	d	r	n	q	g	d
d	i	k	t	a	y	r	r	t	a	l	k	y	h	p	d	k	g	g	d	e
d	i	k	t	a	y	r	r	t	a	l	k	y	h	p	d	k	g	g	d	e
d	i	k	t	a	y	r	r	t	a	l	k	y	h	p	d	k	g	g	d	e
e	i	r	d	a	f	l	k	k	t	k	q	l	h	p	d	q	s	r	k	s
d	i	k	r	n	y	k	r	l	a	a	l	v	s	p	d	k	c	t	i	d
e	i	r	d	a	f	l	k	k	t	k	q	l	h	p	d	q	s	r	k	s
e	i	r	f	c	y	r	q	k	v	l	k	h	h	p	d	k	k	k	h	r
q	f	f	v	k	f	h	q	l	q	s	k	l	h	p	d	k	f	v	m	a
k	l	a	k	a	y	r	a	l	a	r	k	h	h	p	d	r	v	k	n	k
k	i	k	e	a	h	k	k	v	m	i	v	n	h	p	d	r	g	g	s	p
e	i	q	k	a	y	r	a	q	c	l	k	w	h	p	d	k	n	l	d	n
k	k	e	c	q	y	r	k	l	a	l	k	w	h	p	d	k	h	t	d	d
e	i	k	s	a	f	y	a	q	s	k	k	v	h	p	d	n	s	s	e	e
a	d	l	t	g	d	p	t	i	a	s	d	w	h	p	d	d	p	n	t	k
f	i	r	r	q	y	y	k	l	a	a	k	y	h	p	d	k	n	p	e	g
e	i	r	i	a	f	r	k	r	i	r	e	v	h	p	d	k	c	k	h	p
a	i	k	k	a	w	r	d	m	s	k	i	h	h	p	d	r	g	g	d	a
a	i	k	k	a	w	r	d	m	s	k	i	h	h	p	d	r	g	g	d	a
d	i	r	k	e	y	r	k	l	a	l	k	l	h	p	d	k	c	r	a	p
d	i	k	k	s	y	f	k	l	a	k	e	y	h	p	d	k	n	p	d	h
e	i	t	k	a	y	r	k	l	a	q	k	w	h	p	d	n	f	s	d	e
e	i	k	s	a	y	k	s	l	a	r	e	w	h	p	d	k	r	k	d	e
e	i	i	k	a	y	r	k	r	c	l	m	f	h	p	d	r	f	v	d	n
a	i	k	k	a	y	f	q	l	a	k	k	y	h	p	d	v	n	k	t	k
e	l	k	k	a	y	r	k	m	a	l	k	f	h	p	d	k	n	p	d	g
e	i	k	k	a	y	r	k	m	a	l	k	y	h	p	d	k	n	k	e	a
e	i	k	k	a	y	r	k	l	a	l	r	y	h	p	d	k	n	l	d	g
e	i	k	s	a	y	r	k	l	a	l	k	y	h	p	d	r	n	p	n	d
k	i	k	k	n	y	r	k	l	a	l	k	w	h	p	d	k	n	p	d	r
d	i	k	s	a	y	y	k	l	s	k	q	h	h	p	d	t	n	p	t	n
d	i	k	k	s	y	f	k	l	a	k	e	y	h	p	d	k	n	p	d	h
q	i	k	k	a	y	r	k	l	a	k	e	l	h	p	d	r	n	q	d	d

a	l	k	k	g	y	y	r	q	s	m	r	w	h	p	d	k	s	n	l	v
t	i	r	k	a	f	k	k	l	a	i	k	k	h	p	d	r	n	t	d	d
e	i	t	k	a	y	r	k	m	a	q	k	w	h	p	d	n	f	q	d	e
e	i	r	q	k	y	l	i	l	v	k	l	y	h	p	d	f	h	q	g	k
e	i	k	k	a	y	r	r	l	a	r	k	y	h	p	d	i	n	k	e	k
a	v	k	k	q	y	r	n	l	a	k	k	y	h	p	d	i	l	n	a	n
t	i	k	k	a	y	r	k	m	a	l	k	y	h	p	d	r	n	q	g	d
e	l	r	k	a	y	r	e	a	a	k	r	a	h	p	d	r	p	t	g	d
e	v	k	a	a	y	n	r	l	i	q	m	a	h	p	d	k	g	g	t	e
e	i	r	k	a	f	r	k	l	a	k	q	y	h	p	d	a	n	s	g	d
t	v	r	s	a	w	k	a	a	l	s	s	a	h	p	d	r	a	r	a	r
g	l	k	s	a	f	r	k	l	a	m	e	h	h	p	d	r	n	g	g	c
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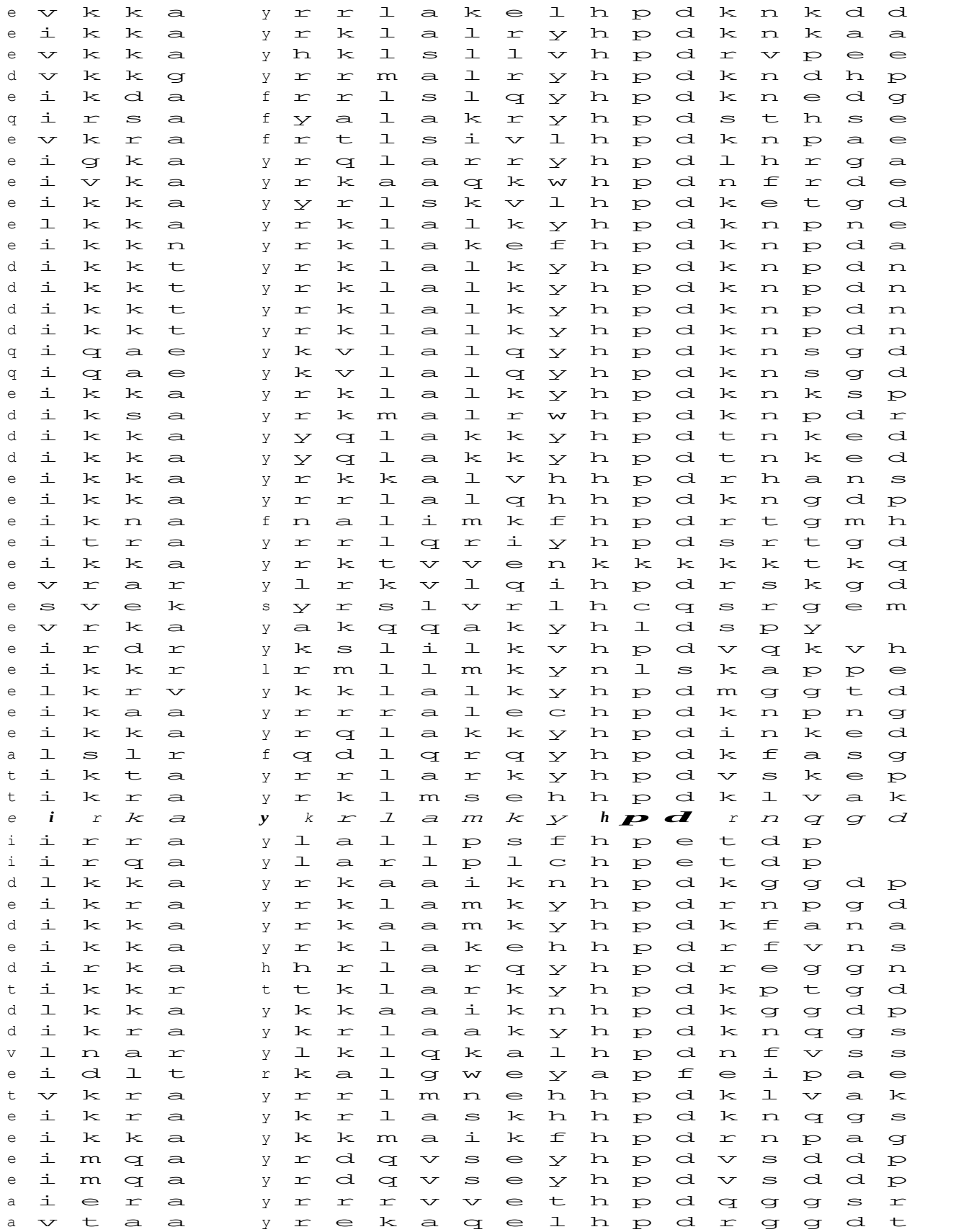

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d	i	k	k	a	y	r	k	k	a	l	q	w	h	p	d	k	n	p	d	n
d	i	k	k	a	y	r	k	l	a	l	q	l	h	p	d	r	n	p	d	d
d	i	k	k	a	y	r	k	q	a	l	k	w	h	p	d	k	n	p	e	n
d	i	k	r	a	y	r	k	v	a	l	k	w	h	p	d	k	n	p	e	n
e	i	i	k	a	y	r	k	l	a	l	q	w	h	p	d	n	f	q	n	e
e	i	k	k	r	f	r	q	l	s	i	l	v	h	p	d	k	n	q	d	d
k	i	r	d	a	h	r	r	i	m	l	l	n	h	p	d	k	g	p	l	v
q	v	k	k	q	y	r	r	a	v	l	v	v	h	p	d	k	a	t	g	q
q	i	l	a	e	f	k	i	r	a	l	e	c	h	p	d	k	h	p	e	n
e	i	s	q	a	f	a	k	r	n	k	a	q	p	p	e	v	k	a	d	s
q	i	k	k	a	l	h	k	l	a	m	k	y	h	p	d	k	n	k	s	p
e	k	l	k	l	h	r	k	l	a	l	r	h	h	p	d	k	n	p	d	d
s	i	k	k	l	l	e	m	l	q	s	k	g	l	p	s	k	s	l	e	d
e	i	h	r	s	y	r	d	l	v	k	v	w	h	p	d	h	n	r	h	q
e	v	k	k	a	y	r	q	k	a	l	s	c	h	p	d	k	n	p	d	n
e	l	k	a	a	y	r	r	l	c	m	l	y	h	p	d	k	h	r	d	p
p	h	l	r	t	l	k	r	r	i	e	n	r	h	p	d	k	n	p	e	n
d	v	r	e	s	f	h	k	l	a	r	q	y	h	p	d	s	g	s	s	d
q	i	k	a	a	h	k	a	m	v	l	k	h	h	p	d	k	r	k	a	a
d	l	k	q	k	y	q	k	l	i	l	l	y	h	p	d	k	q	s	a	d
e	v	n	k	a	y	r	k	l	a	v	l	l	h	p	d	k	c	v	a	p
e	v	n	k	v	y	r	k	l	a	v	l	l	h	p	d	k	c	v	a	p
e	r	k	k	i	i	r	r	l	y	l	k	w	h	p	d	k	n	p	e	n
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a	i	r	k	a	y	r	k	l	a	l	k	w	h	p	d	k	n	p	e	h
q	i	k	k	a	f	h	k	l	a	m	k	y	h	p	d	k	n	k	s	p
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e	l	k	k	a		y	r	k	l	a	l	k	y	h	p	d	k	n	p	n	e
e	i	k	r	a		y	r	r	q	a	l	r	y	h	p	d	k	n	k	e	p
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d	i	k	k	a		y	r	k	q	a	l	k	w	h	p	d	k	n	p	e	n
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d	i	k	r	a		y	r	k	l	a	r	e	l	h	p	d	i	n	p	d	e
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d	v	k	k	a		y	r	k	l	a	r	k	y	h	p	d	v	n	p	g	n
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e	i	r	t	a		y	r	k	l	v	l	k	c	h	p	d	k	v	q	d	p
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d	l	k	k	a		y	r	k	l	a	m	k	w	h	p	d	k	n	p	n	n
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e	i	r	k	r		y	l	k	i	a	r	h	l	h	p	d	s	s	t	i	v
e	v	n	q	a		y	k	d	l	v	f	v	w	h	p	d	r	l	p	k	d
d	i	k	a	s		y	r	r	l	a	q	q	y	h	p	d	i	n	p	t	d
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e	l	k	k	a		y	r	k	a	a	i	k	n	h	p	d	k	g	g	d	p
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k	l	k	r	q		y	r	k	l	a	i	k	y	h	p	d	k	n	p	e	g
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a	a	k	k	q		l	k	l	m	r	l	l	t	h	p	d	k	n	r	s	a
e	i	r	a	a		y	h	r	l	a	m	k	w	h	p	d	k	i	t	s	g

t	l	k	k	q	y	r	k	l	v	l	q	l	h	p	d	k	n	k	s	v
k	i	d	a	q	y	r	s	i	v	r	q	v	e	p	v	r	d	d	l	p
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e	i	k	a	s	f	h	r	l	a	k	e	t	h	p	d	v	a	a	a	a
e	v	k	a	a	f	y	r	l	a	p	l	h	h	p	d	r	h	a	a	s
e	v	r	a	a	y	r	r	m	a	r	k	y	h	p	d	v	s	p	p	d
q	i	k	r	s	y	r	k	l	a	l	k	y	h	p	d	k	n	p	n	n
q	i	k	k	a	y	y	n	c	m	k	a	c	h	p	d	l	s	g	n	d
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e	i	r	a	a	y	k	s	l	v	k	k	w	h	p	d	k	h	p	p	s
e	i	k	k	a	y	y	l	k	a	k	q	v	h	p	d	k	n	p	g	n
t	v	k	r	a	y	r	r	l	m	n	e	n	h	p	d	k	l	v	a	k
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e	i	t	e	r	y	f	k	l	a	e	n	y	y	p	y	q	r	s	g	s
n	i	d	k	s	y	f	k	l	a	k	e	h	y	p	i	n	g	s	t	i
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v	i	k	k	s	y	r	t	l	a	m	k	w	h	p	d	k	n	p	n	n
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m	m	k	k	a	y	k	n	v	s	k	l	y	h	p	d	k	g	g	d	s
m	m	k	k	a	y	k	n	v	s	k	l	y	h	p	d	k	g	g	d	s
l	m	r	k	a	f	l	r	a	c	k	i	v	h	p	d	k	g	g	s	d
r	m	q	q	a	y	k	q	q	s	l	l	l	h	p	d	k	g	g	s	h
e	l	k	k	a	y	r	k	k	a	i	q	y	h	p	d	k	n	p	g	d
a	l	g	n	r	y	r	e	l	v	r	t	v	h	p	d	r	f	a	d	a
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l	i	k	r	a	y	r	k	l	i	s	q	h	h	p	d	k	l	a	g	a
l	i	k	r	a	y	r	k	l	i	s	q	h	h	p	d	k	l	a	g	a
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e	l	k	k	a	y	r	q	l	a	v	m	v	h	p	d	k	n	h	h	p
q	v	k	k	q	y	r	r	a	v	l	v	v	h	p	d	k	a	t	g	q
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l	m	r	k	a	y	l	k	k	c	k	e	f	h	p	d	k	g	g	d	e
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t	l	k	s	a	f	r	k	l	a	m	k	w	h	p	d	r	n	p	g	d
e	i	k	k	a	y	r	k	l	a	r	e	w	h	p	d	r	n	p	d	k

d	l	k	k	a	y	l	k	l	a	k	q	y	h	p	d	t	t	d	a	k
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d	i	k	k	a	y	l	k	l	a	k	q	y	h	p	d	t	t	n	a	n
r	l	r	k	e	y	r	q	l	q	a	q	h	h	p	d	m	a	q	q	g
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q	i	k	r	k	y	r	t	l	a	l	k	y	h	p	d	k	h	p	d	n
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s	l	k	k	k	y	h	r	y	v	k	l	y	h	p	d	h	s	d	n	i
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d	i	k	s	a	y	r	k	l	s	v	k	f	h	p	d	k	l	a	k	g
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a	i	r	q	a	y	l	a	l	l	p	s	f	h	p	e	t	d	p		
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e	i	k	e	a	y	r	k	a	l	l	l	f	h	p	d	k	c	k	e	k
d	i	r	n	l	y	r	k	k	s	l	m	i	h	p	d	k	n	r	d	n
e	l	k	k	a	y	r	k	l	a	l	k	y	h	p	d	k	n	p	n	a
e	i	k	k	a	y	r	k	l	a	l	v	y	h	p	d	k	n	a	g	n
e	i	r	q	q	y	l	k	l	v	l	r	y	h	p	d	r	n	p	g	r
e	i	n	r	a	y	r	k	k	s	i	l	y	h	p	d	k	n	p	k	s
e	i	h	r	a	w	r	k	t	s	l	k	y	h	p	d	k	n	p	n	d
l	i	r	r	a	y	r	k	k	a	l	q	h	h	p	d	r	i	h	d	e
e	i	k	k	s	y	k	r	l	a	l	l	h	h	p	d	k	a	p	i	h
e	i	r	k	a	y	r	q	l	t	k	q	w	h	p	d	k	n	p	g	n
e	i	k	k	s	y	k	k	l	a	l	q	l	h	p	d	k	n	h	a	p
e	l	k	k	a	y	r	k	l	a	l	k	y	h	p	d	k	n	p	n	a
e	l	k	k	a	y	r	k	l	a	l	k	y	h	p	d	k	n	p	n	g
d	i	k	k	a	y	r	k	l	a	v	k	y	h	p	d	k	n	p	d	d
e	i	k	a	n	y	r	k	l	a	l	q	y	h	p	d	r	n	p	g	i
q	i	r	k	q	y	l	f	l	a	l	q	y	h	p	d	r	n	p	g	d
d	v	r	r	h	y	k	r	l	s	i	k	f	h	p	d	k	v	r	n	m
t	i	k	k	s	y	r	r	l	a	i	l	y	h	p	d	k	n	r	e	n
e	i	k	s	a	y	y	k	l	a	k	q	y	h	p	d	a	n	p	d	k
q	i	k	e	s	y	y	r	l	s	r	l	f	h	p	d	r	h	t	a	d
e	i	k	y	a	y	k	k	a	a	l	e	t	h	p	d	r	v	s	p	s
e	i	r	k	a	y	r	q	l	t	k	q	w	h	p	d	k	n	p	g	n
q	i	k	k	a	h	l	k	k	v	l	k	h	h	p	d	k	k	a	a	s
l	m	r	k	a	y	l	k	k	c	k	e	f	h	p	d	k	g	g	d	e
l	m	r	k	a	y	l	k	k	c	k	e	f	h	p	d	k	g	g	d	e

e	i	r	k	a	y	r	k	r	a	k	e	l	h	p	d	l	h	p	g	d
e	l	k	s	a	f	r	k	l	a	m	k	y	h	p	d	r	n	p	g	d
e	i	k	a	a	w	r	s	v	a	r	a	v	h	p	d	h	n	q	d	d
d	i	k	a	a	y	k	e	l	v	k	k	h	h	p	d	a	n	g	g	d
a	i	r	k	r	y	r	v	l	v	s	e	n	h	p	d	m	l	v	a	r
a	v	r	t	a	y	r	r	a	v	k	t	a	h	p	d	r	g	g	d	a
d	l	k	k	a	y	r	k	a	a	i	k	n	h	p	d	k	g	g	d	p
q	i	r	k	k	f	l	r	l	t	r	i	s	h	p	d	k	a	p	l	t
e	i	k	k	a	y	r	k	l	s	k	k	y	h	p	d	i	n	k	e	e
e	i	k	k	a	y	r	k	l	s	k	k	y	h	p	d	i	n	k	e	p
d	i	k	k	a	y	r	k	m	s	k	k	y	h	p	d	i	n	k	e	a
e	i	k	k	a	f	r	r	l	a	r	e	l	h	p	d	v	n	p	d	p
e	i	k	k	a	y	r	k	l	a	r	e	n	h	p	d	a	n	k	g	n
e	i	k	k	a	f	r	r	l	a	r	e	l	h	p	d	v	n	p	d	p
a	i	k	a	a	f	r	k	l	a	r	q	c	h	p	d	l	n	p	g	d
e	i	k	k	s	f	r	k	l	a	r	q	y	h	p	d	v	n	p	n	d
e	i	k	k	q	f	r	k	l	a	l	k	y	h	p	d	k	n	p	g	d
a	i	r	r	a	y	r	e	l	s	k	r	y	h	p	d	t	t	l	l	t
e	i	n	e	a	y	r	d	l	a	f	v	w	h	p	d	r	l	p	r	d
e	i	r	k	s	y	l	k	i	a	f	q	l	h	p	d	t	s	k	a	t
d	i	t	r	s	y	r	e	l	a	k	t	w	h	p	d	h	n	p	s	k
e	i	k	k	a	y	r	k	l	s	k	k	y	h	p	d	v	n	q	e	a
e	i	k	k	a	f	r	e	l	a	k	k	w	h	p	d	l	h	p	d	n
d	i	k	k	a	f	r	e	l	a	k	k	w	h	p	d	l	h	p	d	n
e	i	e	k	a	y	r	e	l	v	k	k	y	h	p	d	r	y	k	d	h
e	i	k	r	a	y	k	r	l	v	k	e	w	h	p	d	r	h	p	e	n
e	i	k	r	a	y	k	r	l	a	r	q	y	h	p	d	v	n	k	s	p
d	i	k	k	s	y	r	k	l	a	l	k	y	h	p	d	k	n	p	d	n
e	i	k	k	a	y	r	r	l	a	i	q	f	h	p	d	r	n	q	g	n
e	i	k	c	a	f	r	k	k	a	k	a	l	h	p	d	l	v	s	h	t
h	i	k	k	a	f	r	a	q	a	l	k	y	h	p	d	k	n	p	g	d
e	i	k	k	a	y	r	r	l	a	i	q	f	h	p	d	r	n	q	g	n
q	i	r	t	a	y	r	r	r	c	l	e	t	h	p	d	k	q	k	d	r
d	i	k	k	a	y	h	q	l	a	l	k	y	h	p	d	k	a	s	g	n
a	l	k	k	a	y	h	q	k	a	l	a	l	h	p	d	r	n	p	g	g
r	i	k	e	h	y	r	v	l	a	k	h	y	h	p	d	n	p	s	a	p
d	i	k	k	a	y	h	q	l	a	l	k	y	h	p	d	k	c	t	g	n
e	i	r	r	a	y	y	k	l	a	v	v	y	h	p	d	k	n	p	d	g
e	i	k	r	a	y	r	r	l	a	l	k	y	h	p	d	k	n	k	d	p
d	i	k	r	a	y	r	r	l	g	l	k	y	h	p	d	k	n	p	g	d
e	i	r	t	a	y	r	r	l	a	l	k	y	h	p	d	k	n	g	g	d
d	i	k	k	a	y	h	q	l	a	l	k	y	h	p	d	k	c	t	g	n
e	i	k	k	a	y	r	r	k	a	k	e	l	h	p	d	r	n	a	d	n
e	i	k	a	a	f	r	k	l	a	k	e	h	h	p	d	r	n	k	s	a
d	i	k	k	a	y	k	r	l	a	m	k	y	h	p	d	r	n	s	g	d
l	l	s	s	q	f	r	a	l	q	k	r	f	h	p	d	n	f	a	t	a
e	i	r	k	t	w	r	k	l	a	l	r	w	h	p	d	r	e	n	g	n
e	v	k	r	a	y	r	k	l	m	n	e	h	h	p	d	k	l	m	a	k
d	i	k	k	a	y	k	r	l	a	m	k	y	h	p	d	r	n	q	g	d
q	i	r	a	a	y	r	k	t	c	l	e	n	h	p	d	k	a	l	i	n
e	i	k	t	a	y	r	r	l	a	r	k	y	h	p	d	v	s	k	e	a
e	i	d	l	a	y	r	r	l	m	s	r	y	h	p	d	k	v	a	n	a
e	i	k	t	a	y	r	r	l	a	r	k	y	h	p	d	v	s	k	e	a
e	l	k	k	a	y	r	r	c	a	m	k	y	h	p	d	r	n	p	g	d
e	i	d	l	a	y	r	r	l	m	s	r	y	h	p	d	k	v	a	n	a
d	i	k	k	c	y	r	k	l	a	l	k	y	h	p	d	k	n	p	d	n
y	t	k	p	q	l	r	r	l	l	l	k	y	h	p	d	k	n	p	v	y
d	l	k	k	a	y	r	r	c	a	m	k	y	h	p	d	r	n	p	g	d

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e i e l a     y r r l m s r y h p d k l a q a
e i k t a     y r r l a r k y h p d v s q e p
a i k r a     y r k l m g e h h p d k l v a k
e i k k a     y k r l a m k f h p d r q s e d
q l t t r     y q e l q r q f h p d r f a t q
d l k k a     y r k a a i k n h p d k g g d p
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37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58
d	a	e																			
k	e	k	e																		
p	d	a	s																		
r	g	s	e																		
r	n	s	e																		
g	v	p	m																		
a	d	s	e																		
p	d	a	s																		
r	n	s	e																		
r	g	s	e																		
k	d	a	e																		
k	d	a	e																		
a	a	l	a	t																	
e	n	k	q	k	a	e															
p	d	a	s																		
e	r	e	a	s	g	d	e	r	a												
g	a	m																			
g	a	v																			
d	a	n																			
p	k	a	a	q	l	f	q	e	l	s	k	a	l	e	i						
g	a	e																			
q	k	k	m	a	e																
q	a	k	y	d	k																
s	e	h	e	k	a	i	a	l													
p	n	a	g																		
s	r	l	r	a	a	e															
e																					
p	d	a	a																		
k	e	s	e																		
d	k	q	e	a	t																
t	d	e	e	k	k	e	q	e													
g																					
q	n	s	n	s	t	a	k	e	s	t	a	a	m	e							
e	v	a	a																		
l	d	r	a	q																	
p	e	e	s	n																	
y	l	a	a	k	i	n	e	a													
a	e	e	a	n																	
a	s	a																			
s	e	e	e	k	e	q	a	a													
e	q	k	q	a	a	e															
p	e	e	s	n																	
e	a	e																			
r																					
e	n	e	s	m	a	k															
p	k	a	a																		
g	e	n	v	k	q	d	d														
s	a	q																			
e	c	e																			
p	d	a	s																		
i																					
k	k	e	a	e																	
p	l	a	s																		
p	q	a	a																		

```
p v a a
p v a a
p g v a g e a k
i k q e a e
i k q e a e
p v a a
e s r
y s e
q a q e a f v l l n
g d i k q q v e a e
p f r s g e a k
d
a g l s e a e a t
p q a a
p l a a
g t l e e g e t a e
p l a s
e a n k
g a t
n c g
f a d
g a d
r d n s s a
k k d a e
p q a a
g a e
g a e
r
d s a t
g c e
q m k e v a t

p e h v r h n a t
l v r s e s e g p w l k e i l e e v h k g a
t k e a a e
p e t t
i e r c e f t d q n d v d s v r
g a e
g a e
k k d a e
g a q
k e a k k d e i e
e d a k
g
e f v e e a k
g a e
r r d e a e
g s e
t k n e a e
q k l v a e
m e r c d f f d q s e i s s v k d
e e a t
i d r f e l t d d e e e e l d s v k d r a r m
k i v a e
l k t a s
s r s s s d d
r v e e y t
g a e
```

g a e
g r n a s w s s
k k d a e
r t s s s s a
k d p s n s
p q a a
g a e
k k e a e
r e e a e
g s e
l l l e e t e e a k q a k k d e i e
s k k e r d y a a e q s a k v t e a c r t l
f a d
l t r n e t k d e r l w k e i g e e v r k d
s a a t
k a g
g a e
q a q
g h
p d a h
k t e a e
g a e
g a e
g a e
g a e
p e a e
g s e
e r a a
g a e
n a q
g a e e p a s s s s s k p v d
f a d r a l k i v s d a w f v l s
p s a k

k e a k
g a t l e q k y i a e
y s e
a f d p d s f f f y a
p l a s
p l a
g a e
n c g
p e a e
g a e e n c v d
p g v a g e a k
p l a s
a a p

p e r e q r l a l

n a i
d a e
g a d
d a a
g s d
d a a

```
k e a e
p v r q k d a n
e e a a
k i a e
p y e q y a k
r a e
s k a v
k e e a e
p e a a
p e a a
e e k k k a e
y g t s q w e q w w
r s t e
d t s e
p l a s
d a e
p k a q
g l p
p e a e
r g s e
p e a e
k t a e
s e s
s e s
k n a e
e k m k e l n t l m
e k m k e l n t l m
e k m k e l n t l m
s k s d s r v g w a t g s s e t
a a d
s k s d s r v g w a t g s s e t
g i v m e k e
t d e e k k l s e
e e k l l a e
y l a a k i n e a
k e e a e
k s k e e a e
s a t
k k d g d n s k q i s s
r
s a t


h a t
g
e e k k k a e
a a s
d e k k d a e
e a q
a
g a e
d p e k t
a h a q
i e e c t
k e e a a
g
e m a n
```

e e d m q t y t
p n a h
k e k k k a e
s a i e k a y a r
g a e
n v s e e e l k i g v
k e a e
a
g l a a
k k a e
g l p
e n a a
g
a e a e
a e a e
a a a e
k e a e
g a s
p l k t l a e
k e a e
d l p p e i i k e f e

k e a e
e a a
k a a e
g l p p e m m k m a t
k d a e
k r a t a e
k a r

a d k k e a e

e s a a
g a a
a a v
s a e v r k d e e
e n e e i a k
e n e e i a k
q e r a q
q h d l v y
a s a
l a e a k
d d p n p g s e a q n
g a e
y l a a k i n e a
l c l t e v
r d s
d s k k m a e
g l r a q a h
a c p e r t
g a e
g e e v i q d d
p d a g
e n a a
g a e
p k a v
q a e
g a v

p d a s
n a e
q k a e s t
q a e
a
q k l
d a n
e a k a a a e
e k k v a e
e
g
g
v d a a
v d a a
v d a a
v d a a
k e a e
k e a e
q a e
l a e a k
p d a g
p d a g
s a e e r k e e e

e s s
r
q e k e w e
g
s p

s s q a s
l r s e y e
k e m a q i n n e y e
g
g a e
s q a e q l a a v
d a e
g l p p e m m e m a k
k e a e

k e a e
s d a e k k d a e
s d s e k k y h e
d
e

k d s e
n a l d q r v a m
y y a e w s a k e k g a a a e k s w e
g l p p e m m e m a k
k e a e
a
d a e
d a e

d a e

e a e
k e a e
e a e
e k k a l y a

n v a e g r
a d s
r a e
d k e d a t

g
g t t
k e e a e
k e e a e
d a e
p y e q y a k
a d r a q
n a e
t e e a q
a q a a
p g d e g p g r t p q s a e
k e e a e
p y e q h a k
p s l h
p k a v
r
g a e
v d f q d t n a r s l a e r k r e e
v p a g t v e e c v
k k q r

y i a a k i n e
a a e a a
y v a a k i n e
d a e
g a t
g e p i k e g d n
e l k s q a e
g s e
h d i a n
d k e d a t

s a e v q k e e
s a g v q k e e
a e a a
g e p i k e g d n
g e p i k e g d n
p e a a
p e a a
p a a t
g
g
p k a k
p q a q

g a t
k e f a e
p s l h
q e
p r a a
e l k s q a e
n a e
q a e
g a e
k e e a e
e e k k k a e
p n a h
d k m k r m n
d k m k r m n
r g q e
d a e
g a e
g l p e e m i k l a n
t s a e
g a r

a a a p s s s d e a s s s t r s q a h a a

e a e n k k
e a a a
a
p v a q e q a r
d m t d r e r e k q e
p a a a
t v
t a a
a a t e v t s t v d a
k e s e
g a d
g a d

k k e a e

h d i a n
g a t
k e a e
k e s e
y e d
s e
d a e

g a e
g l p q e f i k i a t
h s c e
p k a k

r g s e
g t k l q e l a e
d e
d a a
d a h
g a e
d a h

g a e
d a a
p k a e
g
a k m q r l n

g a p

l l l y
q a e
g a t
a e a a
k e a a e
p n a h

g a t
r a e
p q a q
p s a a
g
k e f a e
p q a q
k e e a e
k e e a e
e e k k k a e
a d r a k
e e g
p y e q y a k
s k a v
a m t e e k a n s q
d a e
p s a a
d n e r t r r m a e a e s q v s h l e v i l
t e e a q
p r a a
e l k s q a e
k e e a e
a d s
g e p i k e g d n
v p a g t m e e c m
g s e
g s e
h d i a n
q k e d a t

a e a a
p l a a
g e p i k e g d n
g e p i k e g d n
p e a a
k e f a e
g a t
k e e a e
d a e
s a e v q k e e e
p q a q

g
g a e
n a e
p a l h
k e e a e
k e e a e
k e e a e
g
n a e
e e k k k a e
p k a k
p k a k
s a g
a a q
p a a g
a a q
n e t t q k q n e
n e t t q k q n e
s
d a a
s
s a e e q k q a e
g e t v q k q n e
a
d a a
e s e
k a a e
p k a e
s a f e q k q a v
k e a e
g r t e d d
t l k a e k q
p e a a

k k a a e
t k a e
k d a e
a
t e t e k k l a s e
n v r l q q k a q
k k a q
p q m q k q a q
k q a e
e q k q q a e
n s l e k e l a t a
k d a e
a a l a
a d k
p e a s
g a e

n k k e a e
g a e
g a e
r
r
a a d
r v d a e e a k

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g a e
g a e
a a d
g s
d a a a r a a a g
a a a e n t
e e a n
p d v t
s a q
g a e
s k p e a e
p d a a
g l p k e m l e m a k
k e l e
n a d
r k n s s a
p s s s e t a k
g a t
t v f
d d l
t v f
k s k k e a e
d a k
e
k a e a t
a s k k e a d
d k a f
p e a n
a e a l
a k m q r l n
a k m q r l n
e l s q e l i

k e a e
s e r e q r l a q
p e r e q r l a l
g a s v e r v r a a t
g a s v e r v r a a t
k e a e
r g s e
a g a t
s d a e r r v a m
r a e
p y e q s a k
s k a v
g e p i k e g d n
p e g e
r e a a e
d a e
e e k k k a e
g
g

q e a e
k d a e
s a a e
p q c e
p n a e
```

d a e
q e k e q n l
d a e
s
r
p s i i
k s e
i h d t v s n
q i f s s e k v t n s d s k s p l l l t s s
p d a q
p t a t
k a g
h n
d a e
e e a h
l t p d e k s v m e
t
d s k e v n e
e a a
h n d k q e s i h
e e s k
v e e a t
g g s l d q d

g l p p e m m e m a k
d a e
k e a e

s q l a p t e s p p e i n k h n e
p k a a
e e r a v
k
p s v v
p k a a
g
l e a e
e a e v l
k e l y t l l g l i v n i l
p k a a
e k k v e a r
e k e e a a
e e a q
s a d
g
e
p q g a s
e d y n
e e r a v
v n t t r e e v e
p e a a r
a a q
q k a a a e
a r a r a t
e e a q
g n i n d d

k e v e
q e s e
p t a n
r g s e
g v p e e f h a i a n

s
g a d
g a e
g a e
k t q
v k a e
k t q
r q a e
k t a e
k a a e
p d i a t
n p r l l a k a a
n e e e q a l a a k
d a e
d a e
k q e a e
k a e a e
p l k d l a e
r k e a e
e a e
p e a s
k e a e
a e l e c e a v a r e
a c a e
k e a e
s d
r e e a e
t
p n a k
r e e s e
v
g s q
q e a a
a r a a
r e e s e
p a s e
d d
a g a a
s e r d r l m a v
a
g l p p e m m n v a k
e s a a
v t d e a e r e r i v
g a e
d p e a r r q a e
g a e
a a a e
s p e d r r q a e
p e a s
s k v s
a a a e

```
s p q l r e q a e
g a e
g l p p e m m e m a k
k n a e
p e r e r l a s m
```

59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
			t	k	f	k	e	v	q	e	a	y	d	v	l	n	d	s	n	k	k
			e	k	f	k	e	i	q	e	a	y	e	v	l	n	d	k	e	k	r
			a	r	f	a	e	i	g	q	a	y	d	l	l	k	d	s	k	k	r
			e	q	f	a	r	l	q	t	a	y	e	l	l	k	d	p	v	r	r
			e	r	f	r	a	v	v	q	a	y	q	l	l	k	q	s	g	f	c
			d	a	l	r	a	s	i	e	a	y	r	i	l	k	l	n	g	f	c
			e	l	h	a	a	a	n	e	r	m	a	a	l	n	a	a	y	a	a
			r	k	f	k	e	i	n	e	a	y	e	t	l	k	d	p	q	k	r
			a	r	f	a	e	i	g	q	a	y	d	l	l	k	d	s	k	k	r
			d	a	l	r	a	s	i	e	a	y	r	i	l	k	l	n	g	f	c
			e	r	f	r	a	v	v	q	a	y	q	l	l	k	q	s	g	f	c
			e	k	f	k	e	l	a	q	a	y	d	v	l	s	d	p	e	k	r
			e	k	f	k	e	i	g	q	a	y	e	v	l	n	d	p	e	k	r
			e	k	f	k	i	i	g	e	a	y	e	m	l	s	d	a	t	k	r
			e	k	f	k	i	i	g	e	a	y	e	m	l	s	d	a	t	k	r
			r	q	f	q	q	i	n	e	a	y	a	t	l	s	n	p	d	r	r
			l	m	f	n	r	t	k	k	a	y	e	v	l	s	d	p	h	q	r
			q	k	f	q	d	l	g	a	a	y	e	v	l	s	d	d	d	k	r
			d	q	f	i	r	i	d	e	a	w	k	t	l	r	d	e	r	l	r
			e	a	f	k	s	l	g	n	a	v	e	t	l	t	d	p	q	k	r
			e	a	f	k	a	i	g	n	a	v	a	i	l	t	d	a	e	k	r
			i	r	f	r	n	l	v	s	v	y	e	v	l	k	d	p	g	r	r
			l	m	d	v	s	a	r	a	a	y	d	r	l	l	n	a	k	k	a
			e	a	f	k	v	l	q	r	s	f	e	l	i	g	e	p	e	s	r
			k	k	f	i	d	v	a	a	a	k	e	v	l	t	d	p	e	k	r
			k	s	f	v	e	l	l	e	a	y	k	v	l	s	k	p	e	s	r
			e	w	s	s	l	v	n	k	a	y	k	t	l	s	k	s	i	e	r
			k	k	f	q	e	v	s	e	a	y	e	v	l	s	d	e	t	k	r
			e	r	f	m	e	i	q	q	a	c	e	a	l	s	k	t	r	r	k
			k	a	f	m	k	l	t	k	a	y	q	a	l	t	d	d	e	a	r
			d	k	f	k	e	v	n	r	a	h	s	i							
			a	k	f	q	q	l	k	e	a	k	e	i	l	c	d	p	e	k	r
			e	k	f	k	v	l	s	k	l	y	n	i	l	s	n	k	d	s	r
			r	k	f	k	e	l	g	e	a	y	t	i	l	s	d	p	v	k	k
			e	r	f	k	a	i	s	m	a	y	e	v	l	s	d	p	e	k	k
			k	k	f	s	q	i	t	e	a	y	e	a	l	l	v	e	v	k	h
			e	k	f	r	d	i	t	a	a	y	e	v	l	g	n	y	r	l	r
			q	a	f	e	i	i	s	k	a	y	k	t	l	e	n	e	a	t	r
			r	r	f	k	e	i	s	e	a	y	e	v	l	s	d	e	k	k	r
			k	d	f	m	d	n	t	k											
			q	q	f	l	l	v	q	a	a	y	d	v	l	s	d	p	q	e	r
			e	r	f	q	e	v	d	s	a	f	r	i	l	q	e	k	f	a	k
			l	k	l	h	q	v	k	q	a	y	e	v	l	s	d	p	k	q	r
			e	s	f	k	r	i	a	t	a	y	e	v	l	k	d	e	e	s	r
			r	r	f	k	e	i	s	e	a	y	e	v	l	s	d	e	k	k	r
			t	r	f	v	e	i	k	q	s	y	e	l	l	s	d	s	e	r	r
			e	i	f	e	r	v	n	r	a	y	e	f	l	c	s	r	n	a	l
			m	i	f	m	e	l	n	n	a	w	t	e	f	e	s	d	a	t	q
			q	l	f	q	e	l	s	k	a	l	e	i	l	m	d	v	s	a	r
			d	y	f	h	c	i	t	m	a	y	e	t	l	g	t	v	k	n	r
			e	k	f	k	e	i	n	e	a	y	h	v	l	i	d	d	e	r	r
			e	k	f	k	e	i	n	e	a	y	q	v	l	s	d	p	e	k	r
			e	l	f	k	e	v	a	f	s	y	s	i	l	s	d	p	e	k	r
			d	r	f	d	i	i	d	e	q	e	l	v	s	v	k	n	r	a	r
			a	k	f	k	q	i	s	e	a	y	d	v	l	s	d	p	q	r	r
			e	s	f	k	k	l	q	s	a	y	e	v	l	s	d	s	v	k	r
			h	n	f	q	v	l	g	e	a	y	q	v	l	s	d	p	g	q	r

d m f k e v t f s y n i l s d p e k r
d m f k e v t f s y n i l s d p e k r
r r f q q i q e a y s v l n d e n k r
a k f k q i s e a y d v l s d p n k r
a k f k q i s e a y d v l s d p n k r
e m f k e v t f a y e v l s d p e n r
k l f v k i a t a y e i l k d n t t r
q a f r l i s d a w y v l s d p s r k
k a f k e l q d p e k r k a m d d k i
e k f k l i a r m k d k f k l i a p
r r f q q i q e a y s v l s d e r k r
k d f k e i k s a y e c l m q k f e k
a q f q e l v h a y e v l s d p k e r
h n f q v l g e a y q v l s d s g q r
e k f q v l g e a y q v l s d p v h r
a r f i k i q a a y e l l m d s e k k
e s f k k l q s a y e v l s d f v k k
y f v e f i s k a y q a l t d s v s r
e k f k e i s a a y e v l s d e q k r
v q f q t i n e a y d i v l k q i k n
q a f r f v l d a w e v l s t p t k k
g a f h l i s e a w s f l s n e f n k
d d f m k i h a a y c t l s d p e k r
a m f k q i s e a y e v l s d p q k k
k n f q v l g e a y q v l s n p d k r
e k f k e i s n a y e v l s d d e k k
e a f k f l s q a w g v f s d k a k r
e k f l a v q k a y e c l q a t m q g
s r f q e i n e a y q v l s d p i a r
e g f k l l n e a f r v f s d k g e m
e n f q r i c e a y e i l s d e t k r
f l a s k i n e a k d v m l g k t k n
v r f k l v s e a y e v l n d d l k r
d r l f k m i g e a y s v l s d p t k
a k f k l c s v a y q s l c e k l s v
n f c m f i n d i y e i l s d p v q r
d r a k m s s l l l y r l i q k g y t
a a f k l v g e a n r l l s d q i k r
s a f k l i g e a q r i l l d r e k r
a k f k q i s e a y d v l s d p q k r
e k f a e i n n a y e i l s d e e k r
s r f k a i q e a y e v l m d p t r r
e k f q q l q k v i s i l g d e e k r
r d f m e i h k a y a t l a d p t t r
k k f q a i q e a y s v l s d s n k r
d k f k q i s a a y e v l s d e e k r
a k f k r i s e a y d v l s d p q k r
e a f k s v s k a f q c l s n d e a r
e k f k l c t v a y q s l c e k l a m
s k f k s i s e a y s c l e s g d v k
r a k m s s l l l y r l i q r g y t a
r k f a e i n n a y e v l s d e e k r
s t l l l y r l i q k g y s v v t s n i
a k f k e v l l s y e a i k q e i k e
e k f m k l r e v y n v l s d e e t r
e k f l k i q k a w e v l s d a e l r
d r f i r v q e a y e t l s d p r r r
g a f k l v r h a r d l l s d q p c l

g a f k l v l a a w c l l s d k v k r
s l i i y c l f v y c n g t e a n k y
a k f k q i s e a y d v l s d p q k r
d e f m k i h a a y c t l s d p e k r
r r f v q i l a a y e i l s d s e k r
k n f q i l g e a y q v l g d p e k r
d k f k e i s n a y e i l s d d e k r
a k f k q i s e a y d v l s d p q k r
n k f r e i a a a y e i l g d d d k r
e a f k s v s k a f q c l s n e d t r
s h f k l i q e a y e v l m d s t k r
t k r l s r a m y i m k l n g v n v n e
q a l k l v s d a w y v l s d p p r k
t d k l f k m i g e a y a v l s d p a k r
e k f q e i n e a y n v l m d p a k r
e l f k s v r c s y e v l s n e a t r
s a f k t i g e a q r v l l d k d k r
e a f g a l a k a q q l l l n d q e r
d m a i i l n e a y q l l s d p i s r
e k f q r l k t s y e v l k d e k a r
a k f k q i s e a y e a k y e v m f q
a a f k l v w d a s r f l a d k d k r
g a f k h v s e a w k f l s d k e k r
g a f k l v s e a w c l l s d k l q r
g a f k p v t e a w c m l s d k v k r
t k f q e v s k a y e i l k d k e k r
e a f k k v s k a f t c l s d g n s r
e a f k k l q n a y e v l l d s v k q
g a f n l v a e a w a l l s d k d k r
e k f l k i k h a y t t l i n s d s r
m t f s t v s m t f s t v c n k c t t
d p f k k s f y d r e l q l s q l g q
r k f q e i r e a y e t l g n s e r r
e k f k e l a q a y e v l s d p e k r
e k f k e l a q a y e v l s d p e k r
d k f q q l q k v i s i l g d e e k r
k v f d i l k e a w n k f n k e e l s
q a f r l i s d a w y v l s d p s r k
h l l i s t e a n k y f v e f i s k a
e s f k k l q s a y e v l s d s v k r
a e k q v l g e a y q v l s d p v h r
g a f k l i l e a w d l l s d k s q r
v q f q t i n e a y d i v l k q l k i
t k f q e v s k a y e i l k d k e k r
q k r k p k q e k s e p s a s c n k p
r r f q q i q e a y s v l n d e n k r
e s f k k l q s a y e v v e l l i i l
d a f d r l k k a q t t l l d e k a r
e k f k e l a h a y e v l s d p e k r
e e a a r l n e a y q t l k s p s q r
e m f k e i t r a y e v l s d p e k r
e k f k e v q e a y e v l s d d q k r
d k f k e v k e a f d t l s d p q k k
e k f k e i a e a y e v l s d d q k k
e k f k e i k e a y e v l s d d q k r
e k f k e v k e a y e t l s d d q k r
e k f k e i k e a y e v l s d d q k r
d k m k r m n t l y k k m e q d v k v

d k m k r m n t l y k k m e q d v k v
m k f q k l k e a k e i l c d p s k r
d k f i k i q d a y e k i c k e r n i
s i f k e a t q a y e i l i d d n k k
e k f k e i n e a y e i l s s p d k k
m i f m e l n d a w s e f e n q g q k
e a f k v l r a a w d i v s n p e r r
e t f q k l q k a k d i l t n e a s r
r k f k q v a e a y e v l s d a k k r
d k f k e i n n a h a i l t d a t k r
d k f k e i n n a h a i l t d a t k r
k k f i d i a a a k e v l s d p e m r
e e f n q g f d e q d l h c d e e l e
q r l v e i i k a y h y l k t v v r e
v k f k e i n e a y e v l k d k d k r
e s f k k l q c a y e v l s d i v k k
e k f k e v k e a y d v l s e p q k r
e r f a e v n q a y e i i g d k d k r
l e f i t i a n a r l a v i n a a w a
r k f k e i g e a y e t l k d p q k r
e r f r d v i q a y q l l k q a g f c
r k f k e i g e a y e t l k d p q k r
g k f k e i k e a y e i l i n e e k r
k k r i v l q k s i e i n k g y k i l
k k k i i l e k s i q i n k g y k t l
n k f k e i k e a y e i l i n e e k r
e e f r e t e g l r a d e t l e d s d
e e f r e t e g l r a d e t l e d s d
e e f r e t e g l r a d e t l e d s d
e q f m l v k e a y d v l r n e e k r
q v y e l v d v a f s a i g y k d s r
e q f m l v k e a y d v l r n e e k r
e y f t c i t k a y e q v g m s d v k
e h s r k l n e a y k e l a d p f k r
e r f r v i a t a y e t l k d d e a k
k d l m e s s k s
r r f i e a k e a f d f l y d k e k r
q k f k k i a q a y e i l t d k k k r
a s f l e l k n a y d v l r r p a d r
g k s k w a v a m k p l i h e l r a e
e m f e r i n a a y e l l s s e t a n
e a s k v v n n a f s l l m d p a k r
q f f d k i a k a h q a l t d k e a r
q f f d k i a k a h q a l t d k e a r
e a f k a l g n a y a v l s d t d k r
d k f k e i s f a y e v l s s p e k r
k k f i d i a a a k e v l q d e e k r
g r f m e i a e a y e v l s d p l r k
r v f v k l r r a h e v l l d p k q r
t k f q e i s e a y e v l s d d t k r
e q f k q i s q a y e v l s d e k k r
n k f k e i a e a y d v l s d d k k k
e m f k e i n y a n a v l s n p n k r
e e f k k v s i a y s v l s d p n k r
q q f r l l q a a y d v l s d p r e r
k k f h q v a m a y e i l s s e d k r
d k f k e i s f a y e v l s s p e k r
e k f q d l s s a y e v l s d k e k r

t k f q l l n k a y q i l s d e e k r
d e f v k i n k a y e v l k d e n l r
k k f i d i a a a k e v l s n e e k r
e q f e k i q i a y d n l k a l y k n
e k f k e i n a a y e i l s d e k k r
e k f q k i n e a y e k v k k h l e r
d k f k l v n e a y e v l t n d e k r
a l f r d v l a a y r l l q d t p v v
q l n a a r d r l i k p r g s a r v e
e r f k q v s a a f d i v g d a e k r
t e f i e v a e a k a a s i n a a f s
g r f k e i n e a y s v l s d p q k r
e k f k q i s q a y e v l s d a k k r
r r f k e v s e a y e v l g d a q k r
r r f k e v s e a y e v l g d a q k r
k r f k e v s e a y e v l s d p q k r
e k f k e v n e a y e v l s n d d k r
e k f q q i a e a y d v l s e p q k r
e k m r e i n e a y d f l m k k s q n
e k f k e i n e a y q v l s d p d k k
e k l a k i i e a y e a l k
k e y r v i r d a y e t l i d k s k r
e n f k e v n e a y d v l k d p d k k
e k f r e a s v a h e v l t d p d k r
d r f k k a a e a y d v l g d d k k r
q k t q q i k k a y e q i r k v r s m
v k f k e a r e a y e v l c d s r k r
e k f k k v g e a y e v l s d p e k r
e a f e i l n k a y e e l
e k f k e l a q a y e v l s d p e k r
k k f i d i a s a k e v l t d p e m r
e k f k e l a q a y e v l s d p e k r
e k f k e i g e a y a v l s d p q k r
e k f a q v s e a y s v l s d t e k r
e k f k e l t v a y e v l s d t e k r
l k f k e v g e a y a i l s d a q k k
l i f m e l n n a w t d f e n d a t q
l i f m e l n n a w t d f e n d a t q
m a f d i v s r s w k i l e n e l t r
r q s i g l c q a f t g f t f f i c t
e r f q q v d e a f r v l q e k f a k
e r f q l i q q a y e v l s d p q e r
s d f n a i n a a w n
q a f r r i s e a a d c l t d c q k r
k d f l d k a k
t l l e r d p q t y s v c t l r p l t
e v f m k i c e a y q t l h r v n s r
i m f n r t k r a y e v l s d p q q r
q r f i e i q q a y s v l s k i k s n
a r f v q i s e a y k t l i k p e r r
e a f k v l q r a f e l i g e p e n r
d y f t c i t k a y e i l g t s k p r
r k f q e v s e a y e v l s d e q k r
k k f r e i n q a y e i l g n y r l r
e a f k v l q r a f e l i g e p e n r
e r f h e l s k a l e i l t d e s a r
e i f k q v a k a y e v l s d k k k r
e a f k a l g n a a g v l t d a e k r

t k f q d l g a a y e v l s n p d k r
d k f k e v a e a y e v l s d k s k r
e k f k v l s k l y q v l t d t q k r
e q f r e v v a a f e v l f d k e k r
k e f l r i n e a h r v l i d h q r r
k h f q e l s n a y n i l t d e t k r
i q f r n l v s i y e v l k d p s r r
t q f k l v a t a y e i l r d e e s r
k k f i d i a a a k e v l t d p e k r
k s f m m l s k a y q a l t d d v a k
e k f k a i s q a y e v l s d a d k r
d k f k e i s f a y e v l s d p e k r
d k f k e v n r a h s i l s d q t k r
d k f k e v n r a h s i l s d q t k r
d k f k e v n r a h s i l s d q t k r
d k f k e v n r a h s i l s n q t k r
a k f q q l k e a k e t l c d p e k r
a k f q q l k e a k e t l c d p e k r
e r f k e i a e a y e v l s d k k k r
e r f q l i q q a y e v l s d p q e r
r k f q e v s e a y e v l s d e q k r
r k f q e v s e a y e v l s d e q k r
l k f k e v g e a y a i l s d a h k k
e k f k q l t d v y d v l k d p a k r
a v s g m i q n a y a t l g n p e k r
e m y e e v r r a y e e i c k s p a v
e t f k k v n k a f g v l t d k k k r
d g y m r l v n a y e r y a r g e e p
d k f a e i n k a y t i l k d r y k r
m k n k l k n a a s d e e r e k i k k
k e a v e i m d a y t s i m k s p p l
e k q k t v n k a y g l v s n k k r y
a l f d k l k n t h k n k e g e y y q
k e f q r l h r a y e t l i d p q l r
a k f k e v q e a y e v l s d s q k r
q q s a t i n q a w q t l r h p l m r
a r f k e v a e a w e v l s d e q r r
q k a q e i q q a y e l i k q q k g f
a k f k e i k e a y e v l t d s q k r
q g f k q l r q a y e e a l r i a q s
q g f k a l r q a y e e a l r l a v n
e k f k e l a q a y e v l s d p e k r
i k f k e i s e a y e i l s d d s k r
e k f k e i n e a y q i l s d s q k k
n k m k e i n d a y e n l t k
e k f k e v q t a y e i l s d s e k r
e l f n k i g r a y e v l s d p t k r
e k f k e l a q a y e v l s d p e k r
e k f k q i t e a y e i l t d d q k r
q k s t e v n d a l k t l k d p i l r
e k f a a y a k a y p e l a a e f k r
e k t q q i q a a y d l i c k a k g w
e k f k e i n e a y e v l g d d q k r
e v m k a i n a a f e f l n s l e s e
e k f k k i q k a k d v l t d e e t r
e k f k k i q k a k d v l t d e e t r
e r f q l v r a a y d a i e a g d a d
e a f a r v n e a y e r l q g d a

e k f k k v q k a k e v l t d d e k r
e l m q q l n t l w t k l k d g l y r
e l m q q l n t l w t k l k d g l y r
e l m q q l n t l w t k l k d g l y r
e k f k e i n a a y e i l s d e e k r
e k f k l i n e a y g v l s d e k k r
e k f k e i n a a y e i l s d e e k r
k r f a i i q e a y s h i k k h a
e k f k e l a q a y e v l s d p e k r
r v f e s r r r i n m a n k q i n p e
a t f i r i e k a y r k v l s h v i e
e a f k v l r a a w d i v s n a e k r
r c f q i l e k v y s i l g d r e q r
v m f m r i a k a y a a l t d e e s r
d k f r q i s p a c q v l s d a k k s
g a f k a i g t a y a v l s n p e k r
r r f k q v a e a y e v l s d a k k r
k k f k l v s e a y e v l s d s k k r
a k f r e i a e a y e t l s d a n r r
m i f m e l n d a w s e f e n q g q k
k a f e a v d k a y k l l l d q e q k
t q f r q l v a i y e v l k d d e r r
r h f l e i q a a y e v l s q p r k p
e i f k e i n a a h a i l s d s k k r
e a f l l v a t a y e t l k v s q a a
r k f k e v a e a y e v l s n d e k r
m i f m e l n d a w s e f e n q g s r
s r f v e l s e a y r v l s r e q s r
e t f q k l q k a k e i l t n e e s r
d m f e k v n k a y e f l c t k s a k
d k f i q i s k a y e i l s n e e k r
e k q k h l d k i y q e r a s q a e r
q k f i e i d q a w k i l g n e e t k
e n s n k s g f s y f d i g f i n t s
e k f k q i s q v y k v i s d a t k r
a k d l l e g q a k k
e q f k l i q a a y d v l s d p q e r
a k d l l e t t t k h
a k f r e i a e a y e t l s d a n r r
d a f k a i g n a f a v l s n p d k r
d y f t c i t k a y e m l s d p v k r
r l f n l v h q a y e v l s d p q t r
d a f k a v v n a r t a l l k n i k
e v f k h l q n e i n r l e k q a f l
r r f q i l g k v y s v l s d r e q r
v m f m r i a k a y a a l t d e e s r
g k f k e i g e a f t i f s d p k k k
e k i k e v a s w p e l v q g l c s i
e r f t r i s q a y v v l g s a t l r
d y f t c i t k a y e m l s d p v k r
d y f t c i t k a y e m l s d p v k r
d k f k e i n n a h a i l t d a t k r
d k f k e i n n a h a i l t d a t k r
e k f k e i n n a h a i l t d i s k r
e k f k q i s q a y e v l s d a k k r
d k f k e i s f a y e v l s n p e k r
e k f s q l a e a y e v l s d e v k r
e k f q d l g a a y e v l s d s e k r

e a f k a i g t a y a v l s n p e k r
k k f k e v a e a y e v l s d k h k r
s r f v e l s e a y r v l s r e q s r
t n f k e i s f a y e v l s n p e k r
e l f h q l s q a l e v l t d a a a r
r l f n l v h q a y e v l s d p q t r
e k f k e i a e a y d v l s d p k k r
e k f k e v a e a y e v l s d p k k r
e k f k e i a e a y d v l s d p r k r
r k f k q v a e a y e v l s d a k k r
k k f i d i a a a k e v l s d p e m r
g d f l k i n r a y e v l k d e d l r
f l y k k m e q g v k v a h q p d f g
f l y k k m e q g v k v a h q p d f g
d k f p a k v t e g f f e v f t p e l
a k f k e v t e a y e a l s d p q k r
e k y k e v q e a y e t l s d e q k r
d k t h q i m k a y e l i c e t k g w
e k f k e i q k a y n i l s d k q k r
e l y v q v r r a y k a l v d r e a f
a t m a r v t v a y e r l s e l t n r
e r m r l g t e a y q l l r r i p y g
n p s p s a n e a f l r l t m m k d k
r h m q r i i e a y k i l h n p k t k
d m f k k v s n a y e v l s d p e k r
e a f k a l q g d y e e a l t d a r r
q q m s a i n e a y d t l l d s e k r
k m f r d v n e a k e v l l d e e k r
e k f k k v a e a y e i l s d a e r r
e q f q r i e e a h r v l s d l r q r
e d f a e a k q a y e t l s d p q k r
d k h r v a t k r d e h a s a n a g v
e k f k e a t e a y e i l r d p k k r
e k f k e i s e a y e a l s d p q k r
e k f k e i s e a y e a l s d p q k r
e k f k e l a q a y e v l s d p e k r
a k f k q i s e a y d v l s d s q k k
a k m q r l n e l f q r v q v t l m e
e v f k h l q n e i n r l e k q a f l
d a f k a i g n a f a v l s n p d k r
a k f q q l k e a k e t l c e p s k r
e k f k e i t e a y d v l t d s e k k
t k f k k i t e a y n f l k k n k v d
e k m a k i n k a y e i l s d k k l k
n k f k e i q e a y a v l s d s d k r
e k f k e l g q a y e v l s d p e k k
e k f k e i n e a y t v l s d p e k r
t r v a a i n a a y e m i e r g l r h
h k f k e i n e a y e t l k d p q k r
d r f a a a n q a y e i v g d e k n r
t s f l a a r i n e a k d v l l s n h
d r f r d v l q a y r v l k q a g l c
h e t k r l n a a y q a a r t q k g f
s r f s e i l e a h n v l k d p v k r
e k f k e i s e a y a v l s d d e k r
e k f i k i k e a y e i l k d p q k r
e k f k e i s e a y a v l s d a e k r
e k f i k i k e a y e t l k d p q k r

e k f k e i s e a y a v l s d p e k r
e k f k e i s e a y a v l s d d e k r
e s f k e a k e a y e v l s d e q k r
v d f k a i t r a y r q l r a m r r f
e l f q r v q v t l m e i r s q c g s
a k m q r l n e l f q r v q v t l m e
a l m q e l n s l w g t f k t e v y n
a l m q e l n s l w g t f k t e v y n
e i f k q i a e a y d v l s d p v k r
y i a a k i n e a k d l l e g q a k k
w t v n g i a n s w c y e c l c v s s
e k f k e v a e a y e v l s d p k k r
e a f k a i g n a f a v l s n p d k r
e r f t r v s e a y l v l g s t i l r
e k f k q v a e a y h i l s d a k k r
g d f l k i n r a y e v l k d e d l r
p e f l k d v e a a t g v d l g s s r
d a f k k i g n a y a v l s n p e k r
e a f k i l r a a w d i v s n p e r r
e k f q d l g a a y e v l s d s e k r
e k f k e i n n a h t i l t d t s k r
d k f k e i s f a y e v l s n p e k r
k k f k e v a e a y e v l s d r s g p
e k f q d l g a a y e v l s d s e k r
r k f k q v a e a y e v l s d a k k r
r k f k e v a e a y e v l s n v e k r
k k f i d i a a a k e v l s d p e m r
k a f e a v d k a y k l l l d
l k p i p i c r s c s s i c r r s i l
m i f m e l n d a w s e f e n q g s r
e t f q k l q k a k e i l c n a e s r
t e p d s s
a k f r e i a e a y e t l s d a s s w
e k f k e i n n a h t i l t d t s k r
d q k e k e n i h l r e c i k s f e v f g
r h f l e i q a a y e v l s q p k k p
e l f h q l s q a l e v l t d a a a r
r l f n l v h q a y e v l s d p q t r
r k f k q v a e a y e v l s d a k k r
a t f i k i e e a y r n v l s h a i k
d y f t c i t k a y e m l s d p v k r
q k f i e i d q a w k i l g n e e t k
d a f k a v v n a r t a l l k n i n g
d a f k a l
e v f k h l q n e i n r l e k q a f l
r r f q i l g r v y a v l s d k e q k
v m f m r i a k a y a a l t d e e s r
e r f t r v s e a y l v l g s t i l r
e i f k e i n t a h a i l t d p t k k
d y f t c i t k a y e m l s d p v k r
d y f t c i t k a y e m l s d p v k r
d k f k e i n n a h a i l t d a t k r
k k f k e v a e a y e v l s d k h k r
e a f k a i g t a y a v l s n p e k r
r r f k q v a q a y e v l s d v r k r
a k f r e i a e a y e t l s d a n s r
k k f k e v g e a f t i l s d p k k k
e k f q d l g a a y e v l s d s e k r

e k f k q i s q a y e v l a d s k k r
e k f k e i a e a y d v l s d p r k r
e k f k e i a e a y d v l s d p k k r
s r f v e l n e a y r v l s r e e s r
r k f k q v a e a y e v l s d a k k r
r k f k e v a e a y e v l s n v e k r
k k f k q v s e a y e v l s d s k k r
e k f k l i s q a y e v l s d p k k r
t q f r q l v a i y e v l k d d e r r
k k f i d i a a a k e v l s d p e m r
e k f s q l a e a y e v l s d e v k r
e k f s q l a e a y e v l s d e v k r
e r f k v v s e a h n v l s d p v k r
a k f k e i s m a y e v l s d p e k r
e r f k a v s e a h n v l s d p a k r
a k f k e i s v a y e v l s d p d k r
e k f k e v n e a y e v l s d e e k r
e k f k e v n e a y e v l s d e e k r
q t f v e i n n a y s i l s d p n q k
k i f a e i n e a n d v l s n p k k r
q t f v e i n n a y s i l s d p n q k
a k f k e i q e a y e i l s d e t k r
e k f k e v n e a y e v l s d t e k r
d t f v k i n n a y a v l s d t t q k
q i f a e i n e a n d v l s n p k k r
a k m r e i n e a y e v l s n p e k k
e k f k q v s a a f e v l s d t r k r
e k f k e i q r a y d t l s d l s k r
m m s s t i n d a y r t l k n p i d r
e k f k e v q k a y e t l s d k e k r
n f f k c i q k a t e v l l d p i k r
d e f q k v q q a y e l l n n d e e r
e k f k e c s q a y e i l s d p e k r
e k f k e l a q a y e v l s d s q k r
a k f k q i s e a y d v l s d s q k r
e r f k n i k e a y e i l s d p n k r
a k f k d l n e a n e v l s d p e k r
i a s r k q l i e e a y v v l s d p k
l l s k l v n p a y e t l s v e r t r
d k l k a i n e a r d k l r s l n g n
d k f i a l t e a y r f l l t v v p p
e k m r l f n e a y t v l s d q k
a s f k e v n e a y e v l s d a d k r
t k i k r i n a a y n r v k s v t p t
t f t c l v n p a y e q l k n k h e r
e k f k i i g e a y e m l s d a t k r
r q f q q i n e a y a t l s n p d r r
e q i i r i n a a y e i l g d n q s r
e l f k e v a y s y s i l s d p e k r
a a f k l v a e a q s t l s d r t k r
e k f k e l a q a y e v l n d p e k r
a k f k q i s e a y e v l s d p q k r
d a f k a v s k a f q c l s d a e s r
q k f k d i s n a y e v l s d d e k r
e k f v a v q k a y e r l q a s m q g
e k f v a v q k a y e r l q
g a f k l v t e a w e a i s s g h a p
s r f q q v h e a y q v l s d e k r r

g a f k m v q e a w t v l s d k t k r
a a l r l v n d a y a v l s d p a k k
g a f k l v q t a w d v l s t r h p p
s r f l q i l a a y e i l s d s q r r
g r f r r v y d a y t v l h s d a t r
r r f i e v q e a y e t l s d p s r r
k r f a e i n n a y e i l t d q e k r
n f c m f i n e v y t v l t d p i q r
e a f v k l n n a f k d l q d p e k r
s a f k l i q d a w d v l s d k d k k
a r f k a i t e a y e a l l d q q e n
q k f q e l g e a y q v l s d p s k r
e k t q q i q s a y d l i c k t k g w
e k f k e i q e a y e v l s d k q k r
a k f k e v q e a f d v l s n t n k r
d e f m k i h a a y s t l s d p d k r
l r f q q i q e a y s v l s d d t k r
d k f k e i s n a y e v l s d d k k r
h n f r k v n e a y q v l g d i d k k
k k f k e i n e a y q v l g d i d n k
h n f r k v n e a y q v l g d i d k k
e k f k n i a e a y d v l a d e e k r
q k m a s i t a a y e l l s d p k k k
k d f i e i a n a y e t l s d p e k r
e r f k q i s e a y e v l s d p k r r
n m f k s i s e a y e v l s d e e k r
k k f e l i n s a y q i l s n e e l r
e k f q k i n e a y q v l s d e n r r
t k f r d i n e a y q i l s l d q r r
e l f q r v q v t l m e i r s q c g s
e l f q r v q v t l m e i r s q c g s
s l y r r l e e s l p c l s t q d f i
a l m q e l n s l w g t f k t e v y n
e h f k e v a e a y d v l s d p q k r
a k a a e l n d a y q t l k s v p r r
e r a a q l n e a y q t l k s a p r r
e k t r e l q a a y a l v r e r e g f
e k t r e l q a a y a l v r e r e g f
d k f k e a n e a y e v l s d a s k r
e r f r a v i q a y q l l k q a g f c
a r f q d i s n a f s i l s d p e k r
q w a t r a n e a y q t l r d p l k r
e a f k v l r a a w d i v s n p e r r
m i f m e l n d a w s e f e n q g s r
e t f q k l q k a k e i l s n a e s r
d y f t c i t k a y e m l s d p v k r
d k f k e i n n g h a t l k d g t k r
e k f k q v a e a y q i l s d a k k r
a k f r e i a e a y e t l s d a n r r
k k f i d i a a a k e v l s d p e m r
e k f k q i s q a y e v l a d s k k r
d k f k e i s f a y e v l s n p e k r
e k m k k m n t l y k k m e d g v k y
k s f k e i n q a y e t l k d p q k r
r k f k e i n e a y e m l k d p q k r
a q f k e v n g a y d v l k d g d k k
i k f k e i n e a y e v l k d g d k r
e r f k e i q e a y s v l s d p e k r

k k f k e i n a a y d v l k d e q k r
i t a a e l n n a y s t l k d a l k r
k k f k e i n a a y d v l k d e q k r
e q s s t l n q a y h t l k d p l r r
k l y e r l n l a t q i l s n s s n r
h k f h l l s t a t n i l t n a d v r
e l f k a v v h a h s i l t d e d q k
v t i n k i q d a y k i l s n i k t r
e k l h r f k v i s q a y d i l c d p k k k
a k f q a v g e a y q v l s d p g l r
e r f q a i s e a y q v l g d d d l r
e a f k v i n r a f e v l s n e e k r
d k q e s i h e t m s q i n e a y e t
k k f h d l q n a y e i l s d e t k r
q k f i e v g e a y d v l s d p e k k
e t y v q i t k a y e s l t d e l v r
e k f k e i s e a f e i l n d p q k r
i k f k e i t a a y e i l s d p e k k
e k f k e a s a a y e i l s d p e k r
e t m s q i n e a y e t l s d d d k r
r k f q e i c q a y e i l k d n r l r
q k f a v i r a a y e v l s d p q e r
g f f k i i q k a f e t l t d s n k r
e k f k e l a q a y e v l s d p e k r
q k a q e i q k a y e l i k e q k g f
a r f k e v a e a w e v l s d e q r r
a k f k e i k e a y e v l t d a q k r
q g f k q l r e a y e n a l q g t t s
q g f k r l r q a y e e a q h w a a s
e y f r l l l a a n a l l s d k r r r
e k f h m l q l a y n a l i d v q l r
k r f q r l q l a h e v l s d a t k r
e l y t l l g l i v n i l r n t e t r
y t i d q v k e a y q v l s s e k d r
d a f d i l k k a e s d l v n d k i r
d k f k e i s r a y e i l a d e e k r
a r f k e v g e a y t i l s d p e s r
p q f q l i q k a h e v l k d p k l r
r n t e t r k r y d y f l k n g f p r
e k f h m l q l a y n a l i d v q l r
i e f d k v a i a y g v l s d k k r r
e r f r g v q e a y d i l k d p e s r
e k f i e i n k a h e v l s d p e q r
e a f k m v s k a f q v l s d p n l r
d k f k e i s r a y e i l a d e e k r
k k f k e i s l a y e v l s d p q r r
e k f q k i s e a y q v l g d e k l r
e i f s q i n a a y n i l s n d d k r
k r f q r l q l a h e v l s d a t k r
k h y i e i t n a y r a l t d d k t r
e k f q k l a e a y q v l s d p k l r
d k f v e i k q a y e v l q d p k k k
e k f q i i q h a y e v l s d p s k k
e q f q l v n e a y y v l s d n s r r
e k f i e i n k a h e v l s d p e q r
s f f k c i q k a y e i l s d p v r r
e k m k k m n t l y k k m e d g v k y
e k m k k m n t l y k k m e d g v k y

t k f k a l s a a y h l l s d p e q r
k s f k e i n e a y e t l k d p q k r
e r f a e a g r a y e l l r d p v r r
d r f r a v i q a y q l l k q a g f c
d r m a v l n a a y e a i e r e r r a
e k f g k l q a a y d l l k d p v r r
e k f k e l a q a y e v l s d p e k r
e a f v f l r q a y s v i g l e e s v
e k f k e i s e a y e v l s d d n k r
d k y k e v q e a y e t l s d d q k r
q k y k d v q e a y e t l s d s q k r
e r f k e i n a a y e v l s d p q k k
e r f k e i s e a n d i l g d p k k r
e r f k e i n a a y e v l s d p q k k
e r f k q i s e a y e i l s d p d r r
e k f k d i n e a y d v l s d e t k r
e k f k e i s e a y e v l s d p e k r
v k f q r l n e a y a v l s n p d r r
r k l k e i n q a r d r l k e l l e l
l f s k f v n p a y e v l s r e n d r
a t f m k i h r a y e v l l q r h r t
e k f k k f q k p m n t l s d p q k r
e k f k e i s e a y e v l s d p q k r
e k f k e i s e a y e v l s d p e k r
e k m k q i n e a y a v l m s g e f s
q r f k e i q e a y e v l s d p q k r
e k f k e i n e a y a v l s d p e k r
e k f k e i n n a h a i l t d a t k r
e r f k e a t e a y e v l i d a q k r
r a l r r i l t a y e v l s d p g r r
d q f k r i n a a y a v l s d r a s r
e r f k e a t e a y e v l i d a q k r
a a f k k v q r a l d i l g d p e t r
r l f k e v a e a y d v l s d e k k k
e q f k r v n e a y e a l c v h f r r
v a f q s i k e a y e h v a s n t k k
r r f k e v s e a y d v l s d e n k k
e v f k e i s f a n s i l s d p a r r
e k f k e v s v a y e c l s d p e k r
e m f k r i g h a y e i l s d e e k r
e k f k k v a e a y e i l s d p t k r
r r f k e v s e a y d v l s d e n k k
g l f k e a n e a y e v l k d s n k k
t l f k e i n e a y e v l s d s k k r
e k f k e v k e a y e i l t d a q k k
q q a a q i n d a y q t l k d p l r r
e r f r i l c e a w n v l r q d s l v
e k s q q i q h a y e l i r k e k g i
d k f k e v k e s y e i l t d p q k k
e h f k t i q d a y d i l s d p a k r
d k f k a i n e a y e a l r d p a k r
k k a s q i n a a y d r i q r l r k r
d k f k a i n e a y e a l r d p q k r
a t f k e c k e a y e v l s d g n k r
k k a s q i n a a y d r i q r q r k r
e k f k e i n n a h g i l a d s t k r
a v l i n k c r n m l k k c i v m
a a f k e c k e a y e v l a d t k k r

q k v r q i n a a y d r i q r r c r r
e r f k a v n e a y e a l r d p n k r
q k a q e i q a a y d l i k r e k g f
e k f k e a k e a y e i l t d a q k r
q q a a t i n d a y q t l k h p l k r
e k f k e l a q a y e v l s d p e k r

81	82	83	84	85	86	87	88	89				1	2	
a	q	y	d	r	f	g	h	a	56.52%	39			1	1
a	a	y	d	q	y	g	h	a	62.32%	43			1	1
d	l	y	d	q	a	r	q	a	37.68%	26			0	0
r	v	f	d	d	t	g	y	d	39.13%	27			1	0
									31.88%	22			0	0
									24.64%	17			0	0
i	e	k	e	r	r	v	a		28.99%	20			1	0
a	a	y	d	r	f	g	h	a	63.77%	44			1	0
d	l	y	d	q	a	r	q	a	46.38%	32			1	0
									24.64%	17			0	0
									31.88%	22			0	0
e	i	y	d	q	y	g	e	d	56.52%	39			0	0
e	i	y	d	q	y	g	e	e	66.67%	46			0	1
a	q	y	d	q	f	s	r	y	62.32%	43			1	1
a	q	y	d	q	f	s	r	y	62.32%	43			1	1
l	n	y	d	l	k	i	g	y	40.58%	28			0	1
a	i	y	d	s	l	g	v	k	43.48%	30			1	1
k	l	y	d	r	c	g	e	e	55.07%	38			1	0
r	i	y	d	a	e	q	m	q	39.13%	27			0	0
k	a	y	d	l	y	r	t	t	50.72%	35			1	0
r	s	y	d	l	y	g	s	e	59.42%	41			1	1
e	k	y	d	k	v	l	k	e	34.78%	24			0	0
a	q	l	r	t	k	q	l	d	37.68%	26			1	0
k	e	y	d	q	s	l	a	e	44.93%	31			1	0
r	q	f	d	a	g	q	d	p	46.38%	32			1	1
a	a	y	d	y	e	l	s	l	34.78%	24			0	0
g	k	y	l	l	t	l	n	g	23.19%	16			0	0
r	e	y	d	t	y	g	q	t	60.87%	42			1	1
r	r	q	r	n	k	k	s	d	31.88%	22			0	0
k	n	w	e	k	y	g	n	p	43.48%	30			1	0
									44.93%	31			0	0
a	s	y	d	k	w	r	n	s	39.13%	27			1	0
a	i	y	d	e	r	g	t	v	49.28%	34			0	0
s	r	y	d	s	g	q	d	l	52.17%	36			1	1
a	i	y	d	e	g	g	e	a	59.42%	41			0	0
r	t	e	s	v	v	d	l	n	34.78%	24			1	0
k	l	y	d	k	g	i	l	h	39.13%	27			0	0
k	k	c	l	e	v	y	e	e	34.78%	24			0	0
r	i	y	d	q	y	g	k	d	60.87%	42			1	1
									24.64%	17			0	0
a	w	y	d	n	h	r	e	q	49.28%	34			0	0
a	r	r	g	i	v	e	d	l	26.09%	18			0	0
a	a	f	i	k	d	f	n	n	43.48%	30			0	1
n	d	y	n	y	l	l	d	n	42.03%	29			0	0
r	i	y	d	q	y	g	k	d	43.48%	30			0	0
r	a	f	d	q	y	g	i	t	44.93%	31			1	0
n	t	d	g	p	n	p	s	n	28.99%	20			1	0
q	n	l	f						21.74%	15			0	0
a	a	y	d	r	l	l	n	a	36.23%	25			0	0
r	a	f	d	s	i	d	p	e	34.78%	24			0	0
s	e	y	d	a	i	l	s	r	63.77%	44			1	1
k	l	y	d	m	y	g	h	a	68.12%	47			1	1
r	h	y	d	n	a	g	f	e	62.32%	43			1	0
m	s	t	l	l	l	y	r	l	23.19%	16			1	1
q	i	y	d	q	y	g	e	e	57.97%	40			1	1
r	d	y	d	e	l	l	k	k	39.13%	27			0	0
q	a	y	d	t	s	g	k	s	49.28%	34			0	0

r	q	f	d	s	a	g	f	e	57.97%	40	1	0
r	q	f	d	s	a	g	f	e	46.38%	32	0	0
s	m	y	d	v	g	l	y	d	44.93%	31	0	1
q	i	y	d	q	y	g	e	d	59.42%	41	1	1
q	i	y	d	q	y	g	e	d	62.32%	43	0	1
r	l	y	d	t	t	g	s	e	57.97%	40	0	0
a	q	y	d	y	a	i	e	h	43.48%	30	1	0
t	l	y	d	r	e	l	h	l	33.33%	23	1	1
k	l	k	e	e	q	e	a	f	30.43%	21	0	0
									21.74%	15	0	0
s	s	y	d	v	g	l	y	d	46.38%	32	0	1
e	e	e	e	m	e	i	t	e	34.78%	24	0	0
a	w	y	d	s	h	r	s	q	44.93%	31	0	0
q	a	y	d	a	c	g	k	s	47.83%	33	0	1
e	a	y	d	r	t	g	k	f	50.72%	35	0	1
v	q	y	d	m	d	n	r	v	39.13%	27	0	0
r	d	y	d	e	q	l	r	k	36.23%	25	0	0
e	n	f	e	k	y	g	h	p	43.48%	30	1	0
a	l	y	d	q	y	g	e	a	63.77%	44	1	1
q	m	e	g	t	e	e	f	e	33.33%	23	1	0
s	q	f	d	g	d	l	n	l	31.88%	22	0	0
s	t	f	y	y	k	r	k	k	33.33%	23	1	1
a	v	y	d	r	r	t	l	l	39.13%	27	0	0
a	v	y	d	q	y	g	e	e	59.42%	41	1	1
a	a	y	d	k	y	g	k	e	57.97%	40	0	1
s	l	y	d	r	y	g	e	a	63.77%	44	1	1
a	d	y	d	l	k	r			42.03%	29	1	0
l	q	g	p	q	p	w	r	l	30.43%	21	0	0
q	e	y	d	k	k	r	m	r	44.93%	31	1	0
v	s	g	g	s	g	g	d	e	40.58%	28	0	0
l	i	y	d	l	y	g	m	e	50.72%	35	0	0
s	g	s	a	f					24.64%	17	0	0
a	s	y	n	a	g	s	d	s	43.48%	30	1	0
									42.03%	29	1	0
n									24.64%	17	0	0
m	v	y	d	e	i	h	g	y	37.68%	26	1	1
a	v	t	a	i	i	a	e	e	24.64%	17	1	1
s	q	y	d	n	r	y	r	s	44.93%	31	1	0
t	l	h	d	n	k	r	k	t	44.93%	31	1	0
a	i	y	d	q	y	g	e	e	65.22%	45	1	1
k	n	y	d	l	y	g	d	e	#REF!	####	1	0
r	i	f	d	s	t	d	e	f	39.13%	27	0	0
a	v	y	d	q	t	g	s	v	#REF!	####	0	0
a	i	y	d	s	t	l	r	v	44.93%	31	0	0
f	l	y	d	v	g	a	y	n	40.58%	28	0	0
s	a	y	d	r	f	g	e	a	56.52%	39	1	0
q	i	y	d	l	y	g	e	e	62.32%	43	1	1
k	k	y	d	v	s	g	s	d	47.83%	33	1	1
n									30.43%	21	0	0
g	q	w	y	y	r	a	g	v	27.54%	19	0	0
l	a	a	a	i	a	e	e	e	20.29%	14	1	1
e	i	y	n	k	y	g	e	e	66.67%	46	0	1
a	a	v	e	k	q	r	k	a	17.39%	12	0	1
k									27.54%	19	0	0
r	f	y	d	w	t	l	a	q	44.93%	31	0	0
v	v	y	d	n	d	l	r	s	44.93%	31	0	1
v	l	y	d	r	d	l	s	m	43.48%	30	0	0
i	y	n	v	q	g	q	t	q	40.58%	28	1	0

i	a	y	d	q	k	r	k	l	46.38%	32	1	0
f	v	e	s	i	a	k	a	y	36.23%	25	0	0
a	v	y	d	q	y	g	e	e	63.77%	44	1	1
s	v	y	d	r	r	m	l	r	40.58%	28	0	0
a	h	y	d	r	y	l	l	s	42.03%	29	0	0
t	a	y	d	k	y	g	k	e	56.52%	39	0	1
s	l	y	d	r	y	g	e	a	63.77%	44	1	0
a	i	y	e	q	y	g	e	e	63.77%	44	1	0
a	r	f	d	r	g	e	d	l	50.72%	35	1	0
r	k	y	d	g	s	g	s	d	47.83%	33	1	1
r	i	f	d	s	t	d	e	f	40.58%	28	0	0
e	e	t	i	t	d	p	t	l	10.14%	7	0	0
s	i	y	d	r	e	l	q	l	27.54%	19	0	1
s	q	y	d	l	e	e	e	m	50.72%	35	1	0
f	e	y	d	f	t	g	i	y	59.42%	41	1	1
t	q	y	d	r	a	l	k	l	42.03%	29	0	0
r	f	h	d	m	r	r	k	p	46.38%	32	1	0
d	y	i	l	t	q	v	h	a	27.54%	19	0	0
q	a	y	d	k	e	q	a	k	37.68%	26	1	0
k	l	f	d	d	l	l	r	i	34.78%	24	0	0
v	l	s	d	p	q	k	r	a	43.48%	30	1	1
s	q	y	d	i	r	r	r	i	43.48%	30	0	0
a	a	y	d	r	r	k	s	l	49.28%	34	1	0
s	s	y	d	q	r	r	k	k	44.93%	31	1	0
t	s	y	d	q	r	r	i	s	40.58%	28	0	1
d	l	y	d	q	f	g	h	e	60.87%	42	1	1
r	q	f	d	q	v	g	i	v	52.17%	36	1	1
k	s	y	d	d	e	l	k	r	34.78%	24	0	0
i	l	y	n	v	k	r	g	k	46.38%	32	1	0
r	k	y	g	s	d	s	r	a	47.83%	33	0	0
r	c	c	h	f	s	t	q	n	34.78%	24	1	0
s	g	f	h	p	q	t	q	s	21.74%	15	1	0
e	e	y	d	k	l	q	y	r	#REF!	####	0	1
e	i	y	d	q	y	g	e	d	#REF!	####	0	0
e	i	y	d	q	y	g	e	d	#REF!	####	0	0
a	v	y	d	q	t	g	s	i	#REF!	####	0	0
									24.64%	17	0	0
t	l	y	d	r	e	l	h	l	27.54%	19	1	0
y	q	a	l	t	d	s	v	s	31.88%	22	1	0
r	d	y	d	e	l	l	k	k	39.13%	27	0	0
e	a	y	d	r	t	g	k	f	47.83%	33	0	1
s	s	y	d	q	k	r	k	s	50.72%	35	1	0
r	w	k	g	r	r	n	l	s	33.33%	23	1	0
d	l	y	d	q	v	g	h	e	60.87%	42	1	1
a	e	p	a	s	s	s	s	s	40.58%	28	1	0
s	m	y	d	v	g	l	y	d	43.48%	30	0	1
n	l	y	i	l	k	f	l	v	28.99%	20	0	0
a	y	l	d	e	c	i	a	d	28.99%	20	0	0
e	i	y	d	q	y	g	e	d	#REF!	####	0	1
a	r	y	l	l	s	l	q	g	26.09%	18	0	0
r	i	y	d	e	a	g	e	d	59.42%	41	0	0
a	q	y	d	q	f	g	h	a	62.32%	43	1	1
a	h	y	d	q	f	g	h	t	60.87%	42	1	1
a	r	y	d	q	f	g	h	e	52.17%	36	1	1
a	h	y	d	q	f	g	q	a	72.46%	50	1	1
a	h	y	d	q	f	g	h	t	65.22%	45	1	1
a	h	y	d	q	f	g	h	a	72.46%	50	1	1
a	h	q	p	d	f	g	t	w	24.64%	17	0	0

a	h	q	p	d	f	g	t	w	24.64%	17	0 0
a	l	y	d	k	w	r	r	s	44.93%	31	1 1
r									#REF!	####	0 0
a	k	y	d	r	f	g	h	s	56.52%	39	1 1
r	n	y	d	s	l	g	n	t	#REF!	####	1 1
p	l	y							24.64%	17	0 0
k	e	y	e	m	k	r	m	a	42.03%	29	0 0
a	r	y	d	h	w	r	r	s	34.78%	24	1 1
d	i	y	d	r	y	g	k	e	65.22%	45	1 1
n	i	y	d	k	y	g	s	l	59.42%	41	0 0
n	i	y	d	k	y	g	s	l	59.42%	41	0 0
k	k	f	d	d	g	e	d	p	49.28%	34	1 1
p	s	d	n	e	e	e	n	p	20.29%	14	0 0
s									24.64%	17	0 0
a	a	y	d	r	f	g	h	a	53.62%	37	0 1
r	d	y	d	e	e	l	r	k	37.68%	26	0 0
a	q	y	d	r	f	g	h	q	62.32%	43	1 1
a	q	f	d	r	g	e	i	d	50.72%	35	1 0
s	i	e	k	q	l	e	t	a	31.88%	22	1 0
a	a	y	d	r	f	g	h	a	60.87%	42	1 1
									#REF!	####	0 0
a	a	y	d	r	f	g	h	a	60.87%	42	1 1
s	a	y	d	q	y	g	h	a	62.32%	43	1 1
q	d	s	l	n	r	a	i	h	14.49%	10	0 0
k	n	f	l	n	r	a	i	y	15.94%	11	0 0
t	a	y	d	q	y	g	h	a	60.87%	42	1 1
p	e	p	e	e	s	g	y	a	30.43%	21	0 0
p	e	p	e	e	s	g	y	a	30.43%	21	0 0
p	e	p	e	e	s	g	y	a	31.88%	22	0 0
k	e	y	d	l	a	f	s	r	39.13%	27	0 1
s	e	y	t	l	e	n	l	k	#REF!	####	1 0
k	e	y	d	l	a	f	s	r	39.13%	27	0 1
r	q	a	f	d	s	v	d	h	24.64%	17	0 0
a	k	y	l	i	k	e	y	g	#REF!	####	0 0
t	n	y	d	y	y	l	d	h	31.88%	22	0 1
									#REF!	####	0 0
e	e	y	d	n	r	e	e	r	44.93%	31	0 0
a	d	l	d	r	t	e	n	p	39.13%	27	0 0
r	l	y	d	y	q	l	r	g	36.23%	25	0 0
t	y	f	g	m	i	r	l	l	13.04%	9	0 0
n	s	g	m	p	d	s	h	r	31.88%	22	0 0
r	q	y	d	l	q	n	a	e	43.48%	30	1 0
e	n	w	e	k	y	g	n	p	34.78%	24	1 0
e	n	w	e	k	y	g	n	p	34.78%	24	1 0
r	q	y	d	q	y	g	a	e	59.42%	41	1 1
r	l	y	d	a	r	g	l	e	#REF!	####	0 0
r	q	f	d	q	g	v	d	p	52.17%	36	1 1
e	r	y	d	r	f	g	t	f	49.28%	34	1 0
a	i	y	d	a	l	g	v	q	46.38%	32	1 0
q	e	y	d	a	y	g	s	g	#REF!	####	1 1
q	i	y	d	q	g	g	e	e	63.77%	44	0 1
k	i	y	d	q	f	g	e	e	69.57%	48	1 1
r	v	y	d	e	m	g	e	t	60.87%	42	0 0
r	q	y	d	v	s	g	p	s	60.87%	42	1 0
e	f	y	d	r	h	r	e	s	50.72%	35	0 0
k	a	y	d	m	t	r	i	r	39.13%	27	1 0
r	l	y	d	a	r	g	l	e	#REF!	####	0 0
a	m	y	d	r	h	g	e	e	62.32%	43	1 0

k	i	y	d	e	t	g	s	v	40.58%	28	0 0
k	k	y	d	q	f	g	e	k	#REF!	####	1 1
r	a	f	d	n	g	q	d	p	47.83%	33	1 1
n	t								27.54%	19	0 1
a	q	y	d	q	y	g	d	s	68.12%	47	0 0
									36.23%	25	0 0
a	i	y	d	r	y	g	k	d	63.77%	44	0 1
r	h	h	f	p	p	a	v	t	27.54%	19	0 0
p									24.64%	17	0 0
k	k	f	d	l	g	q	i	d	46.38%	32	1 0
t	v	m	r	e	r	r	e	l	#REF!	####	1 0
a	a	y	d	r	f	g	h	a	55.07%	38	1 1
e	l	y	d	k	g	g	e	q	63.77%	44	0 1
e	s	y	d	r	y	g	k	d	66.67%	46	1 1
e	s	y	d	r	y	g	k	d	66.67%	46	1 1
d	s	y	d	r	f	g	k	d	71.01%	49	1 1
r	r	y	d	q	f	g	h	a	71.01%	49	1 1
a	t	y	d	q	f	g	e	e	68.12%	47	1 1
t	t	y	n	n	s	s	y	g	43.48%	30	0 0
a	n	y	d	r	f	g	t	a	69.57%	48	1 1
									42.03%	29	1 1
d	s	y	i	l	e	t	f	d	#REF!	####	1 1
a	k	y	d	q	f	g	h	a	65.22%	45	1 1
r	i	v	d	m	g	g	d	p	60.87%	42	1 1
k	e	y	d	e	l	k	a	l	57.97%	40	0 1
v									31.88%	22	1 0
a	s	y	d	q	f	g	h	a	62.32%	43	1 1
k	i	y	d	q	f	g	e	e	68.12%	47	0 1
									31.88%	22	0 0
e	i	y	d	q	y	g	e	d	68.12%	47	0 1
q	k	f	d	s	g	e	d	p	46.38%	32	1 1
e	i	y	d	q	y	g	e	d	65.22%	45	0 1
q	a	y	d	q	f	g	h	t	68.12%	47	1 1
a	h	y	d	r	f	g	s	a	65.22%	45	1 1
e	l	y	d	k	y	g	e	e	66.67%	46	0 0
s	r	y	d	n	g	h	d	i	49.28%	34	1 1
q	n	m	f	n	a				24.64%	17	0 0
q	n	m	f	n	a				24.64%	17	0 0
k	r	c	l	e	v	y	e	e	28.99%	20	0 0
l	d	r	r	q	l	k	v	v	#REF!	####	0 0
g	r	r	n	i	q	e	d	e	#REF!	####	0 0
s	w	y	d	n	h	r	e	q	53.62%	37	0 1
									#REF!	####	1 0
i	e	y	n	i	a	t	a	v	#REF!	####	0 0
									#REF!	####	0 0
d	v	f	a	l	v	r	d	k	8.70%	6	0 0
q	i	y	d	s	r	l	r	m	#REF!	####	0 0
a	i	y	d	s	v	g	e	k	43.48%	30	0 1
r	r	r	k	n	k	q	y	q	42.03%	29	0 0
r	d	y	d	d	s	l	l	w	33.33%	23	0 0
l	i	y	d	q	s	i	a	e	#REF!	####	1 0
r	s	f	d	s	v	d	p	e	27.54%	19	0 0
r	e	y	d	t	y	g	q	t	57.97%	40	1 1
r	l	y	d	k	g	i	v	h	39.13%	27	0 0
l	i	y	d	q	s	i	a	e	#REF!	####	1 0
a	a	y	d	k	v	l	k	a	44.93%	31	0 0
g	s	y	d	s	r	n	d	k	#REF!	####	1 1
k	n	y	d	l	y	g	i	n	#REF!	####	1 1

k	t	y	d	r	c	g	e	e	56.52%	39	1	0
e	v	y	d	k	y	g	e	d	65.22%	45	1	1
a	l	y	d	e	q	g	v	i	#REF!	####	1	0
e	i	y	d	q	h	g	e	e	57.97%	40	1	1
a	l	y	d	c	c	f	q	s	47.83%	33	1	0
l	e	y	d	q	l	g	g	i	37.68%	26	0	1
e	k	y	d	r	v	l	k	e	37.68%	26	0	0
t	d	y	d	y	m	l	d	n	40.58%	28	0	0
r	q	f	d	n	g	e	d	p	49.28%	34	1	1
e	n	y	e	k	y	g	n	p	37.68%	26	1	0
q	v	y	d	e	g	g	e	a	63.77%	44	0	1
r	i	y	d	r	y	g	l	k	62.32%	43	0	0
n	i	y	d	n	y	g	s	l	60.87%	42	0	0
n	i	y	d	n	y	g	s	l	60.87%	42	0	0
n	i	y	d	n	y	g	s	l	60.87%	42	0	0
n	i	y	d	n	y	g	s	l	59.42%	41	0	0
a	i	y	d	k	w	r	n	s	#REF!	####	1	0
a	i	y	d	k	w	r	n	s	#REF!	####	1	0
d	i	f	d	n	y	g	e	d	66.67%	46	1	0
s	w	y	d	n	h	r	e	q	53.62%	37	0	1
r	e	y	d	t	y	g	q	t	57.97%	40	1	1
r	e	y	d	t	y	g	q	t	57.97%	40	1	1
s	r	y	d	s	g	q	d	i	55.07%	38	1	1
r	v	y	d	q	h	g	p	d	55.07%	38	0	0
r	r	y	d	m	s	r	e	d	#REF!	####	1	1
e	i	v	p	v	e	d	v	r	33.33%	23	1	0
e	m	y	n	k	g	i	d	p	30.43%	21	0	0
d	s	i	p	y	l	i	c	s	#REF!	####	0	0
d	f	y	d	v	f	g	e	v	24.64%	17	0	0
e	c	g	e	m	s	a	r	l	#REF!	####	0	1
f	e	f	y	n	e	e	l	f	#REF!	####	0	0
e	a	w	l	n	s	e	s	k	31.88%	22	1	0
k	e	t	t	e	t	p	q	e	#REF!	####	0	0
r	d	y	d	n	q	q	e	a	43.48%	30	0	0
a	n	y	d	q	f	g	h	a	68.12%	47	1	0
a	e	y	l	l	s	l	h	g	#REF!	####	0	0
a	e	y	d	q	m	w	q	h	47.83%	33	1	1
k									30.43%	21	1	0
a	*a*	***y***	***d***	*q*	*y*	***g***	*h*	*a*	#REF!	####	1	1
p	a	k	s	v	w	q	p	e	#REF!	####	0	0
p	v	e	e	a	d	d	e	e	#REF!	####	0	0
d	i	y	d	q	y	g	e	d	#REF!	####	0	1
s	r	y	d	q	f	g	h	a	65.22%	45	0	1
q	q	y	d	q	f	g	h	a	62.32%	43	1	1
									44.93%	31	0	1
e	m	y	d	r	y	g	m	d	#REF!	####	1	0
e	n	y	d	n	y	g	e	k	52.17%	36	0	0
e	i	y	d	q	y	g	e	d	#REF!	####	0	1
a	a	y	d	q	y	g	h	a	#REF!	####	1	1
a	e	a	i	i	a	l	n	t	#REF!	####	0	0
r	v	s	g	e	l	p	t	n	#REF!	####	0	0
k									28.99%	20	1	0
a	a	y	d	q	y	g	h	a	#REF!	####	1	1
v	f	t	h	t	d	t	e	n	#REF!	####	0	0
q	q	y	d	q	l	g	h	e	49.28%	34	1	0
q	q	y	d	q	l	g	h	e	49.28%	34	1	0
g	f	d	e	a	d	v	d	t	24.64%	17	0	0
									27.54%	19	0	0

q	m	y	d	q	l	g	h	e	#REF!	####	1	0
v	r	l	l	l	g	p	s	q	#REF!	####	0	0
v	r	l	l	l	g	p	s	q	#REF!	####	0	0
v	r	l	l	l	g	p	s	q	#REF!	####	0	0
r	q	y	d	q	f	g	d	n	57.97%	40	0	0
a	l	y	d	r	y	g	k	k	66.67%	46	0	1
r	q	y	d	q	f	g	d	n	57.97%	40	0	0
									#REF!	####	0	0
e	i	y	d	q	y	g	e	d	#REF!	####	0	1
r	w	a	d	i	l	a	k	v	20.29%	14	0	0
q	t	n	a	s	q	s	k	g	#REF!	####	0	1
k	e	y	e	m	k	r	m	a	42.03%	29	0	0
a	v	y	d	e	q	g	t	v	#REF!	####	0	0
k	n	w	e	e	f	g	n	p	24.64%	17	0	0
e	l	y	v	k	g	g	k	p	39.13%	27	0	0
k	h	k	v	y	v	y	s	n	#REF!	####	1	1
d	i	y	d	r	y	g	e	a	62.32%	43	1	1
s	l	y	d	r	a	g	c	d	59.42%	41	0	1
k	e	y	d	t	l	g	h	s	#REF!	####	0	1
p	l	y							24.64%	17	0	0
k	r	a	l	d	v	i	q	a	#REF!	####	0	0
q	r	y	d	d	i	l	i	n	43.48%	30	0	0
w	g	s	r	r					#REF!	####	0	0
k	i	y	d	q	h	g	s	l	39.13%	27	0	0
a	e	l							37.68%	26	1	0
d	i	y	d	k	y	g	t	e	#REF!	####	1	1
p	l	f							23.19%	16	0	0
r	s	y	d	d	q	l	r	s	21.74%	15	0	0
a	r	y	d	h	w	r	r	s	#REF!	####	1	1
i	v	d	g	p	d	p	e	n	#REF!	####	0	0
s	n	y	d	q	y	g	d	a	#REF!	####	1	0
e	m	q	g	n	a	a	n	r	#REF!	####	0	0
r	e	y	d	l	q	r	c	e	#REF!	####	1	0
f	g	s	l	g	h	g	g	l	#REF!	####	1	1
e	l	y	n	k	g	r			47.83%	33	0	0
									24.64%	17	0	0
a	w	y	d	n	h	r	e	a	60.87%	42	0	0
									#REF!	####	0	0
k	e	y	d	t	l	g	h	s	31.88%	22	0	0
l	r	y	d	e	y	g	d	e	65.22%	45	0	1
r	a	f	n	s	v	d	p	t	#REF!	####	0	0
a	i	y	d	i	y	g	k	r	30.43%	21	0	0
									34.78%	24	1	0
d	q	n	a	d	r	a	s	r	24.64%	17	0	0
a	v	y	d	e	q	g	t	v	#REF!	####	1	0
k	n	w	e	e	f	g	n	p	40.58%	28	0	0
t	r								#REF!	####	1	1
a	y	n	t	w	g	f	h	r	33.33%	23	0	0
r	k	y	d	r	g	l	l	s	36.23%	25	0	0
r	a	f	n	s	v	d	p	t	#REF!	####	0	0
r	a	f	n	s	v	d	p	t	#REF!	####	0	0
n	i	y	d	k	y	g	s	l	59.42%	41	0	0
n	i	y	d	k	y	g	s	l	59.42%	41	0	0
s	i	y	d	k	y	g	s	l	68.12%	47	0	0
e	l	y	d	k	g	g	e	q	63.77%	44	0	1
e	l	y	d	r	y	g	e	q	#REF!	####	0	0
k	q	y	d	a	y	g	s	a	62.32%	43	1	1
k	q	y	d	t	y	g	e	e	63.77%	44	1	0

k	q	y	d	q	f	g	d	d	66.67%	46	1	1
e	i	y	d	r	y	g	r	e	60.87%	42	0	1
r	s	y	d	d	q	l	r	s	#REF!	####	0	1
e	l	y	d	r	y	g	e	q	#REF!	####	0	0
a	a	y	d	k	v	r	k	a	46.38%	32	1	0
a	i	y	d	i	y	g	k	r	50.72%	35	1	1
g	l	y	d	q	y	g	e	e	69.57%	48	1	1
e	i	y	d	q	f	g	e	e	71.01%	49	1	1
e	i	f	d	r	y	g	e	e	68.12%	47	1	1
d	i	y	d	k	y	g	k	e	65.22%	45	1	1
k	k	f	d	d	g	e	d	p	49.28%	34	1	1
k	k	y	d	k	y	g	e	k	#REF!	####	1	0
t	w	n	s	p	e	v	p	t	#REF!	####	0	0
t	w	n	s	s	e	v	g	c	#REF!	####	0	0
a	k	r	r	g	t	r	m	d	#REF!	####	1	1
a	a	y	d	q	y	g	h	a	#REF!	####	1	1
a	a	y	d	q	y	g	e	a	#REF!	####	0	1
									28.99%	20	0	0
a	a	y	d	q	f	g	h	a	69.57%	48	1	1
e	e	e	e	k	q	t	v	q	#REF!	####	1	0
e	r	e	a	f	k	l	q	k	#REF!	####	0	0
v	r	q	h	i	l	r	g	e	#REF!	####	0	0
a	l	e	l	l	r	n	g	v	#REF!	####	1	0
k	f	y	d	s	g	e	m	s	27.54%	19	0	0
k	v	y	d	k	y	g	k	e	59.42%	41	0	0
r	g	a	r	g	g	g	v	p	31.88%	22	0	0
a	q	y	d	a	m	r	c	f	46.38%	32	0	1
a	r	y	d	s	g	e	d	v	#REF!	####	1	1
k	q	y	d	t	f	g	r	n	50.72%	35	0	0
q	l	y	d	t	v	g	r	e	40.58%	28	0	0
s	m	y	d	m	t	g	n	a	#REF!	####	1	0
a	h	s	n	a	a	g	a	s	#REF!	####	1	1
q	a	y	d	q	f	g	k	a	#REF!	####	0	1
a	q	y	d	q	y	g	h	v	#REF!	####	1	1
a	q	y	d	q	y	g	h	v	#REF!	####	1	1
e	i	y	d	q	y	g	e	d	#REF!	####	0	1
a	v	y	d	q	y	g	e	e	65.22%	45	1	1
i	r	s	q	c	g	s	s	s	#REF!	####	0	0
d	q	n	a	d	r	a	s	r	24.64%	17	0	0
l	r	y	d	e	y	g	d	e	65.22%	45	0	1
a	l	y	d	k	w	r	q	s	#REF!	####	1	1
a	m	y	d	q	y	g	h	a	#REF!	####	1	1
n	t	i	h	q	q	t	k	k	39.13%	27	0	0
a	e	y	d	k	f	c	k	l	#REF!	####	0	1
a	h	y	d	r	f	g	h	d	52.17%	36	1	1
e	l	y	d	q	y	g	e	d	65.22%	45	0	1
r	y	y	d	t	y	g	a	a	#REF!	####	1	1
a									28.99%	20	1	0
a	a	y	d	r	f	g	h	a	57.97%	40	1	0
a	a	f	d	r	g	e	i	d	#REF!	####	1	0
n									17.39%	12	0	0
									#REF!	####	0	0
									#REF!	####	1	0
a	q	y	d	i	q	h	k	d	43.48%	30	1	1
a	r	y	d	r	f	g	h	a	66.67%	46	1	1
k	a	y	d	m	f	l	p	p	#REF!	####	1	1
a	q	y	d	r	f	g	h	a	68.12%	47	1	1
k	a	y	d	m	s	l	p	p	#REF!	####	1	1

a	q	y	d	r	f	g	h	a	69.57%	48	1	1
a	r	y	d	r	f	g	h	a	66.67%	46	1	1
a	a	y	d	q	y	g	h	a	71.01%	49	1	1
c	v	r	l	s	l	h	d	v	#REF!	####	1	0
s	s	s	q	g	y	f	s	e	#REF!	####	0	0
i	r	s	q	c	g	s	s	s	#REF!	####	0	0
l	r	m	n	l	g	g	t	g	#REF!	####	0	0
l	r	m	n	l	g	g	t	g	#REF!	####	0	0
g	i	y	d	k	f	g	e	e	62.32%	43	1	1
									28.99%	20	0	0
f	p	v	v	d	h	i	v	v	21.74%	15	0	0
e	i	y	d	q	f	g	e	e	68.12%	47	1	1
l	r	y	d	e	y	g	d	e	#REF!	####	0	1
r	k	y	d	r	g	l	l	s	34.78%	24	0	0
k	d	y	d	r	s	r	w	n	#REF!	####	0	1
k	k	y	d	k	y	g	e	k	#REF!	####	0	0
s	s	k	k	g	k	g	k	k	#REF!	####	0	0
k	q	y	d	l	t	g	s	e	62.32%	43	0	1
k	e	y	e	m	k	r	m	a	42.03%	29	0	0
k	q	y	d	t	y	g	e	e	63.77%	44	1	0
n	i	y	d	k	y	g	s	l	65.22%	45	0	0
e	l	y	d	r	y	g	e	q	#REF!	####	0	0
s	r	s	e	t	g	g	a	g	52.17%	36	0	1
k	q	y	d	t	y	g	e	e	63.77%	44	1	0
d	i	y	d	k	y	g	k	e	63.77%	44	1	1
d	i	y	d	k	y	g	k	e	63.77%	44	1	1
k	k	f	d	d	g	e	d	p	49.28%	34	1	1
									#REF!	####	0	0
s	c	s	t	s	y	d	q	n	26.09%	18	0	0
p	l	f							21.74%	15	0	0
a	r	y	d	h	w	r	r	s	#REF!	####	1	1
s	t	l	d	s	y	g	q	n	#REF!	####	0	0
k	a	y	d	t	i	g	h	s	#REF!	####	0	1
n	i	y	d	k	y	g	s	l	47.83%	33	0	0
r	q	f	l	w	l	a	t	t	#REF!	####	0	0
r	a	s							#REF!	####	0	0
a	a	y	d	k	v	r	k	a	46.38%	32	1	0
a	i	y	d	i	y	g	k	r	50.72%	35	1	1
d	i	y	d	k	y	g	k	e	#REF!	####	0	0
r	m	h	a	g	q	d	k	a	#REF!	####	0	1
r	a	f	n	s	v	d	p	t	#REF!	####	0	0
k	k	y	d	l	q	r	h	e	#REF!	####	1	0
r	k	t	e	g	l	p	f	e	37.68%	26	1	0
									30.43%	21	0	0
d	q	n	a	d	r	a	s	r	24.64%	17	0	0
a	v	y	d	e	q	g	t	v	#REF!	####	1	0
k	n	w	e	e	f	g	n	p	40.58%	28	0	0
r	k	y	d	r	g	l	l	s	39.13%	27	0	0
k	i	y	d	r	h	g	s	l	55.07%	38	0	0
r	a	f	n	s	v	d	p	t	#REF!	####	0	0
r	a	f	n	s	v	d	p	t	#REF!	####	0	0
n	i	y	d	k	y	g	s	l	59.42%	41	0	0
e	i	y	d	r	y	g	r	e	60.87%	42	0	1
k	q	y	d	q	f	g	d	d	68.12%	47	1	1
e	v	y	d	r	c	g	e	v	57.97%	40	1	1
k	e	y	d	t	i	g	h	s	#REF!	####	0	1
t	r	y	d	s	g	q	d	l	55.07%	38	1	1
k	q	y	d	t	y	g	e	e	63.77%	44	1	0

e	l	y	d	k	g	g	e	q	62.32%	43	0 1
e	i	f	d	r	y	g	e	e	66.67%	46	1 1
s	l	y	d	q	y	g	e	e	69.57%	48	1 1
r	n	y	d	h	q	l	h	s	#REF!	####	0 1
d	i	y	d	k	y	g	k	e	63.77%	44	1 1
d	i	y	d	k	y	g	k	e	63.77%	44	1 1
s	v	y	d	r	a	g	c	d	59.42%	41	0 1
d	i	y	d	q	g	g	e	q	72.46%	50	0 1
q	r	y	d	d	v	l	i	n	44.93%	31	0 0
k	k	f	d	d	g	e	d	p	47.83%	33	1 1
k	q	y	d	a	y	g	s	a	60.87%	42	1 1
k	q	y	d	a	y	g	s	a	60.87%	42	1 1
k	e	y	d	e	t	r	r	l	56.52%	39	1 0
r	i	v	d	l	g	g	d	p	63.77%	44	1 1
k	e	y	d	e	t	r	r	l	56.52%	39	1 0
r	i	v	d	l	g	g	d	p	63.77%	44	1 1
k	l	y	d	q	f	g	h	e	62.32%	43	1 1
k	l	y	d	q	f	g	h	e	53.62%	37	0 0
e	k	y	d	s	m	l	k	v	#REF!	####	0 0
a	n	y	d	k	y	g	f	d	#REF!	####	1 1
e	k	y	d	s	m	l	k	v	#REF!	####	0 0
k	q	y	d	k	f	g	h	a	59.42%	41	1 0
g	m	y	d	r	f	g	h	e	59.42%	41	1 1
a	e	y	d	a	m	l	r	f	#REF!	####	0 0
a	n	y	d	k	y	g	h	d	#REF!	####	1 1
a	i	y	d	k	y	g	h	e	59.42%	41	1 1
k	l	y	d	e	f	g	p	d	59.42%	41	1 1
m	q	y	d	a	s	f	r	r	57.97%	40	1 0
a	a	y	l	l	k	t	s	g	#REF!	####	0 0
a	m	y	d	q	y	g	h	a	66.67%	46	1 0
r	q	f	d	s	v	d	e	e	40.58%	28	0 0
a	k	y	e	h	q	v	r	m	39.13%	27	1 0
k	m	y	d	q	f	g	l	e	60.87%	42	0 0
e	i	y	d	q	y	g	e	d	69.57%	48	0 1
a	v	y	d	q	y	g	e	d	66.67%	46	1 1
a	a	y	d	q	f	g	h	a	63.77%	44	1 1
q	k	y	d	r	f	g	q	h	66.67%	46	1 1
e	r	s	s	y	d	q	l	y	17.39%	12	1 1
s	e	y	i	i	v	l	s	q	#REF!	####	1 0
g	k	a	h	h	v	y	h	h	#REF!	####	0 1
e	d	t	a	q	k	s	k	q	39.13%	27	1 0
									#REF!	####	0 0
k	k	y	d	q	f	g	q	y	65.22%	45	1 1
v	e	k	p	a	s	a	t	p	#REF!	####	0 0
q	s	i	l	e	s	l	r	s	#REF!	####	1 0
a	q	y	d	q	f	s	r	y	62.32%	43	1 1
l	n	y	d	l	k	i	g	y	#REF!	####	0 1
l	n	y	d	e	e	l	r	d	#REF!	####	0 0
r	q	y	d	t	a	g	f	e	57.97%	40	1 0
r	a	y	d	i	k	w	r	i	#REF!	####	1 0
e	i	y	d	q	y	g	e	d	#REF!	####	0 1
t	i	y	d	q	v	g	e	e	#REF!	####	1 1
k	r	y	d	l	v	g	s	d	#REF!	####	1 1
s	i	y	d	k	y	g	e	a	65.22%	45	1 0
l	q	g	p	q	v	w	r	l	#REF!	####	0 0
									#REF!	####	0 0
f	f	s	g	d	d	v	e	r	#REF!	####	1 0
a	l	y	d	s	g	m	y	d	#REF!	####	0 1

a	l	y	d	q	k	r	k	l	#REF!	####	1	0
v	r	y	d	s	t	v	a	n	31.88%	22	1	0
p	g	a	t	a	a	a	a	s	#REF!	####	0	0
a	h	y	d	i	y	l	r	s	#REF!	####	0	0
a	a	y	d	h	l	p	r	t	37.68%	26	1	1
a	t	y	d	r	a	l	a	r	46.38%	32	0	0
k	i	y	d	r	y	g	e	e	#REF!	####	0	1
a	v	y	d	e	i	h	g	y	40.58%	28	1	1
g	v	i	d	e	k	i	k	k	39.13%	27	0	0
r	s	y	d	q	k	r	f	g	#REF!	####	1	0
r	a	v	f	g	v	c	c	n	#REF!	####	0	1
e	a	y	d	k	h	g	k	e	56.52%	39	0	1
k									30.43%	21	1	0
a	n	y	d	q	y	g	h	a	#REF!	####	1	1
a	q	y	d	q	m	g	h	n	#REF!	####	1	1
a	n	y	d	r	s	l	f	r	44.93%	31	0	0
a	l	y	d	a	g	m	y	e	52.17%	36	0	0
a	l	y	d	q	y	g	e	a	60.87%	42	1	1
r	w	y	n	k	y	g	y	d	#REF!	####	0	1
r	k	y	n	q	y	g	y	n	#REF!	####	0	0
r	w	y	n	k	y	g	y	d	#REF!	####	0	1
k	i	y	d	t	y	g	e	e	60.87%	42	1	1
e	f	y	d	k	t	g	m	t	#REF!	####	1	0
k	m	y	d	m	y	g	e	d	#REF!	####	1	1
r	k	y	d	l	y	g	t	d	56.52%	39	0	1
d	i	y	d	k	y	g	e	e	#REF!	####	1	1
r	k	y	n	s	d	g	r	s	43.48%	30	0	1
k	m	y	d	e	g	g	m	k	#REF!	####	0	1
m	n	y	n	k	y	g	l	n	43.48%	30	0	1
s	s	s	q	g	y	f	s	e	#REF!	####	0	0
s	s	s	q	v	a	w	f	f	#REF!	####	0	0
e	t	d	i	l	q	i	p	s	#REF!	####	0	0
l	r	m	n	l	g	g	t	g	#REF!	####	0	0
s	q	y	d	q	f	g	h	a	#REF!	####	1	1
a	l	y	l	l	a	l	r	g	27.54%	19	0	0
a	l	y	l	l	t	l	s	g	27.54%	19	0	0
r									31.88%	22	0	0
r									31.88%	22	0	0
a	a	y	d	q	y	g	h	a	65.22%	45	1	0
									#REF!	####	0	0
k	a	y	d	s	g	r	m	n	40.58%	28	0	1
a	t	y	l	l	h	l	r	g	30.43%	21	0	0
k	e	y	e	m	k	r	m	a	42.03%	29	0	0
p	l	f							#REF!	####	0	0
a	r	y	d	h	w	r	r	s	#REF!	####	1	1
r	a	f	n	s	v	d	p	t	#REF!	####	0	0
n	i	y	d	k	y	g	s	l	#REF!	####	0	0
k	d	y	d	r	s	r	w	s	#REF!	####	0	1
k	e	y	d	i	i	g	h	s	#REF!	####	0	1
r	k	f	d	d	g	e	d	p	#REF!	####	1	1
e	l	y	d	k	g	g	e	q	#REF!	####	0	1
e	l	y	d	r	y	g	e	q	#REF!	####	0	0
a	h	q	p	d	f	g	g	f	#REF!	####	0	0
a	a	y	d	r	y	g	h	a	59.42%	41	1	0
a	a	y	d	r	y	g	h	a	65.22%	45	1	0
a	a	y	d	r	y	g	h	a	#REF!	####	1	0
a	a	y	d	r	y	g	h	a	59.42%	41	0	1
r	q	y	d	m	m	r	k	n	68.12%	47	1	1

a	a	y	d	r	l	g	h	d	#REF!	####	0 1
a	e	y	m	l	l	l	q	n	#REF!	####	0 0
a	a	y	d	r	f	g	h	d	#REF!	####	1 1
s	q	y	m	l	k	l	l	r	#REF!	####	0 0
k	i	y	d	y	y	l	q	n	#REF!	####	0 0
p	h	y	d	r	w	l	i	e	#REF!	####	0 0
l	r	y	d	r	d	l	k	i	#REF!	####	0 1
r	e	y	d	r	l	i	l	e	#REF!	####	0 0
i	v	y	d	t	t	r	q	g	#REF!	####	0 0
s	k	y	d	q	f	g	k	e	55.07%	38	0 1
a	k	y	d	k	y	g	r	k	#REF!	####	0 1
s	i	y	d	r	i	g	r	d	#REF!	####	0 0
l	s	d	d	d	k	r	k	e	#REF!	####	1 1
q	q	y	d	q	f	g	p	a	50.72%	35	1 0
k	i	y	d	q	f	g	a	d	#REF!	####	1 1
q	n	y	l	k	y	g	h	p	46.38%	32	1 0
e	i	y	d	q	y	g	l	e	#REF!	####	0 0
s	h	y	d	l	y	g	d	d	#REF!	####	0 0
d	i	y	d	q	f	g	e	d	#REF!	####	0 0
k	e	y	d	l	s	r	s	n	#REF!	####	1 1
a	l	y	d	q	y	g	t	t	#REF!	####	0 0
a	w	y	d	s	h	k	e	q	#REF!	####	0 1
a	q	y	d	s	c	d	f	v	34.78%	24	0 0
e	i	y	d	q	y	g	e	d	#REF!	####	0 1
k									30.43%	21	1 0
a	e	y	d	q	l	w	q	h	47.83%	33	1 1
a	a	y	d	q	y	g	h	a	#REF!	####	1 1
p	a	i	t	v	v	d	e	d	#REF!	####	0 0
p	a	e	d	a	k	m	e	e	#REF!	####	0 0
e	e	y	d	r	f	g	i	h	#REF!	####	0 0
k	a	y	d	s	e	r	f	a	#REF!	####	1 1
l	i	y	d	q	l	f	g	l	#REF!	####	1 1
k	r	y	d	y	f	l	k	n	#REF!	####	0 0
q	q	y	q	i	k	q	e	e	#REF!	####	0 0
e	s	l	d	s	a	y	t	a	#REF!	####	0 0
a	t	y	d	r	f	g	e	e	#REF!	####	0 0
r	r	f	d	s	g	v	d	l	#REF!	####	1 0
e	l	f	d	q	r	r	l	l	#REF!	####	1 1
w	k	g	t	g	y	l	y	s	#REF!	####	0 0
k	a	y	d	s	e	r	f	a	#REF!	####	1 1
k	h	y	d	k	t	g	q	l	#REF!	####	1 0
e	m	y	d	m	y	g	m	n	#REF!	####	0 0
k	i	y	d	a	y	g	e	e	#REF!	####	0 0
a	h	y	d	r	t	g	m	d	#REF!	####	0 1
a	t	y	d	r	f	g	e	e	#REF!	####	0 0
k	l	y	d	q	y	g	i	t	#REF!	####	0 0
s	q	y	d	q	f	g	k	e	59.42%	41	0 1
k	w	h	e	k	d	y	l	r	#REF!	####	1 0
l	i	y	d	q	l	f	g	l	#REF!	####	1 1
e	n	y	a	l	y	g	t	p	#REF!	####	1 0
e	k	y	d	k	l	g	k	v	#REF!	####	1 1
k	a	f	d	t	y	g	a	g	56.52%	39	1 0
e	i	y	d	n	f	g	e	q	44.93%	31	0 0
a	q	y	d	r	e	s	a	s	#REF!	####	1 1
k	i	y	d	a	y	g	e	e	#REF!	####	0 0
r	q	f	d	s	v	d	e	n	#REF!	####	0 0
a	h	q	p	d	f	g	g	f	#REF!	####	0 0
a	h	q	p	d	f	g	g	f	#REF!	####	0 0

a	r	f	d	r	g	e	i	d	#REF!	####	1 0
a	a	y	d	r	y	g	h	a	#REF!	####	1 0
s	r	y	d	w	a	r	r	e	47.83%	33	1 0
									#REF!	####	0 0
a									28.99%	20	1 0
k	v	y	d	d	t	g	y	d	#REF!	####	1 0
e	i	y	d	q	y	g	e	d	#REF!	####	0 1
r	a	a	y	d	q	f	n	v	#REF!	####	1 1
a	s	y	d	q	f	g	h	d	#REF!	####	1 1
a	a	y	d	q	y	g	a	a	#REF!	####	0 0
a	a	y	d	q	y	g	a	a	#REF!	####	0 1
q	v	y	d	l	g	g	d	p	56.52%	39	1 1
k	e	y	d	e	a	r	a	l	55.07%	38	1 1
q	v	y	d	l	g	g	d	p	56.52%	39	1 1
a	e	y	q	r	f	s	r	y	50.72%	35	1 1
r	e	l	d	s	r	l	f	g	60.87%	42	0 1
q	k	y	d	q	f	g	r	y	#REF!	####	1 1
s	v	y	d	l	q	i	g	y	#REF!	####	0 1
e	l	s	a	k	t	s	q	i	#REF!	####	0 1
k	e	h	l	l	i	i	q	q	#REF!	####	1 0
q	h	g	r						#REF!	####	1 0
a	a	y	d	q	y	g	h	a	#REF!	####	1 1
r	m	y	d	q	t	g	t	v	#REF!	####	1 1
r	i	y	d	q	t	g	s	v	#REF!	####	1 1
e	t	p	g	q	e	n	v	h	#REF!	####	0 0
a	m	y	d	r	f	g	y	v	#REF!	####	1 1
r	i	y	d	t	y	g	t	t	#REF!	####	1 1
n	i	y	d	k	y	g	s	l	#REF!	####	0 0
a	a	y	d	r	y	g	f	d	#REF!	####	1 1
a	k	f	d	l	l	y	a	r	#REF!	####	1 1
a	r	y	d	a	e	r	a	g	#REF!	####	1 0
a	a	y	d	r	y	g	f	d	#REF!	####	1 1
l	t	y	d	s	s	r	p	f	#REF!	####	0 0
k	i	y	d	s	y	g	e	e	#REF!	####	1 1
n	g	g	r	d	s	a	n	v	#REF!	####	0 0
a	p	d	r	n	k	m	d	e	#REF!	####	0 1
k	i	y	d	v	y	g	e	e	#REF!	####	1 1
r	l	y	d	s	e	r	l	r	50.72%	35	0 0
t	r	y	d	q	f	g	e	k	#REF!	####	0 0
r	i	y	d	q	h	g	k	a	#REF!	####	0 1
r	h	y	d	q	l	g	r	a	#REF!	####	0 0
k	i	y	d	v	y	g	e	e	#REF!	####	1 1
a	a	y	d	r	y	g	h	a	#REF!	####	1 1
a	q	y	d	q	f	g	h	d	#REF!	####	1 1
a	a	y	d	q	y	g	h	a	#REF!	####	1 0
a	e	y	l	l	s	l	q	g	#REF!	####	0 0
									#REF!	####	0 0
k									#REF!	####	1 0
a	a	y	d	q	y	g	h	a	#REF!	####	1 0
r	e	f	d	s	t	d	e	f	#REF!	####	0 0
k	a	y	d	q	l	k	a	q	#REF!	####	1 1
									33.33%	23	0 0
a	a	y	d	q	l	k	a	q	#REF!	####	1 1
r	a	y	d	a	h	g	h	a	#REF!	####	1 1
									33.33%	23	0 0
n	i	y	d	k	y	g	s	l	#REF!	####	0 0
									#REF!	####	0 0
k	l	y	d	t	h	g	h	a	#REF!	####	1 1

									#REF!	####	1	0
a	a	y	d	q	l	r	a	q	#REF!	####	1	1
k									#REF!	####	1	0
a	a	y	d	q	y	g	h	a	#REF!	####	1	1
a	e	y	m	l	s	l	q	g	#REF!	####	0	0
e	i	y	d	q	y	g	e	d	#REF!	####	0	1

3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	20a	21	22	23
1	0	0	1	1	0	1	1	0	1	1	0	0	1	1	1	1	1		1	1	0
1	1	0	1	1	0	1	0	0	1	0	0	0	1	1	1	0	1		1	0	1
0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1	0	1		0	1	0
1	0	0	1	1	1	0	0	0	1	0	0	0	0	1	1	0	1		1	1	1
0	0	0	1	1	0	1	0	0	1	0	0	1	1	1	1	0	0		1	0	0
0	0	0	1	1	0	1	0	0	1	0	0	0	1	1	0	0	0		1	0	0
1	0	0	1	1	1	1	0	0	0	0	0	0	0	1	0	1	0		1	1	0
1	1	0	1	1	1	1	1	0	1	0	0	0	1	0	1	0	1		0	1	1
1	0	1	1	1	1	0	0	0	1	0	0	1	0	1	1	0	1		0	1	0
0	0	0	1	1	0	1	0	0	1	0	0	0	1	1	0	0	0		1	0	0
0	0	0	1	1	0	1	0	0	1	0	0	1	1	1	1	0	0		1	0	0
0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1		1	1	1
1	1	0	1	1	1	1	1	1	1	0	0	1	0	0	1	1	1		1	1	1
1	1	1	1	1	1	0	1	0	1	0	0	1	0	1	1	1	0		1	1	0
1	1	1	1	1	1	0	1	0	1	0	0	1	0	1	1	1	0		1	1	0
1	0	0	1	1	0	0	0	0	1	1	0	0	0	1	0	0	1		1	1	0
1	0	0	1	0	0	0	0	0	1	0	0	1	1	1	0	1	1		1	1	0
1	0	1	1	1	0	0	1	0	1	1	0	0	0	0	1	1	1		1	1	1
1	0	0	1	0	1	1	0	0	1	0	0	1	1	1	0	0	0		1	0	0
1	1	0	1	1	1	0	0	0	1	0	1	0	1	1	1	1	0		1	0	1
1	1	0	1	1	1	0	1	0	1	0	1	0	0	1	1	1	1		1	0	1
1	0	0	1	0	0	0	0	0	1	0	0	0	1	1	1	0	1		0	1	0
1	0	0	1	0	1	0	0	0	1	0	0	0	1	1	0	1	1		1	1	1
1	0	1	1	1	1	1	0	0	0	1	0	1	0	1	0	1	0		1	0	1
1	0	1	1	1	1	0	0	0	1	0	0	0	1	1	0	1	1		1	1	1
1	0	0	1	0	0	0	0	1	0	1	0	0	0	0	0	0	1		0	0	0
0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0		1	1	0
1	0	0	1	1	1	0	1	1	1	1	0	0	1	1	1	1	1		1	0	0
1	0	0	1	1	0	1	0	0	1	1	0	0	1	1	1	0	0		0	1	0
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73	36	10	8	19	13	2	3	133	16	50	13	6	2	5	19	5
74	9	1	1	6	17	1	1	35	5	630	6	4	0	1	2	4
75	16	23	1	26	1	40	6	16	82	28	10	13	0	18	26	373
76	8	0	487	22	5	7	3	1	26	14	3	81	0	20	18	31
77	68	3	53	111	2	21	6	13	52	13	2	13	247	31	16	52
78	37	6	57	187	8	20	8	17	84	23	4	36	10	95	26	32
79	28	2	5	20	17	17	2	6	407	28	9	14	9	29	59	43
80	7	8	5	11	8	7	3	7	78	12	3	12	8	7	526	13
81	185	1	27	79	7	10	0	9	107	22	4	24	16	37	109	51
82	90	3	15	58	9	7	23	114	41	67	19	31	2	71	51	31
83	10	3	7	10	55	8	6	6	7	11	6	8	5	8	6	18
84	14	0	513	28	6	12	6	7	3	28	4	26	10	7	10	6
85	26	3	29	42	4	12	8	20	74	53	19	31	7	153	97	53
86	28	7	18	25	88	65	19	12	31	39	9	1	2	28	26	32
87	16	2	21	26	12	355	5	18	9	69	5	7	10	16	67	16
88	30	6	47	121	17	17	89	17	63	27	15	22	19	30	49	58
89	99	1	75	118	15	23	12	10	27	49	4	33	34	31	27	50
	a	c	d	e	f	g	h	I	k	l	m	n	p	q	r	s
	5048	318	4260	4463	1428	2090	1445	2095	5790	4196	589	1936	2144	2038	3273	2772
	9.84%	0.62%	8.31%	8.70%	2.78%	4.08%	2.82%	4.09%	11.29%	8.18%	1.15%	3.78%	4.18%	3.97%	6.38%	5.41%

T	V	W	Y							P
31	5	3	15	743	46.97%	D		46.97%	1	0
6	18	22	309	744	41.53%	Y			2	71
8	1	17	555	745	**74.50%**	Y			3	3
24	7	2	1	746	28.15%	E			4	3
52	233	0	1	747	31.73%	I	31.19%		5	6
4	16	1	1	747	**87.28%**	L			6	3
8	3	1	0	748	66.31%	G			7	21
2	403	0	2	750	53.73%	V			8	10
40	4	1	2	751	23.04%	S			9	101
17	24	9	21	752	23.27%	K			10	124
113	4	18	6	752	17.82%	N			11	6
14	21	0	5	752	**71.28%**	A			12	5
196	1	1	0	752	38.96%	S			13	7
24	28	0	6	752	17.15%	D	15.96%		14	70
19	16	0	3	754	23.61%	E			15	14
29	9	0	3	753	48.34%	E			16	1
2	85	0	1	755	66.75%	I			17	1
14	6	0	0	755	**68.74%**	K			18	0
27	3	0	1	755	56.95%	K			19	1
16	7	0	0	754	68.70%	A			20	0
1	1	9	605	754	**80.24%**	Y			21	0
1	2	3	44	754	63.79%	R			22	1
18	10	0	3	754	51.99%	K			23	1
7	18	3	1	755	66.62%	L			24	0
10	66	0	3	756	64.42%	A			25	1
1	30	2	0	759	38.34%	L			26	6
8	22	1	2	759	41.77%	K			27	1
11	60	86	304	759	40.05%	Y			28	1
0	0	0	3	759	**97.23%**	H			29	3
0	0	0	0	759	**98.42%**	P			30	747
0	1	0	2	759	**96.18%**	D			31	0
20	53	2	0	759	55.73%	K			32	1
16	19	2	12	758	53.17%	N			33	6
28	20	0	1	758	29.29%	P			34	222
24	3	0	3	750	24.13%	D			35	8
19	6	0	3	750	19.60%	D			36	133
16	12	0	10	705	18.58%	G			37	109
15	18	0	6	653	28.33%	A			38	8
26	12	0	1	643	30.64%	A			39	28
15	20	0	3	466	28.97%	E			40	9
10	7	2	5	269					41	3
17	2	2	2	206					42	1
3	9	0	4	172					43	0
6	4	0	1	121					44	0
5	6	3	0	104					45	2
0	1	2	2	59					46	2
7	3	0	0	44					47	0
0	1	1	0	22					48	0
0	0	1	0	21					49	1
1	1	0	0	21					50	0
0	5	0	0	19					51	
3	1	0	0	17					52	
0	0	0	0	13					53	
0	1	1	0	10					54	
0	1	0	0	8					55	
1	1	0	0	7					56	
1	0	0	0	7					57	

0	0	0	0	6				58	
2	0	0	0	6				59	
0	0	0	0	3				60	
0	0	0	0	1				61	
22	12	1	3	758	39.84%	E		62	2
20	12	2	11	758	45.12%	K		63	2
9	4	0	15	758	**82.98%**	F		64	1
15	23	0	0	758	48.94%	K		65	2
12	23	1	2	758	37.20%	E		66	3
6	180	0	1	758	45.78%	I		67	0
42	15	1	1	757	23.25%	N	16.91%	68	1
25	11	0	4	757	38.97%	E		69	4
8	11	1	1	755	**87.81%**	A		70	2
3	5	46	530	754	70.29%	Y		71	1
26	1	0	7	754	47.35%	E		72	3
69	338	0	4	751	45.01%	V		73	2
0	26	0	1	750	**84.00%**	L		74	0
62	7	0	2	750	49.73%	S		75	0
13	8	0	1	748	**65.11%**	D		76	0
23	15	1	4	746	33.11%	P		77	247
45	45	0	6	746	25.07%	E		78	10
29	8	1	9	742	54.85%	K		79	9
7	8	4	5	739	**71.18%**	R		80	8
18	13	2	1	722	25.62%	A		81	16
17	36	13	6	704	16.19%	I		82	2
7	7	8	506	702	**72.08%**	Y		83	5
7	4	0	4	695	**73.81%**	D		84	10
30	15	4	13	693	22.08%	Q		85	7
32	34	11	184	691	26.63%	Y		86	2
9	11	6	9	689	51.52%	G		87	10
26	12	2	20	687	17.61%	E		88	19
29	31	3	15	686	17.20%	E		89	34
t	v	w	y	50592					2143
1549	2225	302	3317	51278					2144
3.02%	4.34%	0.59%	6.47%	100.00%					4.18%

CM	GAVIL	YFW	ST	HKR	DE	NQ				a
28	56	34	95	63	400	67	743	53.84%	1	3.0%
16	169	392	20	42	26	8	744	52.69%	2	7.5%
5	92	606	13	18	5	3	745	**81.34%**	3	2.0%
2	170	17	64	128	298	64	746	39.95%	4	**8.7%**
6	616	11	57	19	23	9	747	**82.46%**	5	1.6%
12	695	11	10	8	6	2	747	**93.04%**	6	0.1%
5	505	4	21	44	80	68	748	67.51%	7	0.1%
23	650	**4**		35	9	13	750	**86.67%**	8	0.8%
4	93	6	213	116	152	66	751	28.36%	9	**7.1%**
4	98	44	47	354	51	30	752	47.07%	10	6.0%
5	133	27	217	62	157	145	752	28.86%	11	1.2%
31	614	6	67	5	20	4	752	**81.65%**	12	**71.3%**
0	32	3	489	23	137	61	752	65.03%	13	1.6%
8	174	23	61	72	249	95	752	33.11%	14	**8.2%**
2	146	4	87	104	317	80	754	42.04%	15	**12.9%**
6	67	4	33	36	538	68	753	**71.45%**	16	4.5%
20	715	3	4	11	**1**	0	755	**94.70%**	17	0.4%
2	35	1	23	652	19	23	755	**86.36%**	18	0.8%
3	76	2	75	530	28	40	755	70.20%	19	8.1%
6	542	1	71	63	18	53	754	71.88%	20	**68.7%**
1	14	707	3	26	**1**	2	754	**93.77%**	23	0.0%
0	45	59	5	631	1	12	754	**83.69%**	24	0.3%
2	62	5	32	542	46	64	754	**71.88%**	25	3.7%
39	588	8	8	85	1	26	755	**77.88%**	26	**6.6%**
48	581	3	101	3	0	19	756	**76.85%**	27	**64.4%**
80	378	9	22	242	4	18	759	49.80%	28	1.2%
21	134	4	20	379	78	122	759	49.93%	29	1.7%
20	167	440	15	77	1	38	759	57.97%	30	1.1%
0	2	3	1	744	**1**	5	759	**98.02%**	31	0.1%
1	4	1	3	2	0	1	759	**98.42%**	32	0.0%
0	4	3	5	4	741	2	759	**97.63%**	33	0.0%
6	120	4	33	565	4	26	759	74.44%	34	2.8%
19	146	44	49	67	16	411	758	54.22%	35	3.4%
16	169	1	68	197	27	58	758	29.29%	36	**5.7%**
6	249	12	81	40	263	91	750	35.07%	37	**9.3%**
6	115	6	71	59	217	143	750	28.93%	38	**8.5%**
1	220	13	63	133	121	45	705	31.21%	39	**8.2%**
11	257	9	53	82	192	41	653	29.40%	40	**28.3%**
13	247	9	64	67	187	28	643	38.41%	41	**30.6%**
7	169	5	48	45	146	37	466	31.33%	42	**26.6%**
3	47	7	26	58	83	42	269	30.86%	43	**9.7%**
12	72	9	24	35	42	11	206	16.99%	44	**22.3%**
7	51	7	11	21	48	27	172	27.91%	45	**9.9%**
1	40	2	11	18	38	11	121	33.06%	46	**23.1%**
12	35	4	8	6	25	12	104	24.04%	47	**14.4%**
4	24	5	5	5	8	6	59	13.56%	48	**30.5%**
0	10	0	12	6	10	6	44	22.73%	49	**6.8%**
0	10	1	4	3	3	1	22	45.45%	50	**22.7%**
0	7	1	6	2	3	1	21	4.76%	51	**23.8%**
1	5	1	5	5	3	1	21	23.81%	52	4.8%

11	126	7	40	128	389	55	758	51.32%	53	**9.4%**
22	154	23	34	447	33	43	758	58.97%	63	**10.0%**
29	43	644	25	8	3	5	758	**84.96%**	64	2.2%
31	119	0	31	438	28	109	758	57.78%	65	4.5%
21	155	10	26	135	313	95	758	41.29%	66	**7.0%**
13	714	3	13	9	4	2	758	**94.20%**	67	3.2%
10	193	4	170	79	23	277	757	36.59%	68	**12.9%**
7	111	18	41	127	323	126	757	42.67%	69	**10.3%**
2	706	2	26	4	8	5	755	**93.51%**	70	**87.8%**
8	28	612	6	76	8	15	754	**81.17%**	71	0.4%
12	72	9	72	59	443	84	754	58.75%	72	**7.2%**
23	559	17	74	38	27	11	751	**74.43%**	73	4.8%
7	701	18	4	8	7	5	750	**93.47%**	74	1.2%
33	107	3	435	114	27	31	750	58.00%	75	2.1%
3	38	6	44	47	509	101	748	**68.05%**	76	1.1%
5	130	7	75	74	164	44	746	33.11%	77	**9.1%**
10	142	14	77	118	244	131	746	32.71%	78	**5.0%**
11	87	27	72	468	25	43	742	63.07%	79	3.8%
11	41	17	20	607	16	19	739	**82.14%**	80	0.9%
5	239	10	69	216	106	61	722	33.10%	81	**25.6%**
22	314	28	48	115	73	102	704	44.60%	82	**12.8%**
9	42	569	25	19	17	16	702	**81.05%**	83	1.4%
4	65	10	13	19	541	33	695	**77.84%**	84	2.0%
22	126	21	83	179	71	184	693	25.83%	85	**3.8%**
16	178	283	64	76	43	29	691	40.96%	86	4.1%
7	469	27	25	81	47	23	689	**68.07%**	87	2.3%
21	103	39	84	201	168	52	687	29.26%	88	4.4%
5	212	33	79	66	193	64	686	30.90%	89	**14.4%**
905	15624	5046	4305	10490	8697	3971	51181		90	
907	15654	5047	4321	10508	8723	3974	51278			
1.77%	30.53%	9.84%	8.43%	20.49%	17.01%	7.75%	100.00%			

c	d	e	f	g	h	I	k	l	m	n	p	q	r	s	t
1.9%	**47.0%**	**6.9%**	2.2%	0.9%	0.8%	0.9%	**5.9%**	2.0%	1.9%	**8.6%**	0.0%	0.4%	1.7%	**8.6%**	**4.2%**
2.0%	1.9%	1.6%	**8.2%**	0.5%	3.9%	0.8%	0.9%	**11.4%**	0.1%	0.1%	**9.5%**	0.9%	0.8%	1.9%	0.8%
0.4%	0.5%	0.1%	4.6%	0.8%	1.5%	0.5%	0.3%	8.9%	0.3%	0.0%	0.4%	0.4%	0.7%	0.7%	1.1%
0.3%	**11.8%**	**28.2%**	1.9%	5.6%	1.6%	0.5%	**12.2%**	7.0%	0.0%	2.3%	0.4%	**6.3%**	3.4%	5.4%	3.2%
0.3%	1.7%	1.3%	1.3%	3.3%	0.3%	**31.7%**	1.2%	**14.6%**	0.5%	0.3%	0.8%	0.9%	1.1%	0.7%	**7.0%**
0.4%	0.5%	0.3%	1.2%	2.0%	0.0%	1.5%	0.8%	**87.3%**	1.2%	0.1%	0.4%	0.1%	0.3%	0.8%	0.5%
0.5%	2.3%	**8.4%**	0.4%	**66.3%**	1.3%	0.1%	3.9%	0.5%	0.1%	**6.3%**	2.8%	2.8%	0.7%	1.7%	1.1%
1.6%	0.3%	0.9%	0.3%	0.4%	0.4%	**13.2%**	1.2%	**18.5%**	1.5%	0.7%	1.3%	1.1%	3.1%	0.5%	0.3%
0.1%	**10.9%**	**9.3%**	0.4%	2.7%	2.1%	0.8%	**6.7%**	1.3%	0.4%	3.9%	**13.4%**	4.9%	6.7%	**23.0%**	**5.3%**
0.3%	1.3%	5.5%	1.9%	0.9%	0.9%	0.9%	**23.3%**	2.0%	0.3%	0.7%	**16.5%**	3.3%	**22.9%**	4.0%	2.3%
0.0%	**16.2%**	4.7%	0.4%	**12.2%**	1.6%	0.5%	4.5%	3.2%	0.7%	**17.8%**	0.8%	1.5%	2.1%	**13.8%**	**15.0%**
3.7%	2.4%	0.3%	0.1%	3.2%	0.3%	2.5%	0.0%	1.9%	0.4%	0.3%	0.7%	0.3%	0.4%	7.0%	1.9%
0.0%	**16.0%**	2.3%	0.3%	2.3%	0.4%	0.1%	2.1%	0.1%	0.0%	7.0%	0.9%	1.1%	0.5%	**39.0%**	**26.1%**
0.1%	**17.2%**	**16.0%**	2.3%	2.7%	0.5%	2.5%	**7.4%**	6.0%	0.9%	1.9%	9.3%	10.8%	1.6%	**4.9%**	3.2%
0.0%	**18.4%**	**23.6%**	0.1%	3.1%	0.3%	0.8%	**9.2%**	0.5%	0.3%	**4.0%**	1.9%	**6.6%**	4.4%	**9.0%**	2.5%
0.1%	**23.1%**	**48.3%**	0.1%	0.1%	0.3%	0.8%	3.3%	2.3%	0.7%	0.7%	0.1%	8.4%	1.2%	0.5%	3.9%
0.0%	0.1%	0.0%	0.3%	0.0%	0.3%	**66.8%**	0.7%	16.3%	2.6%	0.0%	0.1%	0.0%	0.5%	0.3%	0.3%
0.0%	1.1%	1.5%	0.1%	0.9%	0.8%	1.1%	**68.7%**	1.1%	0.3%	1.5%	0.0%	1.6%	**16.8%**	1.2%	1.9%
0.4%	1.9%	1.9%	0.1%	0.1%	0.4%	0.5%	**57.0%**	0.9%	0.0%	1.2%	0.1%	4.1%	**12.8%**	**6.4%**	3.6%
0.8%	0.4%	2.0%	0.1%	1.1%	1.2%	0.7%	2.3%	0.5%	0.0%	1.7%	0.0%	**5.3%**	4.9%	**7.3%**	2.1%
0.1%	0.1%	0.0%	12.3%	0.1%	3.2%	0.7%	0.0%	0.9%	0.0%	0.1%	0.0%	0.1%	0.3%	0.3%	0.1%
0.0%	0.0%	0.1%	1.6%	0.0%	4.6%	0.5%	**15.3%**	4.9%	0.0%	0.3%	0.1%	1.3%	**63.8%**	0.5%	0.1%
0.0%	1.9%	4.2%	0.3%	0.3%	0.3%	1.2%	**52.0%**	1.7%	0.3%	2.5%	0.1%	**6.0%**	**19.6%**	1.9%	2.4%
0.9%	0.0%	0.1%	0.5%	0.0%	0.1%	2.3%	**8.5%**	**66.6%**	4.2%	0.0%	0.0%	3.4%	2.6%	0.1%	0.9%
3.4%	0.0%	0.0%	0.0%	0.3%	0.0%	1.7%	0.1%	1.7%	2.9%	0.4%	0.1%	2.1%	0.3%	12.0%	1.3%
0.0%	0.1%	0.4%	0.9%	0.1%	0.0%	**6.2%**	**21.7%**	**38.3%**	**10.5%**	0.7%	0.8%	1.7%	**10.1%**	2.8%	0.1%
0.1%	0.5%	**9.7%**	0.1%	0.1%	0.5%	2.0%	**41.8%**	**10.9%**	2.6%	0.8%	0.1%	15.3%	**7.6%**	1.6%	1.1%
2.6%	0.0%	0.1%	**6.6%**	0.1%	**9.5%**	0.7%	0.3%	**12.3%**	0.0%	4.9%	0.1%	0.1%	0.4%	0.5%	1.4%
0.0%	0.0%	0.1%	0.0%	0.0%	**97.2%**	0.0%	0.8%	0.1%	0.0%	0.7%	0.4%	0.0%	0.0%	0.1%	0.0%
0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.1%	0.5%	0.0%	0.0%	**98.4%**	0.1%	0.1%	0.4%	0.0%
0.0%	**96.2%**	1.4%	0.1%	0.0%	0.1%	0.1%	0.1%	0.3%	0.0%	0.1%	0.0%	0.1%	0.3%	0.7%	0.0%
0.0%	0.1%	0.4%	0.3%	0.0%	0.8%	2.8%	**55.7%**	3.3%	0.8%	2.1%	0.1%	1.3%	**17.9%**	1.7%	2.6%
2.4%	1.1%	1.1%	4.0%	**8.8%**	5.8%	0.9%	0.8%	3.6%	0.1%	**53.2%**	0.8%	1.1%	2.2%	4.4%	2.1%
0.4%	2.6%	0.9%	0.0%	**11.2%**	2.2%	0.9%	**19.1%**	1.8%	1.7%	1.8%	**29.3%**	**5.8%**	4.6%	**5.3%**	3.7%
0.5%	**24.1%**	**10.9%**	1.2%	**20.5%**	2.4%	0.7%	2.1%	2.3%	0.3%	**9.9%**	1.1%	2.3%	0.8%	**7.6%**	3.2%
0.3%	19.6%	**9.3%**	0.4%	4.3%	1.6%	0.9%	4.8%	0.8%	0.5%	**16.9%**	**17.7%**	2.1%	1.5%	**6.9%**	2.5%
0.0%	7.7%	**9.5%**	0.4%	**18.6%**	1.0%	1.0%	**12.8%**	1.7%	0.1%	2.8%	**15.5%**	3.5%	5.1%	**6.7%**	2.3%
1.1%	**8.1%**	**21.3%**	0.5%	2.3%	0.6%	0.8%	**10.0%**	5.2%	0.6%	3.4%	1.2%	2.9%	2.0%	**5.8%**	2.3%
0.3%	4.4%	**24.7%**	1.2%	1.4%	0.6%	1.4%	**6.1%**	3.1%	1.7%	1.2%	4.4%	3.1%	3.7%	**5.9%**	4.0%
0.6%	2.4%	**29.0%**	0.4%	1.7%	1.7%	1.7%	**6.9%**	1.9%	0.9%	2.1%	1.9%	**5.8%**	1.1%	**7.1%**	3.2%
0.4%	3.3%	**27.5%**	0.0%	1.9%	0.4%	1.1%	**13.8%**	2.2%	0.7%	3.3%	1.1%	**12.3%**	7.4%	**5.9%**	3.7%
0.5%	2.9%	**17.5%**	2.4%	1.5%	0.5%	3.4%	**10.2%**	**6.8%**	**5.3%**	1.5%	0.5%	3.9%	**6.3%**	3.4%	**8.3%**
0.0%	4.7%	**23.3%**	1.7%	4.7%	1.2%	2.9%	**8.7%**	**7.0%**	4.1%	**9.9%**	0.0%	**5.8%**	2.3%	4.7%	1.7%
0.0%	12.4%	**19.0%**	0.8%	3.3%	0.8%	2.5%	**10.7%**	0.8%	0.8%	5.8%	0.0%	3.3%	3.3%	4.1%	5.0%
1.9%	1.0%	**23.1%**	1.0%	1.0%	1.0%	3.8%	1.0%	**8.7%**	**9.6%**	**6.7%**	1.9%	4.8%	3.8%	2.9%	4.8%
0.0%	1.7%	**11.9%**	1.7%	1.7%	0.0%	**5.1%**	**5.1%**	1.7%	**6.8%**	5.1%	3.4%	5.1%	3.4%	**8.5%**	0.0%
0.0%	4.5%	**18.2%**	0.0%	2.3%	0.0%	0.0%	**13.6%**	**6.8%**	0.0%	**6.8%**	0.0%	**6.8%**	0.0%	**11.4%**	**15.9%**
0.0%	4.5%	**9.1%**	0.0%	**9.1%**	0.0%	**9.1%**	**13.6%**	0.0%	0.0%	4.5%	0.0%	0.0%	0.0%	**18.2%**	0.0%
0.0%	4.8%	**9.5%**	0.0%	0.0%	0.0%	4.8%	**9.5%**	4.8%	0.0%	4.8%	4.8%	0.0%	0.0%	**28.6%**	0.0%
0.0%	4.8%	**9.5%**	4.8%	0.0%	0.0%	4.8%	**19.0%**	**9.5%**	4.8%	0.0%	0.0%	4.8%	4.8%	**19.0%**	4.8%

0.0%	**11.5%**	**39.8%**	0.4%	2.9%	1.2%	1.2%	**8.6%**	1.6%	1.5%	1.3%	0.3%	**5.9%**	**7.1%**	2.4%	2.9%
0.1%	1.6%	2.8%	1.3%	0.8%	1.2%	2.4%	**45.1%**	**5.5%**	2.8%	1.5%	0.3%	4.2%	**12.7%**	1.8%	2.6%
0.3%	0.4%	0.0%	**83.0%**	0.0%	0.3%	0.8%	0.5%	2.1%	3.6%	0.3%	0.1%	0.4%	0.3%	2.1%	1.2%
0.1%	1.3%	2.4%	0.0%	0.4%	1.6%	5.4%	**48.9%**	2.4%	4.0%	1.6%	0.3%	**12.8%**	**7.3%**	2.1%	2.0%
1.6%	4.1%	**37.2%**	0.9%	0.4%	0.7%	2.6%	**10.3%**	**7.4%**	1.2%	0.8%	0.4%	**11.7%**	**6.9%**	1.8%	1.6%
0.8%	0.3%	0.3%	0.3%	0.3%	0.0%	**45.8%**	0.7%	**21.2%**	0.9%	0.1%	0.0%	0.1%	0.5%	0.9%	0.8%
0.9%	1.5%	1.6%	0.3%	**7.4%**	1.6%	1.1%	**5.8%**	2.1%	0.4%	**23.2%**	0.1%	**13.3%**	3.0%	**16.9%**	5.5%
0.3%	3.7%	**39.0%**	1.8%	0.7%	1.1%	0.8%	**11.2%**	1.5%	0.7%	7.0%	0.5%	**9.6%**	4.5%	2.1%	3.3%
0.0%	0.3%	0.8%	0.0%	0.4%	0.0%	1.1%	0.1%	2.8%	0.3%	0.4%	0.3%	0.3%	0.4%	2.4%	1.1%
0.4%	0.3%	0.8%	4.8%	0.1%	4.5%	1.1%	4.2%	1.5%	0.7%	1.2%	0.1%	0.8%	1.3%	0.4%	0.4%
1.1%	**11.4%**	**47.3%**	0.3%	1.5%	0.8%	0.0%	4.0%	0.8%	0.5%	3.2%	0.4%	8.0%	3.1%	**6.1%**	3.4%
1.3%	1.1%	2.5%	1.7%	0.3%	0.4%	**17.7%**	2.1%	**6.7%**	1.7%	0.8%	0.3%	0.7%	2.5%	0.7%	**9.2%**
0.1%	0.1%	0.8%	2.3%	0.1%	0.1%	4.7%	0.7%	**84.0%**	0.8%	0.5%	0.0%	0.1%	0.3%	0.5%	0.0%
3.1%	0.1%	3.5%	0.1%	**5.3%**	0.8%	2.1%	**10.9%**	3.7%	1.3%	1.7%	0.0%	2.4%	3.5%	**49.7%**	**8.3%**
0.0%	**65.1%**	2.9%	0.7%	0.9%	0.4%	0.1%	3.5%	1.9%	0.4%	**10.8%**	0.0%	2.7%	2.4%	4.1%	1.7%
0.4%	7.1%	**14.9%**	0.3%	2.8%	0.8%	1.7%	**7.0%**	1.7%	0.3%	1.7%	**33.1%**	4.2%	2.1%	**7.0%**	3.1%
0.8%	7.6%	**25.1%**	1.1%	2.7%	1.1%	2.3%	**11.3%**	3.1%	0.5%	4.8%	1.3%	**12.7%**	3.5%	4.3%	**6.0%**
0.3%	0.7%	2.7%	2.3%	2.3%	0.3%	0.8%	**54.9%**	3.8%	1.2%	1.9%	1.2%	3.9%	8.0%	**5.8%**	3.9%
1.1%	0.7%	1.5%	1.1%	0.9%	0.4%	0.9%	**10.6%**	1.6%	0.4%	1.6%	1.1%	0.9%	**71.2%**	1.8%	0.9%
0.1%	3.7%	**10.9%**	1.0%	1.4%	0.0%	1.2%	**14.8%**	3.0%	0.6%	3.3%	2.2%	5.1%	**15.1%**	**7.1%**	2.5%
0.4%	2.1%	**8.2%**	1.3%	1.0%	3.3%	**16.2%**	**5.8%**	**9.5%**	2.7%	4.4%	0.3%	**10.1%**	**7.2%**	4.4%	2.4%
0.4%	1.0%	1.4%	**7.8%**	1.1%	0.9%	0.9%	1.0%	1.6%	0.9%	1.1%	0.7%	1.1%	0.9%	2.6%	1.0%
0.0%	**73.8%**	4.0%	0.9%	1.7%	0.9%	1.0%	0.4%	4.0%	0.6%	3.7%	1.4%	1.0%	1.4%	0.9%	1.0%
0.4%	4.2%	**6.1%**	0.6%	1.7%	1.2%	2.9%	**10.7%**	**7.6%**	2.7%	4.5%	1.0%	**22.1%**	**14.0%**	**7.6%**	4.3%
1.0%	2.6%	3.6%	**12.7%**	**9.4%**	2.7%	1.7%	4.5%	**5.6%**	1.3%	0.1%	0.3%	4.1%	3.8%	4.6%	4.6%
0.3%	3.0%	3.8%	1.7%	**51.5%**	0.7%	2.6%	1.3%	**10.0%**	0.7%	1.0%	1.5%	2.3%	**9.7%**	2.3%	1.3%
0.9%	**6.8%**	**17.6%**	2.5%	2.5%	**13.0%**	2.5%	**9.2%**	3.9%	2.2%	3.2%	2.8%	4.4%	**7.1%**	**8.4%**	3.8%
0.1%	**10.9%**	**17.2%**	2.2%	3.4%	1.7%	1.5%	3.9%	**7.1%**	0.6%	4.8%	**5.0%**	4.5%	3.9%	**7.3%**	4.2%

v	w	y			a	c	d	e	f	g	h	I	k	l
0.7%	0.4%	2.0%	1	46.97%			**46.97%**	6.86%					5.92%	
2.4%	3.0%	**41.5%**	1	41.53%	7.53%				8.20%					**11.42%**
0.1%	2.3%	**74.5%**	1	**74.50%**										8.86%
0.9%	0.3%	0.1%	1	28.15%	8.71%		**11.80%**	**28.15%**		5.63%			**12.20%**	6.97%
31.2%	0.0%	0.1%	1	31.73%								**31.73%**		**14.59%**
2.1%	0.1%	0.1%	1	**87.28%**										**87.28%**
0.4%	0.1%	0.0%	1	66.31%				8.42%		**66.31%**				
53.7%	0.0%	0.3%	1	53.73%								**13.20%**		**18.53%**
0.5%	0.1%	0.3%	1	23.04%	7.06%		**10.92%**	9.32%					6.66%	
3.2%	1.2%	2.8%	1	23.27%	5.98%			5.45%					**23.27%**	
0.5%	2.4%	0.8%	1	17.82%			**16.22%**			**12.23%**				
2.8%	0.0%	0.7%	1	**71.28%**	**71.28%**									
0.1%	0.1%	0.0%	1	38.96%			**15.96%**							
3.7%	0.0%	0.8%	1	15.96%	8.24%		**17.15%**	**15.96%**					7.45%	5.98%
2.1%	0.0%	0.4%	1	18.44%	**12.86%**		**18.44%**	**23.61%**					9.15%	
1.2%	0.0%	0.4%	1	48.34%			**23.11%**	**48.34%**						
11.3%	0.0%	0.1%	1	66.75%								**66.75%**		**16.29%**
0.8%	0.0%	0.0%	1	**68.74%**									**68.74%**	
0.4%	0.0%	0.1%	1	56.95%	8.08%								**56.95%**	
0.9%	0.0%	0.0%	1	68.70%	**68.70%**									
0.1%	1.2%	**80.2%**	1	**80.24%**					**12.33%**					
0.3%	0.4%	**5.8%**	1	63.79%									**15.25%**	
1.3%	0.0%	0.4%	1	51.99%									**51.99%**	
2.4%	0.4%	0.1%	1	66.62%	6.62%								8.48%	**66.62%**
8.7%	0.0%	0.4%	1	64.42%	**64.42%**									
4.0%	0.3%	0.0%	1	38.34%								6.19%	**21.74%**	**38.34%**
2.9%	0.1%	0.3%	1	41.77%				9.75%					**41.77%**	**10.94%**
7.9%	**11.3%**	**40.1%**	1	40.05%					6.59%		9.49%			**12.25%**
0.0%	0.0%	0.4%	1	**97.23%**							**97.23%**			
0.0%	0.0%	0.0%	1	**98.42%**										
0.1%	0.0%	0.3%	1	**96.18%**			**96.18%**							
7.0%	0.3%	0.0%	1	55.73%									**55.73%**	
2.5%	0.3%	1.6%	1	53.17%						8.84%	5.80%			
2.6%	0.0%	0.1%	1	29.29%	5.67%					**11.21%**			19.13%	
0.4%	0.0%	0.4%	1	24.13%	9.33%		**24.13%**	**10.93%**		**20.53%**				
0.8%	0.0%	0.4%	1	19.60%	8.53%		**19.60%**	9.33%						
1.7%	0.0%	1.4%	1	9.50%	8.23%		7.66%	9.50%		**18.58%**			**12.77%**	
2.8%	0.0%	0.9%	1	21.29%	**28.33%**		8.12%	**21.29%**					9.95%	5.21%
1.9%	0.0%	0.2%	1	30.64%	**30.64%**			**24.73%**					6.07%	
4.3%	0.0%	0.6%	1	28.97%	**26.61%**			**28.97%**					6.87%	
2.6%	0.7%	1.9%	1	27.51%	9.67%			**27.51%**					**13.75%**	
1.0%	1.0%	1.0%	1	22.33%	**22.33%**			**17.48%**					**10.19%**	6.80%
5.2%	0.0%	2.3%	1	23.26%	9.88%			**23.26%**					8.72%	6.98%
3.3%	0.0%	0.8%	1	19.01%	**23.14%**		**12.40%**	**19.01%**					**10.74%**	
5.8%	2.9%	0.0%	1	23.08%	**14.42%**			**23.08%**						8.65%
1.7%	3.4%	3.4%	1	11.86%	**30.51%**			**11.86%**				5.08%	5.08%	
6.8%	0.0%	0.0%	1	18.18%	6.82%			**18.18%**					**13.64%**	6.82%
4.5%	4.5%	0.0%	1	9.09%	**22.73%**			9.09%		9.09%		9.09%	**13.64%**	
0.0%	4.8%	0.0%	1	0.00%	**23.81%**			9.52%					9.52%	
4.8%	0.0%	0.0%	1	19.05%				9.52%					**19.05%**	9.52%

1.6%	0.1%	0.4%	1	7.12%	9.37%	**11.48%**	**39.84%**					8.58%	
1.6%	0.3%	1.5%	1	45.12%	**10.03%**							**45.12%**	5.54%
0.5%	0.0%	2.0%	1	**82.98%**				**82.98%**					
3.0%	0.0%	0.0%	1	48.94%							5.41%	**48.94%**	
3.0%	0.1%	0.3%	1	37.20%	6.99%		**37.20%**					**10.29%**	7.39%
23.7%	0.0%	0.1%	1	45.78%							**45.78%**		**21.24%**
2.0%	0.1%	0.1%	1	23.25%	**12.95%**				7.40%			5.81%	
1.5%	0.0%	0.5%	1	38.97%	**10.30%**		**38.97%**					**11.23%**	
1.5%	0.1%	0.1%	1	**87.81%**	**87.81%**								
0.7%	6.1%	**70.3%**	1	70.29%									
0.1%	0.0%	0.9%	1	47.35%	7.16%	**11.41%**	**47.35%**						
45.0%	0.0%	0.5%	1	45.01%							**17.71%**		6.66%
3.5%	0.0%	0.1%	1	**84.00%**									**84.00%**
0.9%	0.0%	0.3%	1	49.73%					5.33%			**10.93%**	
1.1%	0.0%	0.1%	1	**65.11%**		**65.11%**							
2.0%	0.1%	0.5%	1	33.11%	9.12%	7.10%	**14.88%**					6.97%	
6.0%	0.0%	0.8%	1	25.07%		7.64%	**25.07%**					**11.26%**	
1.1%	0.1%	1.2%	1	54.85%								**54.85%**	
1.1%	0.5%	0.7%	1	**71.18%**								**10.55%**	
1.8%	0.3%	0.1%	1	25.62%	**25.62%**		**10.94%**					**14.82%**	
5.1%	1.8%	0.9%	1	16.19%	**12.78%**		8.24%				**16.19%**	5.82%	9.52%
1.0%	1.1%	**72.1%**	1	**72.08%**				7.83%					
0.6%	0.0%	0.6%	1	**73.81%**		**73.81%**							
2.2%	0.6%	1.9%	1	1.01%			6.06%					**10.68%**	7.65%
4.9%	1.6%	**26.6%**	1	26.63%				**12.74%**	9.41%				5.64%
1.6%	0.9%	1.3%	1	51.52%					51.52%				**10.01%**
1.7%	0.3%	2.9%	1	17.61%		6.84%	**17.61%**			**12.95%**		9.17%	
4.5%	0.4%	2.2%	1	14.43%	**14.43%**	**10.93%**	**17.20%**						7.14%

m	n	p	q	r	s	t	v	w	y	
	8.61%				8.61%					**d** n s e k
		9.54%							**41.53%**	**y l** p f a
									74.50%	**y** l
			6.30%		5.36%					**e k d** a l q g s
						6.96%	**31.19%**			**I l v** t
										l
	6.28%									**g** e n
							53.73%			**v l I**
		13.45%		6.66%	**23.04%**	5.33%				**s p d** e a k r t
		16.49%		**22.87%**						**k r p** a e
	17.82%				**13.83%**	**15.03%**				**n d t s g**
					7.05%					**a** s
	7.05%				**38.96%**	**26.06%**				**s t d** n
		9.31%	**10.77%**							**d e q** p a k l
			6.63%		9.02%					**e d a** k s q
			8.37%							**e d** q
							11.26%			**i l v**
				16.82%						**k r**
				12.85%	6.36%					**k r** a s
			5.31%		7.29%					**a** s q
									80.24%	**y** f
				63.79%					5.84%	**r** k y
			5.97%	**19.63%**						**k** r q
										l k a
					12.04%		8.73%			**a** s v
10.54%				**10.14%**						**l** k m r I
			15.28%	7.64%						**k q l e** r
							7.91%	**11.33%**	**40.05%**	**y** l w h v f
										h
		98.42%								**p**
										d
				17.92%			6.98%			**k** r v
	53.17%									**n** g h
		29.29%	5.80%		5.28%					**p** k g a q s
	9.87%				7.60%					**d** g e n a s
	16.93%	**17.73%**			6.93%					**d** p n a e s
		15.46%		5.11%	6.67%					**g** p k e a d s r
					5.82%					**a** e k d s l
					5.91%					**a** e k s
			5.79%		7.08%					**e** a k s q
			12.27%	7.43%	5.95%					**e** k q a r s
5.34%				6.31%		8.25%				**a** e k t l r m
	9.88%		5.81%				5.23%			**e** a n k l q v
	5.79%									**a** e d k n
9.62%	6.73%						5.77%			**e** a m l n v
6.78%	5.08%		5.08%		8.47%					**a** e s m i k n q
	6.82%		6.82%		**11.36%**	**15.91%**	6.82%			**e** t k s a l n q v
					18.18%					**a** s k e g I
					28.57%					**s** a e k
					19.05%					**k** s e l

		5.94%	7.12%					e d a k r q
			12.66%					k r a l
								f
		12.80%	7.26%					k q r I
		11.74%	6.86%					e q k a l r
					23.75%			I v l
23.25%		**13.34%**		**16.91%**	5.55%			n s q a g k v
7.00%		9.64%						e k a q n
								a
						6.10%	**70.29%**	y w
		7.96%		6.10%				e d q a s
					9.19%	**45.01%**		v I t l
								l
				49.73%	8.27%			s k g t
10.83%								d n
	33.11%			6.97%				p e a d s
		12.73%			6.03%	6.03%		e q k d t v
			7.95%	5.80%				k r s
			71.18%					r k
		5.12%	15.10%	7.06%				a k r e s q
		10.09%	7.24%			5.11%		i a q e r k v
							72.08%	y f
								d
		22.08%	**14.00%**	7.65%				qr r k l s e
							26.63%	y f g l
			9.72%					g l r
			7.13%	8.44%				e h k s r d
				7.29%				e a d l s

Organism	Name	Type	12	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Acholeplasma laidlawii	dnaj	I	d	y	y	d	v	l	g	i	s	k	s	a	s	q	d	e	i	k
Actinobacillus actinom	DnaJ	I	d	y	y	e	l	l	g	i	s	r	s	a	d	e	k	e	i	k
Agrobacterium tumefacie	DnaJ	I	d	f	y	e	t	l	g	v	s	k	t	a	d	e	k	e	l	k
Allium porrum	DnaJ	I										k	n	a	s	p	d	d	l	k
Allium porrum	LDJ2	I	k	y	y	e	v	l	g	v	s	k	n	a	t	p	e	d	l	k
Anopheles gambiae	agCP3152	I	d	y	y	s	t	l	g	v	t	k	n	a	s	p	k	e	i	k
Anopheles gambiae	agCP5985	I	g	f	y	d	v	l	g	v	k	p	g	c	s	p	e	d	l	k
Aquifex aeolicus	DnaJ	I	d	y	y	e	i	l	g	v	n	r	d	a	t	k	e	e	i	k
Aquifex aeolicus	DnaJ-2	I	d	y	y	e	i	l	g	v	p	r	n	a	s	q	e	e	i	k
Arabidopsis thaliana	At1g80030	I	d	y	y	a	t	l	g	v	s	k	s	a	n	n	k	e	i	k
Arabidopsis thaliana	At3g17830	I	d	h	y	s	t	l	n	v	n	r	n	a	t	l	q	e	i	k
Arabidopsis thaliana	AT4g39960	I	d	f	y	s	v	l	g	v	s	k	n	a	t	k	a	e	i	k
Arabidopsis thaliana	At5g48030	I	d	y	y	s	v	l	g	v	s	k	n	a	q	e	g	e	i	k
Arabidopsis thaliana	ATJ1	I	n	y	y	d	v	l	g	v	s	p	k	a	t	r	e	e	i	k
Arabidopsis thaliana	ATJ2	I	k	f	y	e	i	l	g	v	p	k	t	a	a	p	e	d	l	k
Arabidopsis thaliana	ATJ3	I	k	f	y	e	i	l	g	v	p	k	s	a	s	p	e	d	l	k
Atriplex nummularia	ANJ1	I	r	y	y	e	i	l	g	v	p	k	d	a	s	p	e	d	l	k
Babesia bovis	DnaJ	I	k	f	y	k	v	l	g	l	s	r	d	c	s	e	s	e	i	k
Bacillus anthracis	DnaJ	I	d	y	y	e	v	l	g	l	s	k	g	a	s	k	d	–	i	k
Bacillus halodurans	DnaJ	I	d	y	y	e	v	l	g	v	d	r	n	a	s	a	d	e	v	k
Bacillus sphaericus	DnaJ	I	d	y	y	e	v	l	g	l	t	k	d	e	i	k	k	a	y	r
Bacillus stearothermoph	DnaJ	I	d	y	y	e	i	l	g	v	s	k	n	a	t	k	e	e	i	k
Bacillus subtilis	DnaJ	I	d	y	y	e	v	l	g	v	s	k	s	a	s	k	d	e	i	k
Bacillus thermoglucosid	DnaJ	I	d	y	y	e	i	l	g	v	s	k	n	a	t	k	e	e	i	k
Borrelia burgdorferi	DnaJ	I	d	y	y	e	i	l	g	l	s	k	g	a	s	k	d	e	i	k
Bradyrhizobium japonicu	DnaJ	I	c	y	y	e	t	l	e	v	e	r	d	a	d	e	s	k	l	k
Brevibacillus choshinen	DnaJ	I	d	y	y	e	v	l	g	v	g	k	g	a	d	a	d	e	i	k
Brucella melitensis	DnaJ	I	d	y	y	e	a	l	g	v	t	r	t	a	d	d	k	t	l	k
Brucella ovis	DnaJ	I	d	y	y	e	a	l	g	v	t	r	t	a	d	d	k	t	l	k
Buchnera	DnaJ	I	d	y	y	q	i	l	g	i	p	k	s	a	e	e	r	e	i	k
Buchnera aphidicola	DnaJ	I	d	y	y	q	i	l	g	i	p	k	s	a	e	e	r	e	i	k
Caenorhabditis elegans	C24G6.5	I	t	l	y	t	t	l	n	v	r	p	d	a	s	q	a	d	i	k
Caenorhabditis elegans	F22B7.5	I	d	y	y	k	t	l	g	v	d	k	k	s	d	a	k	a	i	k
Caenorhabditis elegans	F39B2.10	I	g	y	y	d	v	l	g	v	k	p	d	a	s	d	n	e	l	k
Campylobacter jejuni	DnaJ	I	s	y	y	e	i	l	e	i	t	q	n	a	d	k	e	t	i	k
Caulobacter crescentus	DnaJ	I	d	y	y	e	i	l	g	v	t	r	t	i	d	e	a	g	l	k
Cercopithecus aethiops	DJ2	I	t	y	y	d	v	l	g	v	k	p	n	a	t	q	e	e	l	k
Chlamydia muridarum	DnaJ	I	d	y	y	t	i	l	g	v	a	k	t	a	t	p	e	e	i	k
Chlamydia trachomatis	DnaJ	I	d	y	y	t	i	l	g	v	a	k	t	a	t	p	e	e	i	k
Chlamydophila pneumonia	DnaJ	I	d	y	y	s	i	l	g	i	s	k	t	a	s	a	e	e	i	k
Chlorobium tepidum	DnaJ	I	d	y	y	e	i	l	g	v	a	r	s	a	d	k	d	e	i	k
Clostridium acetobutyl	DnaJ	I	d	y	y	e	v	l	g	l	e	k	g	a	s	d	d	e	i	k
Clostridium perfringen	DnaJ	I	d	y	y	e	v	l	g	l	q	k	g	a	s	d	d	e	i	k
Corynebacterium glutam	DnaJ	I	d	y	y	g	i	l	g	v	d	r	n	a	t	e	s	e	i	k
Corynebacterium glutam	DnaJ-2	I	n	y	y	a	d	l	g	v	s	s	s	a	s	e	d	e	i	k
Coxiella burnetii	DnaJ	I	d	y	y	e	v	l	g	v	n	l	n	a	t	e	a	e	v	k
Cucumis sativus	DnaJ-1	I	k	y	y	e	i	l	g	v	s	k	n	a	s	q	d	d	l	k
Daucus carota	DnaJ	I	k	y	y	e	i	l	g	v	p	k	t	a	s	p	d	d	l	k
Deinococcus radioduran	DnaJ	I	d	y	y	e	l	l	g	v	s	r	t	a	s	a	d	e	i	k
Dictyostelium discoideu	DDJ1	I	k	f	y	d	i	l	g	v	a	r	d	a	s	e	t	d	i	k
Drosophila melanogaste	SD10289p	I	d	y	y	a	t	l	g	v	a	k	n	a	n	g	k	d	i	k
Drosophila melanogaste	CG8863	I	g	y	y	d	i	l	g	v	k	p	n	a	t	p	d	e	l	k
Drosophila melanogaste	Tid1	I	d	y	y	a	t	l	g	v	a	k	n	a	n	g	k	d	i	k
Drosophila melanogaste	Tid56	I	d	y	y	a	t	l	g	v	a	k	n	a	n	g	k	d	i	k
Ectocarpus siliculosus	DnaJ	I				e	f	l	g	v	d	a	g	a	g	d	e	e	i	k
Erysipelothrix rhusiopa	DnaJ	I	d	f	y	e	i	l	g	v	s	k	s	a	t	d	a	e	i	k
Escherichia coli	*DnaJ*	*I*	*d*	*y*	***y***	*e*	*i*	***l***	*g*	*v*	*s*	*k*	*t*	***a***	*e*	*e*	*r*	*e*	***i***	*r*

Euphorbia esula	DnaJ	I	k y y e i l g v s k s a s q d d l k
Francisella tularensis	DnaJ	I	c y y e i l n i s k t a s g v e i k
Fusobacterium nucleatum	DnaJ	I	d y y e v l g i d k s a s e n d i k
Geodia cydonium	DnaJ	I	d l y e v l e l p k g a s f s d i r
Giardia intestinalis	DnaJ	I	e f y d l l g v s p s a d p q t i k
Glycine max	PM37	I	r y y e i l g v s k n a s q d d l k
Haemophilus ducreyi	DnaJ	I	d y y e v l g l q k g a t e k d i k
Haemophilus influenzae	DnaJ	I	d y y e v l g l q k g a s e d e i k
Halobacterium salinarum	DnaJ	I	d f y d v l g v s r d a t e d e i m
Halobacterium sp.	DnaJ	I	d f y d v l g v s r d a t e d e i m
Haloferax mediterranei	Hsp40	I	d f y d v l g v s r d a s k d q i k
Helicobacter pylori	DnaJ	I	s y y e i l e v e k h s n q e t i k
Hevea brasiliensis	DnaJ	I	k y y e i l g v s k n a s q d d l k
Homo sapiens	DnaJA1	I	t y y d v l g v k p n a t q e e l k
Homo sapiens	DnaJA2	I	k l y d i l g v p p g a s e n e l k
Homo sapiens	DnaJA3	I	d y y q i l g v p r n a s q k e i k
Homo sapiens	Dnj3 / Cpr	I	k l y d i l g v p a g a s e n e l k
Lactobacillus sakei	DnaJ	I	d y y d v l g v g r d a s d d e i k
Lactococcus lactis	DnaJ	I	e y y e r l g v d k n a s q d e i k
Legionella pneumophila	DnaJ	I	d y y e l l e v s r n a s d a e i k
Leishmania major	L6520.01	I	e l y e v l n v s v e a n e h e i k
Leishmania major	Tcj4	I	g l y d e l g i s p d a t e p q i r
Leishmania major	L7610.08	I	d l y s v l g v a r n s t p e q i k
Leptospira interrogans	DnaJ	I	s y y d i l g v s k s a n d e e i k
Listeria innocua	DnaJ	I	d y y e v l g i s k s a s a d e i k
Listeria monocytogenes	DnaJ	I	d y y e v l g i s k s a s a d e i k
Lycopersicon esculentum	DnaJ	I	k y y e i l g v p k a a s q e d l k
Mannheimia haemolytica	DnaJ	I	d y y e v l g l s k g a s e k d i k
Marine group II	DnaJ	I	d y y e v l d v e r t a t e k d l k
Medicago sativa	Msj1	I	k y y d i l g v s k s a s e d e i k
Mesorhizobium loti	DnaJ	I	d f y e t l g v q k g a d e k e l k
Methanobacterium therm	DnaJ	I	d y y e i l g v d r g a d k k e i k
Methanosarcina mazei	DnaJ	I	d y y e i l g l s k d s s v e d i k
Methanosarcina thermoph	DnaJ	I	d y y e i l g l s r d a t p e d i k
Methanothermobacter the	DnaJ	I	d y y e i l g v d r g a d k k e i k
Methylovorus sp.	DnaJ	I	d y y e v l g v n r d a s d e e i k
Mus musculus	DnaJA2	I	k l y d i l g v p p g a s e n e l k
Mus musculus	Hsj2 / RDJ2	I	t y y d v l g v k p n a t q e e l k
Mus musculus	mmDj4	I	q y y d i l g v k p s a s p e e i k
Mus musculus	Tid1	I	d y y q i l g v p r n a s q k d i k
Mus musculus	Tid56	I	d y y q i l g v p r n a s q k d i k
Mycobacterium leprae	DnaJ	I	d f y k e l g v s s d a s p e e i k
Mycobacterium leprae	DnaJ-2	I	d y y g l l g v s r n a s d a d i k
Mycobacterium tubercul	DnaJ	I	d f y q e l g v s s d a s p e e i k
Mycobacterium tubercul	DnaJ-2	I	d y y g l l g v s k n a s d a d i k
Mycoplasma genitalium	DnaJ	I	d y y e v l g i s k n a s s q d i k
Mycoplasma genitalium	DnaJ	I	i s k n a s s q d i k
Mycoplasma pneumoniae	DnaJ	I	d y y e v l g v s r s a t a q d i k
Mycoplasma pulmonis	DnaJ	I	d y y k i l g i d k s a n e k e i k
Myxococcus xanthus	DnaJ	I	d y y q t l g v d r s a s a e d v k
Neisseria meningitidis	DnaJ	I	d f y a t l g v a r t a t d d e i k
Nicotiana tabacum	DnaJ	I	r y y e i l g v s k n a s d d e i k
Nitrosomonas europaea	DnaJ	I	d y y e v l g v g r d a d e n e l k
Oryza sativa	DnaJ	I	k y y e v l g v s k t a t q d e l k
Pasteurella multocida	DnaJ	I	d y y d v l g v e r g a d e k e i k
Peanut witches-broom ph	DnaJ	I	d y y e v l e l s r d a k l d d i k
Pisum sativum	DnaJ	I	d y y a t l g v p k s a t v k d i k
Porphyromonas gingival	DnaJ	I	d y y e v l g v s k n a t d d e l k

Pseudomonas aeruginosa	DnaJ	I	d	f	y	e	v	l	g	v	e	r	g	a	s	e	a	d	l	k
Rattus norvegicus	RDJ1 / Hsj2	I	t	y	y	d	v	l	g	v	k	p	n	a	t	q	e	e	l	k
Rattus norvegicus	RDJ2	I	k	l	y	d	i	l	g	v	p	p	g	a	s	e	n	e	l	k
Rhizobium fredii	NolC	I	d	l	y	e	t	l	g	v	a	r	n	a	d	e	k	e	l	k
Rhizobium leguminosarum	DnaJ	I	d	f	y	e	t	l	g	v	a	k	s	a	d	e	k	e	l	k
Rhodobacter capsulatus	DnaJ	I	d	f	y	e	v	l	g	v	s	k	g	a	s	a	e	e	i	k
Rhodopseudomonas sp	DnaJ	I	c	y	y	e	t	l	e	v	e	r	n	a	d	d	s	t	l	k
Rickettsia conorii	DnaJ	I	n	y	y	q	i	l	g	v	s	k	t	a	s	q	a	d	l	k
Rickettsia prowazekii	DnaJ	I	d	y	y	q	v	l	g	v	s	k	t	a	s	q	a	d	i	k
Saccharomyces cerevisia	MDJ1	I	d	p	y	d	t	l	g	l	k	k	s	a	t	g	a	e	i	k
Saccharomyces cerevisia	Scj1	I	d	y	y	a	i	l	e	i	d	k	d	a	t	e	k	e	i	k
Saccharomyces cerevisia	XDJ1	I	r	l	y	d	v	l	g	v	t	r	d	a	t	v	q	e	i	k
Saccharomyces cerevisia	YDJ1 / Mas	I	k	f	y	d	i	l	g	v	p	v	t	a	t	d	v	e	i	k
Saccharomyces cerevisia	YNL077w	I	s	l	y	d	s	l	n	v	t	a	a	a	s	t	s	e	i	k
Salix gilgiana	DnaJ	I	k	y	y	e	v	l	g	v	s	k	s	a	s	q	d	d	l	k
Salmonella typhimurium	DnaJ	I	d	y	y	e	i	l	g	v	s	k	t	a	e	e	r	e	i	k
Schizosaccharomyces pom	DnaJ relate	I	k	l	y	d	i	l	e	v	h	f	e	a	s	a	e	e	i	k
Schizosaccharomyces pom	DnaJ-relate	I	s	q	k	q	i	l	g	v	s	k	d	a	s	e	s	e	i	r
Schizosaccharomyces pom	mitochondr	I	k	l	y	e	v	l	n	v	d	v	t	a	s	q	a	e	l	k
Schizosaccharomyces pom	Spj1	I	s	q	k	q	i	l	g	v	s	k	d	a	s	e	s	e	i	r
Sinorhizobium meliloti	DnaJ	I	d	l	y	e	t	l	g	v	q	k	n	a	d	e	k	e	l	k
Solanum tuberosum	DnaJ	I	k	y	y	e	i	l	g	v	p	k	t	a	a	q	e	d	l	k
Staphylococcus aureus	DnaJ	I	d	y	y	e	v	l	g	i	s	k	d	a	s	k	d	e	i	k
Streptococcus pneumonia	DnaJ	I	e	f	y	d	r	l	g	v	s	k	n	a	s	a	d	e	i	k
Streptococcus pyogenes	DnaJ	I	e	y	y	d	r	l	g	v	s	k	d	a	s	q	d	d	i	k
Streptomyces albus G	DnaJ2	I	d	y	y	a	v	l	g	v	r	r	d	a	s	q	d	e	i	k
Streptomyces coelicolo	DnaJ	I	d	y	y	k	v	l	g	v	p	k	d	a	t	e	a	e	i	k
Streptomyces coelicolo	DnaJ2	I	d	y	y	a	v	l	g	v	r	r	d	a	s	q	d	e	i	k
Tetragenococcus haloph	DnaJ	I	d	y	y	e	v	l	g	v	d	k	g	a	s	d	d	e	i	k
Thermoplasma acidophilu	DnaJ	I	d	y	y	k	i	l	g	v	d	r	n	a	t	d	e	e	i	k
Thermoplasma volcanium	DnaJ	I	d	y	y	k	i	l	g	v	d	r	n	a	s	e	e	d	i	k
Thermotoga maritima	DnaJ	I	d	y	y	e	i	l	g	v	p	r	d	a	t	q	e	e	i	k
Trypanosoma cruzi	TCJ2	I	k	f	y	d	s	l	g	v	s	p	d	a	s	v	d	e	i	k
Trypanosoma cruzi	TCJ3	I	e	y	y	e	i	l	g	l	e	a	e	a	t	e	h	d	i	k
Trypanosoma cruzi	TCJ4	I	s	l	y	d	e	l	g	i	l	p	s	a	a	t	d	e	i	r
uncultured proteobacte	DnaJ	I	d	y	y	e	t	l	g	i	s	k	g	a	t	a	e	e	i	k
Ureaplasma urealyticum	DnaJ	I	d	y	y	e	i	l	g	v	s	k	s	a	t	p	e	e	i	k
Vibrio cholerae	DnaJ	I	d	f	y	e	v	l	g	v	g	r	d	a	s	e	r	d	i	k
Vibrio harveyi	DnaJ	I	d	f	y	e	v	l	g	v	s	r	d	a	s	e	r	d	i	k
Xanthomonas campestris	DnaJ	I	d	y	y	e	v	l	g	v	a	r	g	a	s	d	e	e	l	k
Xylella fastidiosa	DnaJ	I	d	y	y	q	v	l	g	v	p	r	t	a	s	e	d	d	l	k
Yersinia pestis	DnaJ	I	d	y	y	e	v	l	g	v	s	r	d	a	e	e	r	e	i	k
Zea mays	ZmDj1	I	k	y	y	e	i	l	g	v	p	k	s	a	s	q	d	d	l	k
Plasmodium falciparum	Pfj1	III	d	p	y	t	v	l	g	l	s	r	n	a	t	t	n	d	i	k

19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
k	a	y	r	s	l	a	k	k	y	h	p	d	v	s	k	e	k	d	a	e					
r	a	y	k	k	l	a	m	q	y	h	p	d	r	t	k	g	d	k	e	k	e				
s	a	f	r	k	l	a	m	k	f	h	p	d	k	n	p	d	d	a	d	s	e				
k	a	y	r	k	a	a	i	k	n	h	p	d	k	g	g	d	p								
k	a	y	r	k	a	a	i	k	n	h	p	d	k	g	g	d	p								
k	a	y	y	q	l	a	k	k	y	h	p	d	t	n	k	d	d	p	n	a	g				
k	a	y	r	k	l	a	m	k	y	h	p	d	k	n	p	n	e	g							
k	a	y	r	k	l	v	r	i	y	h	p	d	i	n	p	d	p	s	a	q					
k	a	y	r	r	l	v	r	k	y	h	p	d	i	c	k	k	p	e	c	e					
a	a	y	r	r	l	a	r	q	y	h	p	d	v	n	k	e	p	g	a	t					
s	s	y	r	k	l	a	r	k	y	h	p	d	m	n	k	n	p	g	a	e					
s	a	y	r	k	l	a	r	s	y	h	p	d	v	n	k	d	a	g	a	e					
k	a	y	y	g	l	a	k	k	l	h	p	d	m	n	k	d	d	p	e	a	e				
k	s	f	h	e	l	a	k	k	f	h	p	d	t	n	r	n	n	p	s	a	k				
k	a	y	k	k	a	a	i	k	n	h	p	d	k	g	g	d	p								
k	a	y	k	k	a	a	i	k	n	h	p	d	k	g	g	d	p								
k	a	y	k	k	a	a	i	k	n	h	p	d	k	g	g	d	p								
k	a	y	r	k	l	a	i	k	h	h	p	d	k	g	g	d	s								
k	a	y	r	r	l	a	k	k	y	h	p	d	v	s	k	e	e	n	a	i					
k	a	y	r	k	l	a	r	k	y	h	p	d	v	n	k	a	p	d	a	e					
k					l	s	k	q	y	h	p	d	l	n	k	e	p	g	a	d					
k	a	y	r	k	l	s	k	k	y	h	p	d	v	n	k	e	p	d	a	a					
k	a	y	r	k	l	s	k	k	y	h	p	d	i	n	k	e	a	g	s	d					
k	a	y	r	k	l	s	k	k	y	h	p	d	i	n	k	e	p	d	a	a					
k	a	y	r	k	i	a	i	k	y	h	p	d	r	n	q	g	n	e	e	a	a				
s	s	f	r	k	l	a	m	k	f	h	p	d	r	n	p	g	d	d	t	s	e				
k	a	y	r	k	l	a	r	q	y	h	p	d	v	n	k	a	a	d	a	e					
a	a	f	r	k	l	a	m	q	y	h	p	d	r	n	p	d	d	p	e	a	e				
a	a	f	r	k	l	a	m	q	y	h	p	d	r	n	p	d	d	p	e	a	e				
k	a	y	k	k	l	a	m	k	y	h	p	d	r	n	q	g	d	k	t	a	e				
k	a	y	k	r	l	a	m	k	y	h	p	d	r	n	q	g	d	k	n	a	e				
k	s	y	f	k	l	a	k	e	y	h	p	d	k	n	p	d	h	g							
k	a	y	f	q	l	a	k	k	y	h	p	d	v	n	k	t	k	e	a	q					
k	a	y	r	k	m	a	l	k	f	h	p	d	k	n	p	d	g	a							
k	a	y	r	k	m	a	l	k	y	h	p	d	r	n	q	g	d	k	e	a	e				
s	a	f	r	k	l	a	m	e	h	h	p	d	r	n	g	g	c	e	n	a	a				
k	a	y	r	k	l	a	l	k	y	h	p	d	k	n	p	n	e	g							
k	a	y	r	k	l	a	v	k	y	h	p	d	k	n	p	g	d	a	e	a	e				
k	a	y	r	k	l	a	v	k	y	h	p	d	k	n	p	g	d	a	e	a	e				
k	a	y	r	k	l	a	v	k	y	h	p	d	k	n	p	g	d	a	a	a	e				
k	a	y	r	k	l	a	l	k	y	h	p	d	k	n	p	d	n	k	e	a	e				
k	a	f	r	k	l	a	i	k	y	h	p	d	k	n	r	g	n	k	e	a	e				
r	a	f	r	k	m	a	m	k	y	h	p	d	r	n	p	g	d	k	e	a	e				
k	a	y	r	k	l	a	r	k	y	h	p	d	v	n	p	g	e	e	a	a					
k	a	y	r	k	l	a	r	e	n	h	p	d	k	n	p	g	d	k	a	a	e				
k	a	f	r	r	l	a	m	k	y	h	p	d	r	n	p	g	d	k	d	a	e				
k	a	y	r	k	a	a	i	k	n	h	p	d	k	g	g	d	p								
k	a	y	r	k	a	a	i	k	n	h	p	d	k	g	g	d	p								
s	a	y	r	k	l	a	l	k	l	h	p	d	r	n	k	e	e	g	a	a					
k	a	y	r	k	l	a	i	k	y	h	p	d	k	n	p	d	p	a	a	v					
k	a	y	y	q	l	a	k	k	y	h	p	d	t	n	k	e	d	p	d	a	g				
k	a	y	r	k	l	a	l	k	y	h	p	d	k	n	p	n	e	g							
k	a	y	y	q	l	a	k	k	y	h	p	d	t	n	k	e	d	p	d	a	g				
k	a	y	y	q	l	a	k	k	y	h	p	d	t	n	k	e	d	p	d	a	g				
k	a	y	r	r	l	a	l	q	h	h	p	d	k	n	g	d	p								
k	a	y	r	q	l	a	k	k	y	h	p	d	i	n	k	e	d	g	a	e					
k	*a*	***y***	*k*	*r*	*l*	*a*	*m*	*k*	*y*	***h***	***p***	***d***	*r*	*n*	*q*	*g*	*d*	*k*	*e*	*a*	*e*				

```
k a   y r k a a i k n h p d k g g d p
r a   y r k l a m k y h p d r n p g d k e a e
k a   y r k a a m k y h p d k f a n a s d a e k k d a
k a   h h r l a r q y h p d r e g g n d
k r   t t k l a r k y h p d k p t g d e
k a   y k k a a i k n h p d k g g d p
r a   y k r l a a k y h p d k n q g s k d s e
r a   y k r l a s k h h p d k n q g s k e a e
q a   y r d q v s e y h p d v s d d p d a e
q a   y r d q v s e y h p d v s d d p d a e
n a   y r k k a a k y h p d v s d e e d a e
k s   y r k l a l k y h p d r n a g d k e a e
k a   y r k a a i k n h p d k g g d p
k a   y r k l a l k y h p d k n p n e g
k a   y r k l a k e y h p d k n p n a g
k a   y y q l a k k y h p d t n k d d p k a k
k a   y r k l a k e y h p d k n p q m q e
k a   y r k l s k k y h p d i n k a p d a e
k a   y r k m s k k y h p d l n k e e g a e
k a   y r r l a m k y h p d r n p g d t s a e
r s   y r r l a l k y h p d k n t g d e a a a
s a   y r r k a l q y h p d k n s g d p a a a
s a   y k k r a k a l h p d v n p s p t a a
s a   y r k l a i k y h p d k n k g n k e s e
k a   y r k l s k q y h p d i n k e a g a d
k a   y r k l s k q y h p d i n k e a g a d
k a   y r k a a i k n h p d k g g d p
r a   y k r l a a k h h p d k n q g s k e s e
n a   f r r l a r k y h p d r s e e e d a e
k a   y r k a a m k n h p d k g g d p
s a   f r k l a m q f h p d r n p g d h s c e
k a   y r r l a r k y h p d v s d d p d a a
k t   y r k l a l q y h p d r n k e p g a e
k s   y r k l a l k y h p d r n k e p g a e
k a   y r r l a r k y h p d v s d d p d a a
k s   y r k l a m k y h p d r n p d n p k a e
k a   y r k l a k e y h p d k n p n a g
k a   y r k l a l k y h p d k n p n e g
k a   y r k l a l k y h p d k n p d e g
k a   y y q l a k k y h p d t n k d d p k a k
k a   y y q l a k k y h p d t n k d d p k a k
r a   y r k l a r y l h p d a n p d n s a g
r a   y r k l a r e l h p d i n p d e a a q
r a   y r k l a r d l h p d a n p g n p a a g
r a   y r k l a r e l h p d v n p d e a a q
r a   f r k l a m q y h p d r h k a e n e t t q k q n
r a   f r k l a m q y h p d r h k a e n e t t q k q n
r a   f r k l a m q y h p d r h k g e g e t v q k q n
k a   y r k l a m e h h p d r s s s k e s e
k a   y r k l a r k y h p d v n p g n k a a e
k a   y r k l a m k y h p d r n p d n k e a e
k a   y r k a a m k n h p d k g g d p
k a   y r k l a m k y h p d r n a g d t k a e
k a   y r k a a i k n h p d k g g d p
r a   y k k l a m k y h p d r t q g n k e l e
k a   y r r l s k k y h p d v c k e a n a d
a a   y r r l a r q y h p d v n k e p g a t
k a   y r k k a i q y h p d k n p g d k e a e
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k a   y r r l a m k y h p d r n p g d k e a e
k a   y r k l a l k y h p d k n p n e g
k a   y r k l a k e y h p d k n p n a g
s a   f r k l a m q y h p d r n p g d q e a e
s a   f r k l a m k f h p d k n p d d k d a e
k a   y r s k a k e l h p d r n q g q s a a e
s a   f r k l a m k w h p d r n p g d p q c e
k a   y l k l a k q y h p d t t d a k d a e
k a   y l k l a k q y h p d t t n a n d a e
k a   y y k l a k k y h p d i n k e p d a e
s a   y r q l s k k y h p d k n a g s e e a h
t a   y r k l a l k h h p d k y v d q d s k e v n e
k a   y r k c a l k y h p d k n p s e e a a
k a   y r n a a l k y h p d k n n h t e e s k
k a   y r k a a i k n h p d k g g d p
k a   y k r l a m k y h p d r n q g d k e a e
k s   y k r l a l l h h p d k a p i h e k e e a a
k a   y r q l t k q w h p d k n p g n e e a q
k a   y r k l a l k y h p d k n p n a g
k a   y r q l t k q w h p d k n p g n e e a q
s a   f r k l a m k y h p d r n p g d q e s e
k a   y r k a a i k n h p d k g g d p
k a   y r k l s k k y h p d i n k e e g a d
k a   y r k l s k k y h p d i n k e p g a e
k a   y r k m s k k y h p d i n k e a g a e
k a   f r r l a r e l h p d v n p d p k t q
k a   y r k l a r e n h p d a n k g n v k a e
k a   f r r l a r e l h p d v n p d p k t q
k a   y r k l s k k y h p d v n q e a d a e
k a   f r e l a k k w h p d l h p d n k q e a e
k a   f r e l a k k w h p d l h p d n k a e a e
r a   y k r l v k e w h p d r h p e n r k e a e
r a   y r r l a l k y h p d k n k d p g s q
r a   y r r l g l k y h p d k n p g d q e a a
t a   y r r l a l k y h p d k n g g d a r a a
k a   y r r k a k e l h p d r n a d n p a s e
a a   f r k l a k e h h p d r n k s a d d
k a   y k r l a m k y h p d r n s g d a g a a
k a   y k r l a m k y h p d r n q g d e s a a
k a   y r r c a m k y h p d r n p g d a a a e
k a   y r r c a m k y h p d r n p g d a a a e
k a   y k r l a m k f h p d r q s e d k n a e
k a   y r k a a i k n h p d k g g d p
k q   f r l l a k k y h p d i n p s p d a k
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45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71
																	t	k	f	k	e	v	q	e	a	y
																	e	k	f	k	e	i	q	e	a	y
																	r	k	f	k	e	i	n	e	a	y
																	e	k	f	k	e	l	a	q	a	y
																	e	k	f	k	e	i	g	q	a	y
																	k	k	f	q	e	v	s	e	a	y
																	e	r	f	k	a	i	s	m	a	y
																	e	k	f	k	e	i	n	e	a	y
																	e	k	f	k	e	i	n	e	a	y
																	e	k	f	k	e	i	s	a	a	y
																	d	k	f	k	q	i	s	a	a	y
																	d	k	f	k	e	i	s	n	a	y
																	t	k	f	q	e	v	s	k	a	y
																	r	k	f	q	e	i	r	e	a	y
																	e	k	f	k	e	l	a	q	a	y
																	e	k	f	k	e	l	a	q	a	y
																	e	k	f	k	e	l	a	h	a	y
																	e	m	f	k	e	i	t	r	a	y
																	e	k	f	k	e	v	q	e	a	y
																	d	k	f	k	e	v	k	e	a	f
																	e	k	f	k	e	i	a	e	a	y
																	e	k	f	k	e	i	k	e	a	y
																	e	k	f	k	e	v	k	e	a	y
																	e	k	f	k	e	i	k	e	a	y
																	s	i	f	k	e	a	t	q	a	y
																	v	k	f	k	e	i	n	e	a	y
																	e	k	f	k	e	v	k	e	a	y
																	r	k	f	k	e	i	g	e	a	y
																	r	k	f	k	e	i	g	e	a	y
																	g	k	f	k	e	i	k	e	a	y
																	n	k	f	k	e	i	k	e	a	y
																	d	k	f	k	e	i	s	f	a	y
																	t	k	f	q	e	i	s	e	a	y
																	e	q	f	k	q	i	s	q	a	y
																	d	k	f	k	l	v	n	e	a	y
																	g	r	f	k	e	i	n	e	a	y
																	e	k	f	k	q	i	s	q	a	y
																	r	r	f	k	e	v	s	e	a	y
																	r	r	f	k	e	v	s	e	a	y
																	k	r	f	k	e	v	s	e	a	y
																	e	k	f	k	e	v	n	e	a	y
																	e	k	f	k	e	i	n	e	a	y
																	e	n	f	k	e	v	n	e	a	y
																	e	k	f	r	e	a	s	v	a	h
																	d	r	f	k	k	a	a	e	a	y
																	v	k	f	k	e	a	r	e	a	y
																	e	k	f	k	e	l	a	q	a	y
																	e	k	f	k	e	l	a	q	a	y
																	e	k	f	a	q	v	s	e	a	y
																	e	k	f	k	e	l	t	v	a	y
																	r	k	f	q	e	v	s	e	a	y
																	e	k	f	k	a	i	s	q	a	y
																	r	k	f	q	e	v	s	e	a	y
																	r	k	f	q	e	v	s	e	a	y
																	e	k	f	k	q	l	t	d	v	y
																	a	k	f	k	e	v	q	e	a	y
																	a	*k*	***f***	*k*	*e*	*i*	*k*	*e*	***a***	***y***

e k f k e l a q a y
i k f k e i s e a y
e e k f k e i n e a y
e k f k e v q t a y
e l f n k i g r a y
e k f k e l a q a y
e k f k q i t e a y
e k f k e i n e a y
e k f k k i q k a k
e k f k k i q k a k
e k f k k v q k a k
e k f k l i n e a y
e k f k e l a q a y
e k f k q i s q a y
d k f k e i s f a y
e k f s q l a e a y
t n f k e i s f a y
a k f k e v t e a y
e k y k e v q e a y
e k f k e i q k a y
d m f k k v s n a y
e k f k k v a e a y
e d f a e a k q a y
e k f k e a t e a y
e k f k e i s e a y
e k f k e i s e a y
e k f k e l a q a y
e k f k e i t e a y
n k f k e i q e a y
e k f k e l g q a y
h k f k e i n e a y
e k f k e i s e a y
e k f k e i s e a y
e k f k e i s e a y
e k f k e i s e a y
e s f k e a k e a y
d k f k e i s f a y
e k f k q i s q a y
e k f k l i s q a y
e k f s q l a e a y
e k f s q l a e a y
e r f k v v s e a h
a k f k e i s m a y
e r f k a v s e a h
a k f k e i s v a y
e e k f k e v n e a y
e e k f k e v n e a y
e e k f k e v n e a y
a k m r e i n e a y
e k f k q v s a a f
e k f k e v q k a y
e k f k e l a q a y
e r f k n i k e a y
e k f k e l a q a y
e k f k e i q e a y
a k f k e v q e a f
d k f k e i s n a y
e h f k e v a e a y

d k f k e a n e a y
e k f k q i s q a y
d k f k e i s f a y
k s f k e i n q a y
r k f k e i n e a y
a q f k e v n g a y
i k f k e i n e a y
k k f k e i n a a y
k k f k e i n a a y
k k f h d l q n a y
q k f i e v g e a y
i k f k e i t a a y
e k f k e a s a a y
r k f q e i c q a y
e k f k e l a q a y
a k f k e i k e a y
e r f r g v q e a y
e k f i e i n k a h
d k f k e i s r a y
e k f i e i n k a h
k s f k e i n e a y
e k f k e l a q a y
e k f k e i s e a y
d k y k e v q e a y
q k y k d v q e a y
e r f k e i n a a y
e r f k e i s e a n
e r f k e i n a a y
e k f k k f q k p m
e k f k e i s e a y
e k f k e i s e a y
q r f k e i q e a y
e k f k e v s v a y
e m f k r i g h a y
e k f k k v a e a y
g l f k e a n e a y
t l f k e i n e a y
e k f k e v k e a y
d k f k e v k e s y
a t f k e c k e a y
a a f k e c k e a y
e k f k e a k e a y
e k f k e l a q a y
q k m a s i t a a y

72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89
d	v	l	n	d	s	n	k	k	a	q	y	d	r	f	g	h	a
e	v	l	n	d	k	e	k	r	a	a	y	d	q	y	g	h	a
e	t	l	k	d	p	q	k	r	a	a	y	d	r	f	g	h	a
d	v	l	s	d	p	e	k	r	e	i	y	d	q	y	g	e	d
e	v	l	n	d	p	e	k	r	e	i	y	d	q	y	g	e	e
e	v	l	s	d	e	t	k	r	r	e	y	d	t	y	g	q	t
e	v	l	s	d	p	e	k	k	a	i	y	d	e	g	g	e	a
h	v	l	i	d	d	e	r	r	s	e	y	d	a	i	l	s	r
q	v	l	s	d	p	e	k	r	k	l	y	d	m	y	g	h	a
e	v	l	s	d	e	q	k	r	a	l	y	d	q	y	g	e	a
e	v	l	s	d	e	e	k	r	s	a	y	d	r	f	g	e	a
e	i	l	s	d	d	e	k	r	s	l	y	d	r	y	g	e	a
e	i	l	k	d	k	e	k	r	d	l	y	d	q	f	g	h	e
e	t	l	g	n	s	e	r	r	e	e	y	d	k	l	q	y	r
e	v	l	s	d	p	e	k	r	e	i	y	d	q	y	g	e	d
e	v	l	s	d	p	e	k	r	e	i	y	d	q	y	g	e	d
e	v	l	s	d	p	e	k	r	e	i	y	d	q	y	g	e	d
e	v	l	s	d	p	e	k	r	r	i	y	d	e	a	g	e	d
e	v	l	s	d	d	q	k	r	a	q	y	d	q	f	g	h	a
d	t	l	s	d	p	q	k	k	a	h	y	d	q	f	g	h	t
e	v	l	s	d	d	q	k	k	a	r	y	d	q	f	g	h	e
e	v	l	s	d	d	q	k	r	a	h	y	d	q	f	g	q	a
e	t	l	s	d	d	q	k	r	a	h	y	d	q	f	g	h	t
e	v	l	s	d	d	q	k	r	a	h	y	d	q	f	g	h	a
e	i	l	i	d	d	n	k	k	a	k	y	d	r	f	g	h	s
e	v	l	k	d	k	d	k	r	a	a	y	d	r	f	g	h	a
d	v	l	s	e	p	q	k	r	a	q	y	d	r	f	g	h	q
e	t	l	k	d	p	q	k	r	a	a	y	d	r	f	g	h	a
e	t	l	k	d	p	q	k	r	a	a	y	d	r	f	g	h	a
e	i	l	i	n	e	e	k	r	s	a	y	d	q	y	g	h	a
e	i	l	i	n	e	e	k	r	t	a	y	d	q	y	g	h	a
e	v	l	s	s	p	e	k	r	r	l	y	d	a	r	g	l	e
e	v	l	s	d	d	t	k	r	q	e	y	d	a	y	g	s	g
e	v	l	s	d	e	k	k	r	q	i	y	d	q	g	g	e	e
e	v	l	t	n	d	e	k	r	a	i	y	d	r	y	g	k	d
s	v	l	s	d	p	q	k	r	a	a	y	d	r	f	g	h	a
e	v	l	s	d	a	k	k	r	e	l	y	d	k	g	g	e	q
e	v	l	g	d	a	q	k	r	e	s	y	d	r	y	g	k	d
e	v	l	g	d	a	q	k	r	e	s	y	d	r	y	g	k	d
e	v	l	s	d	p	q	k	r	d	s	y	d	r	f	g	k	d
e	v	l	s	n	d	d	k	r	r	r	y	d	q	f	g	h	a
q	v	l	s	d	p	d	k	k	a	n	y	d	r	f	g	t	a
d	v	l	k	d	p	d	k	k	a	k	y	d	q	f	g	h	a
e	v	l	t	d	p	d	k	r	r	i	v	d	m	g	g	d	p
d	v	l	g	d	d	k	k	r	k	e	y	d	e	l	k	a	l
e	v	l	c	d	s	r	k	r	a	s	y	d	q	f	g	h	a
e	v	l	s	d	p	e	k	r	e	i	y	d	q	y	g	e	d
e	v	l	s	d	p	e	k	r	e	i	y	d	q	y	g	e	d
s	v	l	s	d	t	e	k	r	a	h	y	d	r	f	g	s	a
e	v	l	s	d	t	e	k	r	e	l	y	d	k	y	g	e	e
e	v	l	s	d	e	q	k	r	r	e	y	d	t	y	g	q	t
e	v	l	s	d	a	d	k	r	q	v	y	d	e	g	g	e	a
e	v	l	s	d	e	q	k	r	r	e	y	d	t	y	g	q	t
e	v	l	s	d	e	q	k	r	r	e	y	d	t	y	g	q	t
d	v	l	k	d	p	a	k	r	r	v	y	d	q	h	g	p	d
e	v	l	s	d	s	q	k	r	a	n	y	d	q	f	g	h	a
e	*v*	***l***	*t*	***d***	*s*	*q*	*k*	***r***	*a*	*a*	***y***	***d***	*q*	*y*	***g***	*h*	*a*

e v l s d p e k r d i y d q y g e d
e i l s d d s k r s r y d q f g h a
q i l s d s q k k q q y d q f g h a
e i l s d s e k r e m y d r y g m d
e v l s d p t k r e n y d n y g e k
e v l s d p e k r e i y d q y g e d
e i l t d d q k r a a y d q y g h a
e v l g d d q k r a a y d q y g h a
d v l t d e e t r q q y d q l g h e
d v l t d e e t r q q y d q l g h e
e v l t d d e k r q m y d q l g h e
g v l s d e k k r a l y d r y g k k
e v l s d p e k r e i y d q y g e d
e v l s d a k k r e l y d k g g e q
e v l s n p e k r e l y d r y g e q
e v l s d e v k r k q y d a y g s a
e v l s n p e k r e l y d r y g e q
e a l s d p q k r a a y d q y g h a
e t l s d e q k r a a y d q y g e a
n i l s d k q k r a a y d q f g h a
e v l s d p e k r k v y d k y g k e
e i l s d a e r r k q y d t f g r n
e t l s d p q k r s m y d m t g n a
e i l r d p k k r q a y d q f g k a
e a l s d p q k r a q y d q y g h v
e a l s d p q k r a q y d q y g h v
e v l s d p e k r e i y d q y g e d
d v l t d s e k k a m y d q y g h a
a v l s d s d k r a h y d r f g h d
e v l s d p e k k e l y d q y g e d
e t l k d p q k r a a y d r f g h a
a v l s d d e k r a r y d r f g h a
a v l s d a e k r a q y d r f g h a
a v l s d p e k r a q y d r f g h a
a v l s d d e k r a r y d r f g h a
e v l s d e q k r a a y d q y g h a
e v l s n p e k r e l y d r y g e q
e v l a d s k k r e l y d k g g e q
e v l s d p k k r d i y d q g g e q
e v l s d e v k r k q y d a y g s a
e v l s d e v k r k q y d a y g s a
n v l s d p v k r k e y d e t r r l
e v l s d p e k r r i v d l g g d p
n v l s d p a k r k e y d e t r r l
e v l s d p d k r r i v d l g g d p
e v l s d e e k r k l y d q f g h e
e v l s d e e k r k l y d q f g h e
e v l s d t e k r g m y d r f g h e
e v l s n p e k k a i y d k y g h e
e v l s d t r k r k l y d e f g p d
e t l s d k e k r a m y d q y g h a
e v l s d s q k r e i y d q y g e d
e i l s d p n k r a a y d q f g h a
e v l n d p e k r e i y d q y g e d
e v l s d k q k r a n y d q y g h a
d v l s n t n k r a q y d q m g h n
e v l s d d k k r a l y d q y g e a
d v l s d p q k r s q y d q f g h a

e v l s d a s k r a a y d q y g h a
e v l a d s k k r e l y d k g g e q
e v l s n p e k r e l y d r y g e q
e t l k d p q k r a a y d r y g h a
e m l k d p q k r a a y d r y g h a
d v l k d g d k k a a y d r y g h a
e v l k d g d k r a a y d r y g h a
d v l k d e q k r a a y d r l g h d
d v l k d e q k r a a y d r f g h d
e i l s d e t k r q q y d q f g p a
d v l s d p e k k k i y d q f g a d
e i l s d p e k k s h y d l y g d d
e i l s d p e k r d i y d q f g e d
e i l k d n r l r a l y d q y g t t
e v l s d p e k r e i y d q y g e d
e v l t d a q k r a a y d q y g h a
d i l k d p e s r e m y d m y g m n
e v l s d p e q r k i y d a y g e e
e i l a d e e k r a t y d r f g e e
e v l s d p e q r k i y d a y g e e
e t l k d p q k r a a y d r y g h a
e v l s d p e k r e i y d q y g e d
e v l s d d n k r a s y d q f g h d
e t l s d d q k r a a y d q y g a a
e t l s d s q k r a a y d q y g a a
e v l s d p q k k q v y d l g g d p
d i l g d p k k r k e y d e a r a l
e v l s d p q k k q v y d l g g d p
n t l s d p q k r a a y d q y g h a
e v l s d p q k r r m y d q t g t v
e v l s d p e k r r i y d q t g s v
e v l s d p q k r a m y d r f g y v
e c l s d p e k r t r y d q f g e k
e i l s d e e k r r i y d q h g k a
e i l s d p t k r r h y d q l g r a
e v l k d s n k k a a y d r y g h a
e v l s d s k k r a q y d q f g h d
e i l t d a q k k a a y d q y g h a
e i l t d p q k k a a y d q y g h a
e v l s d g n k r r a y d a h g h a
e v l a d t k k r k l y d t h g h a
e i l t d a q k r a a y d q y g h a
e v l s d p e k r e i y d q y g e d
e l l s d p k k k e f y d k t g m t

	A	C	D	E	F	G	H	I	K	L	M	N	P	Q	R	S
1	0	3	100	6	0	4	0	0	23	0	0	3	0	1	4	7
2	0	0	0	0	24	0	1	0	0	16	0	0	2	2	0	0
3	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
4	10	0	33	82	0	3	0	0	7	0	0	0	0	12	0	6
5	2	0					0	59	0	6	0	0	0	0	3	2
6	0	0	0	0	0	0	0	0	0	157	0	0	0	0	0	0
7	0	0	1	9	0	141	0	0	0	0	0	6	0	0	0	0
8	0	0	0	0	0	0	0	18	0	16	0	0	0	0	0	0
9	12	0	15	8	0	4	1	0	9	1	0	4	23	5	3	65
10	4	0	0	0	1	0	0	0	79	1	0	0	17	1	50	3
11	2	0	34	3	0	24		0	2	0	0	43	0	0	0	28
12	151	2	0	1	0	0	0	1	0	0	0	0	0	0	0	4
13	3	0	20	5	0	1	0	1	1	0	0	8	0	1	0	79
14	13	0	21	46	1	5	0	0	14	2	0	1	18	28	1	2
15	14	0	43	39	0	1	2	0	27	0	0	8	1	6	7	8
16	2	0	47	98	0	1	0	0	1	0	0	0	0	3	0	0
17	0	0	0	0	0	0	0	111	0	44	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	150	0	2	0	0	0	7	0
19	5	0	0	0	0	0	0	0	115	0	0	2	0	2	18	15
20	146	0	0	0	0	0	0	0	0	0	0	0	0	1	1	9
21	0	0	0	0	24	0		0	0	0	0	0	0	0	0	0
22	0	0	0	0	2	0		0	19	2	0	0	0	0	123	0
23	0	0	2	3	0	1	0	0	102	1	0	1	0	12	34	2
24	19	3	0	0	0	0	0	1	5	123	5	0	0	2	1	0
25	137	0	0	0	0	1	0	0	0	0	0	0	0	0	0	14
26	3	0	0	0	0	0	0	21	45	24	37	0	0	0	23	3
27	1	0	1	19	0	0	0	1	111	1	0	0	0	23	0	1
28	0	0	0	0	7	0	9	0	0	11	0	19	0	0	0	0
29	0	0	0	0	0	0	159	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	159	0	0	0
31	0	0	159	0	0	0	0	0	0	0	0	0	0	0	0	0
32	3	0	0	0	0	0	0	14	61	4	2	0	0	0	43	0
33	1	2	0	1	1	18	6	0	0	0	0	114	1	1	0	9
34	5	0	6	1	0	22	0	0	43	0	0	2	58	13	2	4
35	7	0	51	28	0	50	1	1	1	0	0	13	0	1	0	5
36	14	1	46	20	0	1	2	0	4	0	1	20	42	2	0	5
37	12	0	21	15	0	30		0	28	0	0	4	16	4	1	4
38	54		9	33	0	1	0	0	8	0	0	4	0	2	1	8
39	62		6	26	0	1	0	1	3	1	0	0	0	7	0	8
40	11	0	0	47	0	5	1	0	5	0	0	0	0	2	0	0
41	1	0	0	3	0	0	0	0	1	0	0	0	0	3	0	0
42	1	0	0	0	0	0	0	0	4	0	0	1	0	0	0	0
43	0	0	1	1	0	0	0	0	0	0	0	0	0	3	0	0
44	1	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
45	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
62	11	0	15	94	0	3	1	3	7	0	0	2	0	4	11	1	
63	1	0	1	0	0	0	1	1	127	3	3	2	0	2	14	3	
64	0	0	0	0	154	0	0	0	0	0	2	0	0	0	0	0	
65	3	0	0	0	0	0	1	3	137	0	0	1	0	8	3	3	
66	3	0	2	124	0	1	0	0	9	3	0	1	0	13	1	1	
67	11	2	0	0	1	0	0	81	0	22	0	0	0	0	0	0	
68	23	1	0	0	0	7	0	0	17	0	0	31	0	20	2	48	
69	10	0	1	90	5	1	2	0	9	0	2	4	0	27	3	0	
70	156	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
71	0	0	0	0	3	0	5	0	3	0	1	1	0	0	0	0	
72	5	0	18	125	0	1	1	0	0	0	0	4	0	3	0	2	
73	3	1	0	0	0	0	0	25	0	1	1	0	0	0	0	0	
74	0	0	0	0	0	0	0	0	0	159	0	0	0	0	0	0	
75	4	1	0	0	0	6	0	4	18	0	0	4	0	0	1	109	
76	0	0	146	1	0	0	0	0	0	0	0	11	0	0	0	1	
77	11	0	21	24	0	3	0	0	6	0	0	1	72	0	0	15	
78	2	0	10	62	0	0	0	0	14	0	0	7	0	50	3	2	
79	0	0	0	0	0	0	0	0	150	1	0	0	0	2	3	1	
80	0	0	0	0	0	0	0	0	20	0	0	0	0	0	139	0	
81	67	0	5	32	0	1	0	0	17	0	0	0	0	11	16	8	
82	36	0	0	11	1	0	8	31	2	22	9	4	0	18	6	5	
83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
84	0	0	159	0	0	0	0	0	0	0	0	0	0	0	0	0	
85	9	0	0	8	0	0	0	0	9	5	4	1	0	78	39	0	
86	2	0	0	0	49	13	4	1	0	7	1	0	0	0	1	0	
87	0	0	0	0	0	153	0	0	1	1	0	0	0	1	3	0	
88	5	0	6	42	0	0	69	0	8	1	3	1	3	5	4	7	
89	68	0	32	17	0	1	0	0	3	4	0	3	5	10	2	1	
	a	c	d	e	f	g	h	I	k	l	m	n	p	q	r	s	
	1126	19	1033	1132	274	504	279	378	1427	639	73	334	418	389	573	499	
	10.58%	0.18%	9.71%	10.64%	2.57%	4.74%	2.62%	3.55%	13.41%	6.00%	0.69%	3.14%	3.93%	3.66%	5.38%	4.69%	

T	V	W	Y				P	CM	GAVIL	YFW	ST	HKR	DE
5	0	0	0	156	64.10%	D	0	3	4	0	12	27	106
0	0	0	111	156	71.15%	Y	2	0	16	135	0	1	0
0	0	0	154	156	**98.72%**	Y	0	0	0	154	0	2	0
4	0	0	0	157	52.23%	E	0	0	13	0	10	7	115
20	59	0	0	157	37.58%	I	0	0	126	1	22	3	5
0	0	0	0	157	**100.00%**	L	0	0	157	0	0	0	0
0	0	0	0	157	89.81%	G	0	0	141	0	0	0	10
0	124	0	0	158	78.48%	V	0	0	158	0	0	0	0
8	0	0	0	158	41.14%	S	23	0	17	0	73	13	23
0	3	0	0	159	49.69%	K	17	0	8	13	1	129	0
22	0	0	0	159	27.04%	N	0	0	26	0	50	3	37
0	0	0	0	159	**94.97%**	A	0	2	152	0	4	0	1
40	0	0	0	159	49.69%	S	0	0	5	0	119	1	25
3	4	0	0	159	28.93%	E	18	0	24	1	5	15	67
1	2	0	0	159	27.04%	D	1	0	17	0	9	36	82
6	0	0	0	158	62.03%	E	0	0	3	0	6	1	145
0	3	0	1	159	69.81%	I	0	0	158	1	0	0	0
0	0	0	0	159	**94.34%**	K	0	2	0	0	0	157	0
2	0	0	0	159	72.33%	K	0	0	5	0	17	133	0
1	0	0	0	158	**92.41%**	A	0	0	146	0	10	1	0
1	0	0	132	158	**83.54%**	Y	0	0	0	156	1	1	0
1	0	0	9	158	77.85%	R	0	0	2	11	1	144	0
0	0	0	0	158	64.56%	K	0	0	2	0	2	136	5
0	0	0	0	159	77.36%	L	0	8	143	0	0	6	0
2	5	0	0	159	86.16%	A	0	0	143	0	16	0	0
0	3	0	0	159	28.30%	K	0	37	51	0	3	68	0
0	0	0	1	159	69.81%	K	0	0	3	1	1	111	20
0	0	6	107	159	67.30%	Y	0	0	11	120	0	9	0
0	0	0	0	159	**100.00%**	H	0	0	0	0	0	159	0
0	0	0	0	159	**100.00%**	P	159	0	0	0	0	0	0
0	0	0	0	159	**100.00%**	D	0	0	0	0	0	0	159
10	22	0	0	159	38.36%	K	0	2	43	0	10	104	0
4	0	0	1	159	71.70%	N	1	2	19	2	13	6	1
2	1	0	0	159	36.48%	P	58	0	28	0	6	45	7
1	0	0	0	159	32.08%	D	0	0	58	0	6	2	79
1	0	0	0	159	28.93%	D	42	2	15	0	6	6	66
3	1	0	0	140	21.43%	G	16	0	43	0	7	30	36
4	0	0	0	125	43.20%	A	0	1	55	0	12	9	42
5	1	0	0	123	50.41%	A	0	2	66	0	13	3	32
2	1	0	0	74	63.51%	E	0	0	17	0	2	6	47
0	1	0	0	9	33.33%		0	0	2	0	0	1	3
0	0	0	0	6	66.67%		0	0	1	0	0	4	0
0	0	0	0	5	60.00%		0	0	0	0	0	0	2
0	0	0	0	4	75.00%		0	0	1	0	0	0	0
0	0	0	0	4	100.00%		0	0	0	0	0	0	4
0	0	0	0	0			0	0	0	0	0	0	0
0	0	0	0	0			0	0	0	0	0	0	0
0	0	0	0	0			0	0	0	0	0	0	0
0	0	0	0	0			0	0	0	0	0	0	0
0	0	0	0	0			0	0	0	0	0	0	0
0	0	0	0	0									
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0	0	0	0	0											
0	0	0	0	0											
0	0	0	0	0											
0	0	0	0	0											
5	2	0	0	159	59.12%	E	0	0	19	0	6	19	109		
1	0	0	0	159	79.87%	K	0	3	5	0	4	142	1		
0	0	0	3	159	**96.86%**	F	0	2	0	157	0	0	0		
0	0	0	0	159	86.16%	K	0	0	6	0	3	141	0		
0	1	0	0	159	77.99%	E	0	0	8	0	1	10	126		
0	42	0	0	159	50.94%	I	0	2	156	1	0	0	0		
10	0	0	0	159	30.19%	S	0	1	30	0	58	19	0		
1	4	0	0	159	56.60%	E	0	2	15	5	1	14	91		
0	1	0	0	159	**98.11%**	A	1	0	157	0	1	0	0		
0	0	0	146	159	91.82%	Y	0	1	0	149	0	8	0		
0	0	0	0	159	78.62%	E	0	0	6	0	2	1	143		
15	113	0	0	159	71.07%	V	0	2	142	0	15	0	0		
0	0	0	0	159	**100.00%**	L	0	0	159	0	0	0	0		
12	0	0	0	159	68.55%	S	0	1	14	0	121	19	0		
0	0	0	0	159	**91.82%**	D	0	0	0	0	1	0	147		
6	0	0	0	159	45.28%	P	72	0	14	0	21	6	45		
5	4	0	0	159	38.99%	E	0	0	6	0	7	17	72		
2	0	0	0	159	**94.34%**	K	0	0	1	0	3	153	0		
0	0	0	0	159	**87.42%**	R	0	0	0	0	0	159	0		
2	0	0	0	159	42.14%	A	0	0	68	0	10	33	37		
1	5	0	0	159	22.64%	A	0	9	94	1	6	16	11		
0	3	0	156	159	**98.11%**	Y	0	0	3	156	0	0	0		
0	0	0	0	159	**100.00%**	D	0	0	0	0	0	0	159		
6	0	0	0	159	49.06%	Q	0	4	14	0	6	48	8		
6	0	0	75	159	47.17%	Y	0	1	23	124	6	5	0		
0	0	0	0	159	**96.23%**	G	0	0	154	0	0	4	0		
3	0	0	2	159	43.40%	H	3	3	6	2	10	81	48		
8	5	0	0	159	42.77%	A	5	0	78	0	9	5	49		
t	v	w	y	10642			418	92	3057	1178	730	2279	2165		
231	410	6	898	10642			418	92	3057	1178	730	2279	2165		
2.17%	3.85%	0.06%	8.44%	100.00%											

NQ				a	c	d	e	f	g	h
4	156	67.95%	1	0.0%	1.9%	**64.1%**	**3.8%**	0.0%	2.6%	0.0%
2	156	86.54%	2	0.0%	0.0%	0.0%	0.0%	**15.4%**	0.0%	0.6%
0	156	**98.72%**	3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
12	157	73.25%	4	**6.4%**	0.0%	**21.0%**	**52.2%**	0.0%	1.9%	0.0%
0	157	**80.25%**	5	1.3%	0.0%	0.6%	2.5%	0.6%	0.0%	0.0%
0	157	**100.00%**	6	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
6	157	89.81%	7	0.0%	0.0%	0.6%	**5.7%**	0.0%	**89.8%**	0.0%
0	158	**100.00%**	8	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
9	158	46.20%	10	**7.6%**	0.0%	**9.5%**	**5.1%**	0.0%	2.5%	0.6%
1	159	81.13%	11	2.5%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%
43	159	31.45%	12	1.3%	0.0%	**21.4%**	1.9%	0.0%	**15.1%**	0.6%
0	159	**95.60%**	13	**95.0%**	1.3%	0.0%	0.6%	0.0%	0.0%	0.0%
9	159	74.84%	14	1.9%	0.0%	**12.6%**	3.1%	0.0%	0.6%	0.0%
29	159	42.14%	15	**8.2%**	0.0%	**13.2%**	**28.9%**	0.6%	3.1%	0.0%
14	159	51.57%	16	**8.8%**	0.0%	**27.0%**	**24.5%**	0.0%	0.6%	1.3%
3	158	**91.77%**	17	1.3%	0.0%	**29.7%**	**62.0%**	0.0%	0.6%	0.0%
0	159	**99.37%**	18	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
0	159	**98.74%**	19	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
4	159	83.65%	20	3.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1	158	92.41%	23	**92.4%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
0	158	**98.73%**	24	0.0%	0.0%	0.0%	0.0%	15.2%	0.0%	0.6%
0	158	**91.14%**	25	0.0%	0.0%	0.0%	0.0%	1.3%	0.0%	1.3%
13	158	**86.08%**	26	0.0%	0.0%	1.3%	1.9%	0.0%	0.6%	0.0%
2	159	**89.94%**	27	**11.9%**	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%
0	159	**89.94%**	28	**86.2%**	0.0%	0.0%	0.0%	0.0%	0.6%	0.0%
0	159	32.08%	29	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
23	159	69.81%	30	0.6%	0.0%	0.6%	**11.9%**	0.0%	0.0%	0.0%
19	159	75.47%	31	0.0%	0.0%	0.0%	0.0%	**4.4%**	0.0%	**5.7%**
0	159	**100.00%**	32	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**100.0%**
0	159	**100.00%**	33	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
0	159	**100.00%**	34	0.0%	0.0%	**100.0%**	0.0%	0.0%	0.0%	0.0%
0	159	65.41%	35	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
115	159	72.33%	36	0.6%	1.3%	0.0%	0.6%	0.6%	**11.3%**	3.8%
15	159	36.48%	37	**3.1%**	0.0%	3.8%	0.6%	0.0%	**13.8%**	0.0%
14	159	49.69%	38	**4.4%**	0.0%	**32.1%**	**17.6%**	0.0%	**31.4%**	0.6%
22	159	41.51%	39	**8.8%**	0.6%	28.9%	**12.6%**	0.0%	0.6%	1.3%
8	140	30.71%	40	**8.6%**	0.0%	15.0%	**10.7%**	0.0%	**21.4%**	0.7%
6	125	33.60%	41	**43.2%**	0.8%	**7.2%**	**26.4%**	0.0%	0.8%	0.0%
7	123	53.66%	42	**50.4%**	1.6%	4.9%	**21.1%**	0.0%	0.8%	0.0%
2	74	63.51%	43	**14.9%**	0.0%	0.0%	**63.5%**	0.0%	6.8%	1.4%
3	9	33.33%	44	**11.1%**	0.0%	0.0%	**33.3%**	0.0%	0.0%	0.0%
1	6	66.67%	45	**16.7%**	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%
3	5	40.00%	46	**0.0%**	0.0%	20.0%	**20.0%**	0.0%	0.0%	0.0%
3	4	25.00%	47	**25.0%**	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%
0	4	100.00%	48	**0.0%**	0.0%	0.0%	**100.0%**	0.0%	0.0%	0.0%
0	0	#DIV/0!	49	**#DIV/0!**	#DIV/0!	#DIV/0!	**#DIV/0!**	#DIV/0!	#DIV/0!	#DIV/0!
0	0	#DIV/0!	50	**#DIV/0!**	#DIV/0!	#DIV/0!	**#DIV/0!**	#DIV/0!	#DIV/0!	#DIV/0!
0	0	#DIV/0!	51	**#DIV/0!**	#DIV/0!	#DIV/0!	**#DIV/0!**	#DIV/0!	**#DIV/0!**	#DIV/0!
0	0	#DIV/0!	52	**#DIV/0!**	#DIV/0!	#DIV/0!	**#DIV/0!**	#DIV/0!	#DIV/0!	#DIV/0!
0	0	#DIV/0!	53	#DIV/0!	#DIV/0!	#DIV/0!	**#DIV/0!**	#DIV/0!	#DIV/0!	#DIV/0!

6	159	68.55%	63	**6.9%**	0.0%	**9.4%**	**59.1%**	0.0%	1.9%	0.6%
4	159	89.31%	64	**0.6%**	0.0%	0.6%	0.0%	0.0%	0.0%	0.6%
0	159	**98.74%**	65	0.0%	0.0%	0.0%	0.0%	**96.9%**	0.0%	0.0%
9	159	88.68%	66	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%
14	159	79.25%	67	**1.9%**	0.0%	1.3%	**78.0%**	0.0%	0.6%	0.0%
0	159	**98.11%**	68	6.9%	1.3%	0.0%	0.0%	0.6%	0.0%	0.0%
51	159	32.08%	69	**14.5%**	0.6%	0.0%	0.0%	0.0%	**4.4%**	0.0%
31	159	57.23%	70	**6.3%**	0.0%	0.6%	**56.6%**	3.1%	0.6%	1.3%
0	159	**98.74%**	71	**98.1%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1	159	**93.71%**	72	0.0%	0.0%	0.0%	0.0%	1.9%	0.0%	3.1%
7	159	89.94%	73	**3.1%**	0.0%	**11.3%**	**78.6%**	0.0%	0.6%	0.6%
0	159	**89.31%**	74	1.9%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%
0	159	**100.00%**	75	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
4	159	76.10%	76	2.5%	0.6%	0.0%	0.0%	0.0%	**3.8%**	0.0%
11	159	**92.45%**	77	0.0%	0.0%	**91.8%**	0.6%	0.0%	0.0%	0.0%
1	159	45.28%	78	**6.9%**	0.0%	13.2%	**15.1%**	0.0%	1.9%	0.0%
57	159	45.28%	79	**1.3%**	0.0%	6.3%	**39.0%**	0.0%	0.0%	0.0%
2	159	96.23%	80	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
0	159	**100.00%**	81	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
11	159	42.77%	82	**42.1%**	0.0%	3.1%	**20.1%**	0.0%	0.6%	0.0%
22	159	59.12%	83	**22.6%**	0.0%	0.0%	**6.9%**	0.6%	0.0%	5.0%
0	159	**98.11%**	84	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%
0	159	**100.00%**	85	0.0%	0.0%	**100.0%**	0.0%	0.0%	0.0%	0.0%
79	159	30.19%	86	**5.7%**	0.0%	0.0%	**5.0%**	0.0%	0.0%	0.0%
0	159	77.99%	87	1.3%	0.0%	0.0%	0.0%	**30.8%**	**8.2%**	2.5%
1	159	**96.86%**	88	0.0%	0.0%	0.0%	0.0%	0.0%	**96.2%**	0.0%
6	159	50.94%	89	3.1%	0.0%	**3.8%**	**26.4%**	0.0%	0.0%	**43.4%**
13	159	49.06%	90	**42.8%**	0.0%	**20.1%**	**10.7%**	0.0%	0.6%	0.0%
723	10642									
723	10642									

I	k	l	m	n	p	q	r	s	t	v	w	y	
0.0%	**14.7%**	0.0%	0.0%	**1.9%**	0.0%	0.6%	2.6%	**4.5%**	**3.2%**	0.0%	0.0%	0.0%	1
0.0%	0.0%	**10.3%**	0.0%	0.0%	**1.3%**	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	**71.2%**	1
0.0%	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**98.7%**	1
0.0%	**4.5%**	0.0%	0.0%	0.0%	0.0%	**7.6%**	0.0%	3.8%	2.5%	0.0%	0.0%	0.0%	1
37.6%	0.0%	**3.8%**	0.0%	0.0%	0.0%	0.0%	1.9%	1.3%	**12.7%**	**37.6%**	0.0%	0.0%	1
0.0%	0.0%	**100.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1
0.0%	0.0%	0.0%	0.0%	**3.8%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1
11.4%	0.0%	**10.1%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**78.5%**	0.0%	0.0%	1
0.0%	**5.7%**	0.6%	0.0%	2.5%	**14.6%**	3.2%	1.9%	**41.1%**	**5.1%**	0.0%	0.0%	0.0%	1
0.0%	**49.7%**	0.6%	0.0%	0.0%	**10.7%**	0.6%	**31.4%**	1.9%	0.0%	1.9%	0.0%	0.0%	1
0.0%	1.3%	0.0%	0.0%	**27.0%**	0.0%	0.0%	0.0%	**17.6%**	**13.8%**	0.0%	0.0%	0.0%	1
0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.5%	0.0%	0.0%	0.0%	0.0%	1
0.6%	0.6%	0.0%	0.0%	5.0%	0.0%	0.6%	0.0%	**49.7%**	**25.2%**	0.0%	0.0%	0.0%	1
0.0%	**8.8%**	1.3%	0.0%	0.6%	11.3%	17.6%	0.6%	**1.3%**	1.9%	2.5%	0.0%	0.0%	1
0.0%	**17.0%**	0.0%	0.0%	**5.0%**	0.6%	**3.8%**	4.4%	**5.0%**	0.6%	1.3%	0.0%	0.0%	1
0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	1.9%	0.0%	0.0%	3.8%	0.0%	0.0%	0.0%	1
69.8%	0.0%	27.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**1.9%**	0.0%	0.6%	1
0.0%	**94.3%**	0.0%	1.3%	0.0%	0.0%	0.0%	**4.4%**	0.0%	0.0%	0.0%	0.0%	0.0%	1
0.0%	**72.3%**	0.0%	0.0%	1.3%	0.0%	1.3%	**11.3%**	**9.4%**	1.3%	0.0%	0.0%	0.0%	1
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.6%**	0.6%	**5.7%**	0.6%	0.0%	0.0%	0.0%	1
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	**83.5%**	1
0.0%	**12.0%**	1.3%	0.0%	0.0%	0.0%	0.0%	**77.8%**	0.0%	0.6%	0.0%	0.0%	**5.7%**	1
0.0%	**64.6%**	0.6%	0.0%	0.6%	0.0%	**7.6%**	**21.5%**	1.3%	0.0%	0.0%	0.0%	0.0%	1
0.6%	**3.1%**	**77.4%**	3.1%	0.0%	0.0%	1.3%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	1
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.8%	1.3%	**3.1%**	0.0%	0.0%	1
13.2%	**28.3%**	**15.1%**	**23.3%**	0.0%	0.0%	0.0%	**14.5%**	1.9%	0.0%	1.9%	0.0%	0.0%	1
0.6%	**69.8%**	**0.6%**	0.0%	0.0%	0.0%	14.5%	**0.0%**	0.6%	0.0%	0.0%	0.0%	0.6%	1
0.0%	0.0%	**6.9%**	0.0%	11.9%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	**3.8%**	**67.3%**	1
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1
0.0%	0.0%	0.0%	0.0%	0.0%	**100.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1
8.8%	**38.4%**	2.5%	1.3%	0.0%	0.0%	0.0%	**27.0%**	0.0%	6.3%	**13.8%**	0.0%	0.0%	1
0.0%	0.0%	0.0%	0.0%	**71.7%**	0.6%	0.6%	0.0%	5.7%	2.5%	0.0%	0.0%	0.6%	1
0.0%	**27.0%**	0.0%	0.0%	1.3%	**36.5%**	**8.2%**	1.3%	**2.5%**	1.3%	0.6%	0.0%	0.0%	1
0.6%	0.6%	0.0%	0.0%	**8.2%**	0.0%	0.6%	0.0%	**3.1%**	0.6%	0.0%	0.0%	0.0%	1
0.0%	2.5%	0.0%	0.6%	**12.6%**	**26.4%**	1.3%	0.0%	**3.1%**	0.6%	0.0%	0.0%	0.0%	1
0.0%	**20.0%**	0.0%	0.0%	2.9%	**11.4%**	2.9%	0.7%	**2.9%**	2.1%	0.7%	0.0%	0.0%	1
0.0%	**6.4%**	0.0%	0.0%	3.2%	0.0%	1.6%	0.8%	**6.4%**	3.2%	0.0%	0.0%	0.0%	1
0.8%	**2.4%**	0.8%	0.0%	0.0%	0.0%	5.7%	0.0%	**6.5%**	4.1%	0.8%	0.0%	0.0%	1
0.0%	**6.8%**	0.0%	0.0%	0.0%	0.0%	**2.7%**	0.0%	**0.0%**	2.7%	1.4%	0.0%	0.0%	1
0.0%	**11.1%**	0.0%	0.0%	0.0%	0.0%	**33.3%**	0.0%	**0.0%**	0.0%	11.1%	0.0%	0.0%	1
0.0%	**66.7%**	**0.0%**	**0.0%**	16.7%	0.0%	0.0%	**0.0%**	0.0%	**0.0%**	0.0%	0.0%	0.0%	1
0.0%	**0.0%**	**0.0%**	0.0%	**0.0%**	0.0%	**60.0%**	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	1
0.0%	**0.0%**	0.0%	0.0%	75.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1
0.0%	0.0%	**0.0%**	**0.0%**	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	1
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#DIV/0!	**#DIV/0!**	**#DIV/0!**	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	**#DIV/0!**	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

1.9%	**4.4%**	0.0%	0.0%	1.3%	0.0%	**2.5%**	**6.9%**	0.6%	3.1%	1.3%	0.0%	0.0%	1
0.6%	**79.9%**	**1.9%**	1.9%	1.3%	0.0%	1.3%	**8.8%**	1.9%	0.6%	0.0%	0.0%	0.0%	1
0.0%	0.0%	0.0%	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.9%	1
1.9%	**86.2%**	0.0%	0.0%	0.6%	0.0%	**5.0%**	**1.9%**	1.9%	0.0%	0.0%	0.0%	0.0%	1
0.0%	**5.7%**	**1.9%**	0.0%	0.6%	0.0%	**8.2%**	**0.6%**	0.6%	0.0%	0.6%	0.0%	0.0%	1
50.9%	0.0%	**13.8%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**26.4%**	0.0%	0.0%	1
0.0%	**10.7%**	0.0%	0.0%	**19.5%**	0.0%	**12.6%**	1.3%	**30.2%**	6.3%	0.0%	0.0%	0.0%	1
0.0%	**5.7%**	0.0%	1.3%	2.5%	0.0%	**17.0%**	1.9%	0.0%	0.6%	2.5%	0.0%	0.0%	1
0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	0.6%	0.0%	0.6%	0.0%	0.0%	1
0.0%	1.9%	0.0%	0.6%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**91.8%**	1
0.0%	0.0%	0.0%	0.0%	2.5%	0.0%	1.9%	0.0%	**1.3%**	0.0%	0.0%	0.0%	0.0%	1
15.7%	0.0%	**0.6%**	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	**9.4%**	**71.1%**	0.0%	0.0%	1
0.0%	0.0%	**100.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1
2.5%	**11.3%**	0.0%	0.0%	2.5%	0.0%	0.0%	0.6%	**68.6%**	**7.5%**	0.0%	0.0%	0.0%	1
0.0%	0.0%	0.0%	0.0%	**6.9%**	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	1
0.0%	**3.8%**	0.0%	0.0%	0.6%	**45.3%**	0.0%	0.0%	**9.4%**	3.8%	0.0%	0.0%	0.0%	1
0.0%	**8.8%**	0.0%	0.0%	4.4%	0.0%	**31.4%**	1.9%	1.3%	**3.1%**	**2.5%**	0.0%	0.0%	1
0.0%	**94.3%**	0.6%	0.0%	0.0%	0.0%	1.3%	1.9%	**0.6%**	1.3%	0.0%	0.0%	0.0%	1
0.0%	**12.6%**	0.0%	0.0%	0.0%	0.0%	0.0%	**87.4%**	0.0%	0.0%	0.0%	0.0%	0.0%	1
0.0%	**10.7%**	0.0%	0.0%	0.0%	0.0%	6.9%	**10.1%**	**5.0%**	1.3%	0.0%	0.0%	0.0%	1
19.5%	**1.3%**	**13.8%**	5.7%	2.5%	0.0%	**11.3%**	**3.8%**	3.1%	0.6%	**3.1%**	0.0%	0.0%	1
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.9%	0.0%	**98.1%**	1
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1
0.0%	**5.7%**	**3.1%**	2.5%	0.6%	0.0%	**49.1%**	**24.5%**	**0.0%**	3.8%	0.0%	0.0%	0.0%	1
0.6%	0.0%	**4.4%**	0.6%	0.0%	0.0%	0.0%	0.6%	0.0%	3.8%	0.0%	0.0%	**47.2%**	1
0.0%	0.6%	**0.6%**	0.0%	0.0%	0.0%	0.6%	**1.9%**	0.0%	0.0%	0.0%	0.0%	0.0%	1
0.0%	**5.0%**	0.6%	1.9%	0.6%	1.9%	3.1%	**2.5%**	**4.4%**	1.9%	0.0%	0.0%	1.3%	1
0.0%	1.9%	**2.5%**	0.0%	1.9%	**3.1%**	6.3%	1.3%	**0.6%**	5.0%	3.1%	0.0%	0.0%	1

64.10%
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91.82%
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38.99%
94.34%
87.42%
42.14%
19.50%
98.11%
100.00%
0.00%
47.17%
96.23%
26.42%
42.77%

Organism	Name	Type	12	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	20a
Anabaena sp.	DnaJ1	II	d	y	y	e	i	l	g	v	t	k	d	a	t	n	e	d	i	k	k	n
Anabaena variabilis	DnaJ	II	d	y	y	e	i	l	g	v	t	k	d	a	t	n	e	d	i	k	k	n
Anopheles gambiae ag	CP11593	II	d	f	y	k	i	l	g	l	r	k	t	a	s	k	n	d	v	k	k	a
Anopheles gambiae ag	CP12020	II	d	f	y	e	v	l	g	v	t	q	e	a	t	d	s	e	i	k	k	c
Anopheles gambiae ag	CP3958	II	t	l	y	q	t	l	g	l	q	k	t	a	t	a	d	e	i	k	k	t
Anopheles gambiae ag	CP7537	II	d	y	y	k	i	l	d	v	s	r	t	a	t	e	a	e	i	k	k	a
Anopheles gambiae ag	CP8307	II	c	h	y	e	v	l	g	v	t	r	t	a	d	s	d	e	i	k	k	s
Anopheles gambiae ag	CP9096	II	n	c	y	e	l	l	g	v	s	r	e	s	t	k	q	e	i	a	k	s
Anopheles gambiae ag	CP9770	II																k	k	r	k	
Arabidopsis thalian	At1g74250	II	c	h	y	e	v	l	g	i	s	k	e	s	s	p	d	e	i	r	s	s
Arabidopsis thalian	At1g76700	II	e	y	y	d	v	l	g	v	s	p	t	a	t	e	s	e	i	k	k	a
Arabidopsis thalian	At1g77020	II	v	y	y	d	v	l	g	v	t	p	s	a	s	m	e	e	i	r	k	a
Arabidopsis thalian	At2g20560	II	d	y	y	k	v	l	q	v	d	r	s	a	s	d	d	d	l	k	k	a
Arabidopsis thalian	At2g21510	II	e	y	y	e	i	l	g	v	k	t	d	a	s	d	a	e	i	k	k	a
Arabidopsis thalian	At3g08910	II	d	y	y	k	v	l	q	v	d	r	n	a	k	d	d	d	l	k	k	a
Arabidopsis thalian	At3g08970	II	d	p	y	k	v	l	g	v	s	k	d	a	k	q	r	e	i	q	k	a
Arabidopsis thalian	At3g57340	II	d	y	y	e	i	l	g	l	e	s	n	c	s	v	d	d	v	r	k	a
Arabidopsis thalian	At3g62600	II	s	y	y	d	v	l	q	v	p	k	g	a	s	d	e	q	i	k	r	a
Arabidopsis thalian	AT4g28480	II	d	y	y	k	v	l	q	v	d	r	s	a	n	d	d	d	l	k	k	a
Arabidopsis thalian	At4g39150	II	e	y	y	d	i	l	g	v	k	i	d	a	s	g	a	e	i	k	k	a
Arabidopsis thalian	At5g01390	II	d	f	y	k	v	l	e	v	d	r	s	a	n	d	d	e	l	k	k	a
Arabidopsis thalian	MDN11.11	II	d	y	y	s	v	l	g	v	s	k	n	a	q	e	g	e	i	k	k	a
Brucella melitensis	CbpA	II	d	p	y	s	v	l	g	v	a	k	t	a	k	p	e	e	i	k	s	a
Caenorhabditis eleg	F54D5.8	II	d	y	y	k	v	l	g	i	s	k	g	a	t	d	d	e	i	k	k	a
Caenorhabditis eleg	T05C3.5	II	t	l	y	t	t	l	n	v	r	p	d	a	s	q	a	d	i	k	k	s
Caenorhabditis eleg	T15H9.1	II	d	f	y	k	i	l	g	v	a	k	n	a	n	a	n	q	i	k	k	a
Campylobacter jejun	CbpA	II	s	l	y	e	t	l	g	v	s	k	n	a	s	a	d	e	i	k	k	a
Caulobacter crescen	CC2772	II	d	p	y	q	e	l	g	v	t	r	t	a	s	a	d	e	i	r	k	a
Ciona intestinalis	Hsp40	II	d	y	y	a	i	l	g	l	t	r	n	a	t	d	a	d	i	k	k	a
Cryptococcus curvat	SIS1	II	e	y	y	k	t	l	g	l	s	k	d	a	s	e	a	d	i	k	k	a
Deinococcus proteol	DnaJ	II	d	y	y	e	v	l	g	v	s	r	s	a	s	d	s	d	i	k	s	a
Drosophila melanoga	CG2887	II	d	y	y	k	i	l	g	i	q	r	t	a	n	d	g	e	i	r	k	a
Drosophila melanoga	CG4164	II	d	f	y	k	i	l	n	v	k	k	n	a	n	t	n	e	v	k	k	a
Drosophila melanoga	CG7133	II	d	h	y	q	v	l	g	l	p	r	n	a	t	d	s	e	i	k	d	a
Drosophila melanoga	DnaJ-1 / D	II	d	f	y	k	i	l	g	l	e	r	k	a	s	d	d	e	i	k	k	a
Entosiphon sulcatum	DnaJ	II	c	h	y	t	t	l	g	i	a	k	s	a	q	a	k	e	i	k	a	a
Escherichia coli	CbpA	II	d	y	y	a	i	m	g	v	k	p	t	d	d	l	k	t	i	k	t	a
Helicobacter pylori	CbpA	II	s	l	y	q	t	l	n	v	s	e	n	a	s	q	d	e	i	k	k	s
Helicobacter pylori	DnaJ2	II	s	l	y	q	t	l	n	v	s	e	n	a	s	q	d	e	i	k	k	s
Homo sapiens	DnaJB3-lik	II	d	y	y	e	v	l	d	v	p	r	q	a	s	s	e	a	i	k	k	a
Homo sapiens	DnaJB8-lik	II	n	y	y	e	v	l	g	v	q	a	s	a	s	p	e	d	i	k	k	a
Homo sapiens	DnaJC8-lik	II	n	p	f	e	v	l	q	i	d	p	e	v	t	d	e	e	i	k	k	r
Homo sapiens	DnaJB11	II	d	f	y	k	i	l	g	v	p	r	s	a	s	i	k	d	i	k	k	a
Homo sapiens	DnaJB2 / H	II	s	y	y	e	i	l	d	v	p	r	s	a	s	a	d	d	i	k	k	a
Homo sapiens	Hsc40	II	d	y	y	k	i	l	g	i	p	s	g	a	n	e	d	e	i	k	k	a
Homo sapiens	Hsp40	II	d	y	y	c	i	l	g	i	e	k	g	a	s	d	e	d	i	k	k	a
Homo sapiens	Hsp40 / Dn	II	d	y	y	q	t	l	g	l	a	r	g	a	s	d	e	e	i	k	r	a
Homo sapiens	MRJ / Hsj2	II	d	y	y	e	v	l	g	v	q	r	h	a	s	p	e	d	i	k	k	a
Lycopersicon escule	DnaJ like	II	d	y	y	k	v	l	g	v	d	k	n	a	t	d	d	d	l	k	k	a
Meiothermus ruber	DnaJ	II	d	y	y	k	i	l	g	v	p	k	n	a	s	e	d	e	i	k	k	a
Mesorhizobium loti	DnaJ	II	d	p	y	e	v	l	g	v	a	k	n	a	s	a	k	d	i	k	s	a
Mus musculus	2010306G1 9	II	d	y	y	h	i	l	g	i	d	k	g	a	t	d	e	d	v	k	k	a
Mus musculus	DnaJB10	II	s	y	y	e	i	l	d	v	p	r	s	a	s	p	d	d	i	k	k	a
Mus musculus	DnaJB11	II	d	f	y	k	i	l	g	v	p	r	s	a	s	i	k	d	i	k	k	a
Mus musculus	DnaJB6	II	d	y	y	e	v	l	g	v	q	r	h	a	s	p	e	d	i	k	k	a
Mus musculus	DnaJB7	II	d	y	y	e	v	l	g	v	q	r	y	a	s	p	e	d	i	k	r	a
Mus musculus	LOC194858	II	s	y	f	d	f	l	g	v	p	k	s	a	s	e	r	q	i	k	k	a

Mus musculus	DnaJB10-li	II	s	y	y	e	i	l	d	v	p	r	s	a	f	p	d	d	i	k	k	a
Mus musculus	DnaJB3	II	d	y	y	e	v	l	g	v	p	r	q	a	s	a	e	a	i	r	k	a
Mus musculus	Hsp40 / DnI	I	d	y	y	q	t	l	g	l	a	r	g	a	s	d	d	e	i	k	r	a
Mus musculus	Hsp40-3	II	d	y	y	k	i	l	g	i	p	s	g	a	n	e	d	e	i	k	k	a
Mus musculus	mDj4	II	d	y	y	e	v	l	g	v	q	r	h	a	s	p	e	d	i	k	k	a
Mycoplasma hyopneump	16	II	d	f	y	k	i	l	g	v	e	k	s	a	s	l	t	e	i	k	k	a
Mycoplasma pneumoni	MG002 / XD	II	t	l	y	d	l	l	e	l	p	q	t	a	t	l	q	e	i	k	t	a
Neurospora crassa	DnaJ	II	k	l	y	d	l	l	g	i	s	p	t	a	t	q	d	e	i	k	k	a
Nicotiana tabacum	DnaJ-like	II	d	y	y	k	v	l	g	v	d	k	n	a	t	d	d	d	l	k	k	a
Nostoc sp. PCC 7120	all1488	II	d	y	y	a	v	l	g	v	s	k	t	a	t	p	e	e	i	k	r	a
Oryza sativa	Hsp40	II	d	y	y	k	v	l	g	v	d	r	g	a	g	d	d	d	l	k	k	a
Oryza sativa	Os DnaJ	II	d	f	y	s	t	l	g	v	s	r	n	a	s	k	s	e	i	k	s	a
Oryza sativa	P0431G05	II	s	y	y	d	v	l	q	v	p	k	g	a	s	e	d	q	i	k	r	s
Plasmodium falciparum	DnJ1 / SiS	II	d	y	y	s	i	l	g	v	s	r	d	c	t	t	n	d	l	k	k	a
Plasmodium falciparum	Pfj2	II	d	y	y	k	r	l	g	v	k	r	n	a	t	k	e	d	i	s	k	a
Plasmodium falciparum	Pfj4	II	n	y	y	e	v	l	g	v	p	q	d	a	d	l	t	v	i	k	k	s
Plasmodium falciparum	putative D	II	d	y	y	s	i	l	g	v	s	r	d	c	t	n	e	d	i	k	k	a
Rattus norvegicus	MDG1	II	n	y	y	d	i	l	g	v	p	k	s	a	s	e	r	q	i	k	k	a
Rhodothermus marinu	DnaJ	II	d	y	y	e	i	l	g	v	p	e	n	a	t	e	e	e	i	k	k	a
Saccharomyces cerev	YFR041c	I	y	k	f	l	k	l	p	k	l	q	n	s	s	t	k	e	i	t	k	n
Saccharomyces cerev	Caj1	II	e	y	y	d	i	l	g	i	k	p	e	a	t	p	t	e	i	k	k	a
Saccharomyces cerev	Djp1	II	e	y	y	d	l	l	g	v	s	t	t	a	s	s	i	e	i	k	k	a
Saccharomyces cerev	Hlj1	II	e	f	y	e	i	l	k	v	d	r	k	a	t	d	s	e	i	k	k	a
Saccharomyces cerev	Sis1	II	k	l	y	d	l	l	g	v	s	p	s	a	n	e	q	e	l	k	k	g
Salmonella typhimur	CbpA	II	d	y	y	a	i	m	g	v	k	p	t	d	d	l	k	t	i	k	t	a
Schizosaccharomyces	Hlj1	II	q	y	y	e	i	l	d	l	k	k	t	c	t	d	t	e	i	k	k	s
Schizosaccharomyces	Psi protei	I	k	l	y	d	c	l	e	v	r	p	e	a	s	e	a	e	l	k	k	a
Schizosaccharomyces	SPAC4H3.01	I	e	y	y	d	l	l	g	i	s	t	d	a	t	a	v	d	i	k	k	a
Schizosaccharomyces	SPBC3E7.11	I	d	y	y	d	i	l	n	i	s	v	d	a	d	g	d	t	i	k	k	s
Sinorhizobium meli	lCbpA	II	d	p	y	q	i	l	g	v	p	r	t	g	k	p	d	e	i	r	k	a
Synechocystis sp	DnaJ	II	n	y	y	q	i	l	g	v	p	r	n	a	t	a	e	e	i	k	k	s
Synechocystis sp	DnaJ-like	II	d	y	y	q	i	l	g	v	t	k	t	a	s	e	a	e	i	k	k	q
Thermus thermophilu	DnaJ	II	d	y	y	a	i	l	g	v	p	r	n	a	t	q	e	e	i	k	r	a
Treponema pallidum	Hsp	II	d	y	y	e	v	l	g	i	s	k	t	a	s	g	e	e	i	k	k	a
Treponema pallidum	DnaJ	II	d	h	y	a	i	l	g	v	a	a	d	a	s	e	e	h	i	k	k	a
Treponema pallidum	DnaJ2	II	d	y	y	e	v	l	g	i	s	k	t	a	s	g	e	e	i	k	k	a
Trypanosoma brucei	DnaJ	II	d	y	y	k	v	l	g	v	s	r	d	a	s	p	s	d	i	k	k	a
Trypanosoma cruzi	DnaJ	II	d	y	y	k	v	l	g	v	g	r	n	a	t	p	s	d	i	k	k	a
Trypanosoma cruzi	TcJ6	II	d	y	y	k	v	l	g	v	g	r	n	a	t	p	s	d	i	k	k	a
Xanthomonas axonopo	CbpA	II	d	y	y	a	t	l	g	v	e	p	s	a	g	d	a	e	i	k	t	a
Xanthomonas campest	CbpA	II	d	y	y	a	t	l	g	v	e	p	s	a	g	e	a	e	i	k	t	a
Xylella fastidiosa	XF2233	II	d	y	y	a	t	l	g	v	e	p	s	a	g	e	a	e	i	k	t	a

21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
y	r	r	l	a	r	q	y	h	p	d	l	n	p	g	n	k	d	a	e							
y	r	r	l	a	r	q	y	h	p	d	l	n	p	g	n	k	d	a	e							
y	r	k	l	a	k	e	l	h	p	d	k	n	k	d	d	p	d	a	s							
y	k	k	h	a	l	q	l	h	p	d	k	n	k	a	p	g	a	m								
y	r	k	l	a	l	k	y	h	p	d	k	n	p	n	n	p	d	a	a							
y	k	k	l	a	l	r	w	h	p	d	k	n	m	d	n	p	e	e	s	n						
y	r	k	l	a	l	r	w	h	p	d	k	n	l	d	n	a	e	e	a	n						
y	r	q	l	a	r	k	y	h	p	d	l	h	h	g	p	e	q	k	q	a	a	e				
y	k	k	l	a	l	r	w	h	p	d	k	n	m	d	n	p	e	e	s	n						
y	r	r	l	a	l	q	r	h	p	d	k	l	m	k	a	a	g	l	s	e	a	e	a	t		
y	y	i	k	a	r	q	v	h	p	d	k	n	p	n	d	p	q	a	a							
y	y	i	k	a	r	q	v	h	p	d	k	n	q	g	d	p	l	a	a							
y	r	k	l	a	m	k	w	h	p	d	k	n	p	n	n	k	k	d	a	e						
y	y	l	k	a	r	k	v	h	p	d	k	n	p	g	d	p	q	a	a							
y	r	k	l	a	m	k	w	h	p	d	k	n	p	n	n	k	k	d	a	e						
f	h	k	q	s	l	k	y	h	p	d	k	n	k	d	k	g	a	q								
y	r	k	l	s	l	k	v	h	p	d	k	n	q	a	p	g	s	e								
y	r	k	l	a	l	k	y	h	p	d	k	n	q	g	n	e	e	a	t							
y	r	k	l	a	m	k	w	h	p	d	k	n	p	n	n	k	k	d	a	e						
y	y	v	q	a	r	q	v	h	p	d	k	n	p	g	d	p	q	a	a							
y	r	k	l	a	m	k	w	h	p	d	k	n	p	n	n	k	k	e	a	e						
y	y	g	l	a	k	k	l	h	p	d	m	n	k	d	d	p	e	a	e							
f	r	k	l	a	k	k	h	h	p	d	q	n	q	d	d	p	k	a	q							
y	r	k	m	a	l	k	y	h	p	d	k	n	k	e	a	g	a	e								
y	f	k	l	a	k	e	y	h	p	d	k	n	p	d	h	g										
y	r	k	l	a	k	e	l	h	p	d	r	n	q	d	d	e	m	a	n							
y	r	r	l	a	r	k	y	h	p	d	i	n	k	e	k	g	a	e								
f	r	k	l	a	k	q	y	h	p	d	a	n	s	g	d	k	k	a	e							
f	r	k	l	a	l	k	y	h	p	d	k	n	k	e	p	g	a	s								
y	r	k	e	s	l	k	w	h	p	d	k	n	p	g	d	k	r	a	t	a	e					
y	r	k	l	a	k	q	y	h	p	d	k	n	a	g	d	e	s	a	a							
y	h	k	q	a	l	r	y	h	p	d	k	n	k	s	p	q	a	e								
y	r	r	l	a	k	e	l	h	p	d	k	n	k	d	d	p	d	a	s							
f	r	r	l	s	l	q	y	h	p	d	k	n	e	d	g	a										
y	r	k	l	a	l	k	y	h	p	d	k	n	k	s	p	q	a	e								
y	r	r	r	a	l	e	c	h	p	d	k	n	p	n	g	g										
y	r	r	l	a	r	k	y	h	p	d	v	s	k	e	p	d	a	e								
y	r	r	l	a	r	q	y	h	p	d	l	n	k	t	k	e	a	e								
y	r	r	l	a	r	q	y	h	p	d	l	n	k	t	k	e	a	e								
y	r	k	l	a	l	k	w	h	p	d	k	n	p	e	n	k	e	e	a	e						
y	r	k	l	a	l	r	w	h	p	d	k	n	p	d	n	k	e	e	a	e						
f	r	q	l	s	i	l	v	h	p	d	k	n	q	d	d	a	d	r	a	q						
y	r	k	l	a	l	q	l	h	p	d	r	n	p	d	d	p	q	a	q							
y	r	r	k	a	l	q	w	h	p	d	k	n	p	d	n	k	e	f	a	e						
y	r	k	m	a	l	k	y	h	p	d	k	n	k	e	p	n	a	e								
y	r	k	q	a	l	k	f	h	p	d	k	n	k	s	p	q	a	e								
y	r	r	q	a	l	r	y	h	p	d	k	n	k	e	p	g	a	e								
y	r	k	l	a	l	k	w	h	p	d	k	n	p	e	n	k	e	e	a	e						
y	r	k	l	a	m	k	w	h	p	d	k	n	p	q	n	k	k	e	a	e						
f	k	k	l	a	r	k	y	h	p	d	v	n	k	e	p	g	a	e								
y	r	k	l	a	k	k	h	h	p	d	q	n	p	n	d	p	k	a	k							
y	r	k	q	a	l	k	f	h	p	d	k	n	k	s	p	q	a	e								
y	r	k	k	a	l	q	w	h	p	d	k	n	p	d	n	k	e	f	a	e						
y	r	k	l	a	l	q	l	h	p	d	r	n	p	d	d	p	q	a	q							
y	r	k	q	a	l	k	w	h	p	d	k	n	p	e	n	k	e	e	a	e						
y	r	k	v	a	l	k	w	h	p	d	k	n	p	e	n	k	e	e	a	e						
l	h	k	l	a	m	k	y	h	p	d	k	n	k	s	p	d	a	e								

y r k k a l q w h p d k n p d n k e f a e
y r k l a l k w h p d k n p e h k e e a e
y r r q a l r y h p d k n k e p g a e
y r k m a l k y h p d k n k e p n a e
y r k q a l k w h p d k n p e n k e e a e
y r n l v n i y h p d k n t k k s a e e q k q a e
y k r l a k r y h p d i n k q g a
y r k a a l k w h p d k n k d n p e a a
y r k l a m k w h p d k n p n n k k a a e
y r k l a r k y h p d l n p g d k d a e
y h k l a m r w h p d k n p t n n k k e a e
y r k l a r s y h p d v n k d p g a e
y r k l a l k y h p d k n p n n e e a n
y r k l a m m w h p d k h n d e k s k k e a e
y r q l a k e y h p d i a p d k e
y r t l a m k w h p d k n p n n k a e a t
y k k l a m k w h p d k h l n a a s k k e a d
f h k l a m k y h p d k n k s p d a e
y r k l a r e w h p d r n p d k p n a e
l r k l s k k y h p d k n p k y r
y r r k a m e t h p d k h p d d p d a q
y r k k s i q e h p d k n p n d p t a t
y r k l a i k l h p d k n s h p k a g
y r k a a l k y h p d k p t g d t
y r r l a r k y h p d v s k e p d a e
y k k l a l q l h p d k n h a p s a d
y r k l a l k y h p d k n p n g e
y r k l a v k y h p d k n p d d p q g a s
y r r l a i l y h p d k n r e n p e a a r
y r k r a k e l h p d l h p g d k e v e
f r k l a r q y h p d v n p n d k t a e
f r k l a l k y h p d k n p g d k a a e
y k r l a r q y h p d v n k s p e a e
y r r l a i q f h p d r n q g n k e a e
f r a q a l k y h p d k n p g d a c a e
y r r l a i q f h p d r n q g n k e a e
y h q l a l k y h p d k a s g n r e e a e
y h q l a l k y h p d k c t g n r e e s e
y h q l a l k y h p d k c t g n r e e s e
y r r l a r k y h p d v s k e a g a e
y r r l a r k y h p d v s k e a g a e
y r r l a r k y h p d v s q e p g a e

48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74
														e	k	f	k	i	i	g	e	a	y	e	m	l
														e	k	f	k	i	i	g	e	a	y	e	m	l
														q	k	f	q	d	l	g	a	a	y	e	v	l
														e	a	f	k	s	l	g	n	a	v	e	t	l
														d	k	f	k	e	v	n	r	a	h	s	i	
														r	r	f	k	e	i	s	e	a	y	e	v	l
														q	q	f	l	l	v	q	a	a	y	d	v	l
														e	s	f	k	r	i	a	t	a	y	e	v	l
														r	r	f	k	e	i	s	e	a	y	e	v	l
														a	q	f	q	e	l	v	h	a	y	e	v	l
														h	n	f	q	v	l	g	e	a	y	q	v	l
														e	k	f	q	v	l	g	e	a	y	q	v	l
														a	m	f	k	q	i	s	e	a	y	e	v	l
														k	n	f	q	v	l	g	e	a	y	q	v	l
														a	k	f	k	q	i	s	e	a	y	d	v	l
														e	k	f	a	e	i	n	n	a	y	e	i	l
														e	a	f	k	s	v	s	k	a	f	q	c	l
														r	k	f	a	e	i	n	n	a	y	e	v	l
														a	k	f	k	q	i	s	e	a	y	d	v	l
														k	n	f	q	i	l	g	e	a	y	q	v	l
														a	k	f	k	q	i	s	e	a	y	d	v	l
														t	k	f	q	e	v	s	k	a	y	e	i	l
														e	r	f	a	e	v	n	q	a	y	e	i	i
														n	k	f	k	e	i	a	e	a	y	d	v	l
														d	k	f	k	e	i	s	f	a	y	e	v	l
														e	k	f	q	d	l	s	s	a	y	e	v	l
														e	k	f	k	e	i	n	a	a	y	e	i	l
														e	r	f	k	q	v	s	a	a	f	d	i	v
														e	k	f	q	q	i	a	e	a	y	d	v	l
														e	k	f	k	k	v	g	e	a	y	e	v	l
														e	k	f	k	e	i	g	e	a	y	a	v	l
														e	i	f	k	q	v	a	k	a	y	e	v	l
														t	k	f	q	d	l	g	a	a	y	e	v	l
														k	e	f	l	r	i	n	e	a	h	r	v	l
														e	r	f	k	e	i	a	e	a	y	e	v	l
														k	e	f	q	r	l	h	r	a	y	e	t	l
														a	r	f	k	e	v	a	e	a	w	e	v	l
														e	k	f	k	e	i	n	a	a	y	e	i	l
														e	k	f	k	e	i	n	a	a	y	e	i	l
														r	r	f	k	q	v	a	e	a	y	e	v	l
														k	k	f	k	l	v	s	e	a	y	e	v	l
														k	a	f	e	a	v	d	k	a	y	k	l	l
														e	k	f	q	d	l	g	a	a	y	e	v	l
														k	k	f	k	e	v	a	e	a	y	e	v	l
														e	k	f	k	e	i	a	e	a	y	d	v	l
														e	k	f	k	e	v	a	e	a	y	e	v	l
														e	k	f	k	e	i	a	e	a	y	d	v	l
														r	k	f	k	q	v	a	e	a	y	e	v	l
														a	k	f	k	q	i	s	e	a	y	d	v	l
														e	k	f	k	e	i	n	e	a	y	t	v	l
														d	r	f	a	a	a	n	q	a	y	e	i	v
														e	k	f	k	e	v	a	e	a	y	e	v	l
														k	k	f	k	e	v	a	e	a	y	e	v	l
														e	k	f	q	d	l	g	a	a	y	e	v	l
														r	k	f	k	q	v	a	e	a	y	e	v	l
														r	k	f	k	e	v	a	e	a	y	e	v	l
														a	k	f	r	e	i	a	e	a	y	e	t	l

k k f k e v a e a y e v l
r r f k q v a q a y e v l
e k f k e i a e a y d v l
e k f k e i a e a y d v l
r k f k q v a e a y e v l
a k f k e i q e a y e i l
d t f v k i n n a y a v l
e k f k e c s q a y e i l
a k f k q i s e a y d v l
a k f k d l n e a n e v l
a k f k q i s e a y e v l
q k f k d i s n a y e v l
k r f a e i n n a y e i l
e k f k n i a e a y d v l
k d f i e i a n a y e t l
e r f k q i s e a y e v l
n m f k s i s e a y e v l
a k f r e i a e a y e t l
e r f k e i q e a y s v l
k l y e r l n l a t q i l
a k f q a v g e a y q v l
e r f q a i s e a y q v l
e a f k v i n r a f e v l
e k f k e i s e a f e i l
a r f k e v a e a w e v l
e a f k m v s k a f q v l
k k f k e i s l a y e v l
e k f q k i s e a y q v l
e k f q k l a e a y q v l
t k f k a l s a a y h l l
e k f k d i n e a y d v l
e k f k e i s e a y e v l
e k f k e i n e a y a v l
e r f k e a t e a y e v l
d q f k r i n a a y a v l
e r f k e a t e a y e v l
r l f k e v a e a y d v l
r r f k e v s e a y d v l
r r f k e v s e a y d v l
d k f k a i n e a y e a l
d k f k a i n e a y e a l
e r f k a v n e a y e a l

75	76	77	78	79	80	81	82	83	84	85	86	87	88	89
s	d	a	t	k	r	a	q	y	d	q	f	s	r	y
s	d	a	t	k	r	a	q	y	d	q	f	s	r	y
s	d	d	d	k	r	k	l	y	d	r	c	g	e	e
t	d	p	q	k	r	k	a	y	d	l	y	r	t	t
s	d	e	k	k	r	r	i	y	d	q	y	g	k	d
s	d	p	q	e	r	a	w	y	d	n	h	r	e	q
k	d	e	e	s	r	n	d	y	n	y	l	l	d	n
s	d	e	k	k	r	r	i	y	d	q	y	g	k	d
s	d	p	k	e	r	a	w	y	d	s	h	r	s	q
s	d	s	g	q	r	q	a	y	d	a	c	g	k	s
s	d	p	v	h	r	e	a	y	d	r	t	g	k	f
s	d	p	q	k	k	a	v	y	d	q	y	g	e	e
s	n	p	d	k	r	a	a	y	d	k	y	g	k	e
s	d	p	q	k	r	a	i	y	d	q	y	g	e	e
s	d	e	e	k	r	k	n	y	d	l	y	g	d	e
s	n	d	e	a	r	k	k	y	d	v	s	g	s	d
s	d	e	e	k	r	e	i	y	n	k	y	g	e	e
s	d	p	q	k	r	a	v	y	d	q	y	g	e	e
g	d	p	e	k	r	t	a	y	d	k	y	g	k	e
s	d	p	q	k	r	a	i	y	e	q	y	g	e	e
k	d	k	e	k	r	d	l	y	d	q	v	g	h	e
g	d	k	d	k	r	a	q	f	d	r	g	e	i	d
s	d	d	k	k	k	k	i	y	d	q	f	g	e	e
s	s	p	e	k	r	r	l	y	d	a	r	g	l	e
s	d	k	e	k	r	a	m	y	d	r	h	g	e	e
s	d	e	k	k	r	a	q	y	d	q	y	g	d	s
g	d	a	e	k	r	k	k	f	d	l	g	q	i	d
s	e	p	q	k	r	a	t	y	d	q	f	g	e	e
s	d	p	e	k	r	k	i	y	d	q	f	g	e	e
s	d	p	q	k	r	q	a	y	d	q	f	g	h	t
s	d	k	k	k	r	g	s	y	d	s	r	n	d	k
s	n	p	d	k	r	k	t	y	d	r	c	g	e	e
i	d	h	q	r	r	a	l	y	d	c	c	f	q	s
s	d	k	k	k	r	d	i	f	d	n	y	g	e	d
i	d	p	q	l	r	r	d	y	d	n	q	q	e	a
s	d	e	q	r	r	a	e	y	d	q	m	w	q	h
s	d	e	e	k	r	r	q	y	d	q	f	g	d	n
s	d	e	e	k	r	r	q	y	d	q	f	g	d	n
s	d	a	k	k	r	d	i	y	d	r	y	g	e	a
s	d	s	k	k	r	s	l	y	d	r	a	g	c	d
l	d	q	e	q	k	k	r	a	l	d	v	i	q	a
s	d	s	e	k	r	k	q	y	d	t	y	g	e	e
s	d	k	h	k	r	e	i	y	d	r	y	g	r	e
s	d	p	k	k	r	g	l	y	d	q	y	g	e	e
s	d	p	k	k	r	e	i	y	d	q	f	g	e	e
s	d	p	r	k	r	e	i	f	d	r	y	g	e	e
s	d	a	k	k	r	d	i	y	d	k	y	g	k	e
s	d	s	q	k	k	a	v	y	d	q	y	g	e	e
s	d	p	e	k	r	r	y	y	d	t	y	g	a	a
g	d	e	k	n	r	a	a	f	d	r	g	e	i	d
s	d	p	k	k	r	e	i	y	d	q	f	g	e	e
s	d	r	s	g	p	s	r	s	e	t	g	g	a	g
s	d	s	e	k	r	k	q	y	d	t	y	g	e	e
s	d	a	k	k	r	d	i	y	d	k	y	g	k	e
s	n	v	e	k	r	d	i	y	d	k	y	g	k	e
s	d	a	s	s	w	k	a	y	d	t	i	g	h	s

s d k h k r e i y d r y g r e
s d v r k r e v y d r c g e v
s d p r k r e i f d r y g e e
s d p k k r s l y d q y g e e
s d a k k r d i y d k y g k e
s d e t k r k q y d k f g h a
s d t t q k a e y d a m l r f
s d p e k r k m y d q f g l e
s d s q k r a v y d q y g e d
s d p e k r q k y d r f g q h
s d p q k r t i y d q v g e e
s d d e k r s i y d k y g e a
t d q e k r k i y d r y g e e
a d e e k r k i y d t y g e e
s d p e k r k m y d m y g e d
s d p k r r r k y d l y g t d
s d e e k r d i y d k y g e e
s d a n r r k e y d i i g h s
s d p e k r r q y d m m r k n
s n s s n r k i y d y y l q n
s d p g l r s k y d q f g k e
g d d d l r a k y d k y g r k
s n e e k r s i y d r i g r d
n d p q k r e i y d q y g l e
s d e q r r a e y d q l w q h
s d p n l r a h y d r t g m d
s d p q r r k l y d q y g i t
g d e k l r s q y d q f g k e
s d p k l r e k y d k l g k v
s d p e q r a r f d r g e i d
s d e t k r r e l d s r l f g
s d p e k r q k y d q f g r y
s d p e k r r i y d t y g t t
i d a q k r a a y d r y g f d
s d r a s r a r y d a e r a g
i d a q k r a a y d r y g f d
s d e k k k k i y d s y g e e
s d e n k k k i y d v y g e e
s d e n k k k i y d v y g e e
r d p a k r k a y d q l k a q
r d p q k r a a y d q l k a q
r d p n k r a a y d q l r a q

	A	C	D	E	F	G	H	I	K	L	M	N	P	Q	R	S
1	0	3	63	8	0	0	0	0		0	0	6	0	1	0	9
2	0	1	0	0	11	0			1	9	0	0	6	0	0	0
3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
4	9	1	15	28	0	0			26	1	0	0	0	10	0	5
5	0			1	1	0	0	38	1	6	0	0	0	0	1	0
6	0	0	0	0	0	0	0	0	0	96	2	0	0	0	0	0
7	0	0	6	3	0	76	0	0	1	0	0	5	1	6	0	0
8	0	0	0	0	0	0	0	15	1	11	0	0	0	0	0	0
9	7	0	10	7	0	2	0	0	8	1	0	0	21	7	3	24
10	2	0	0	3	0	0	0	1	30	0	0	0	13	4	38	3
11	0	0	14	6	0	10		0	2	0	0	22	0	2	0	19
12	87	4	2	0	0	1	0	0	0	0	0	0	0	0	0	3
13	0	0	5	0	1	4	0	0	4	0	0	8	0	2	0	45
14	10	0	24	17	0	4	0	2	4	5	1	3	15	6	0	3
15	11	0	28	25	0	2	0	1	7	0	0	4	0	3	3	9
16	2	0	34	52	0	0	1	0	0	0	0	0	0	5	0	0
17	0	0	0	0	0	0	0	84	1	10	0	0	0	0	0	0
18	1	0	0	0	0	0	0	0	88	0	0	0	0	1	7	1
19	1	0	1	0	0	0	0	0	78	0	0	0	0	0	8	5
20	79		0	0	0	1	0	0	1	0	0	3	0	1	1	11
21	0	0	0	0	11	0	0	0	0	2	0	0	0	0	0	0
22	0	0	0	0	1	0	8	0	8	0	0	0	0	0	77	0
23	1	0	0	0	0	1	0	2	62	1	0	1	0	6	23	0
24	2	0	0		0	0	1	0	8	71	3	0	0	10	2	0
25	91	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
26	0	0	0	0	0	0	0	6	13	44	13	1	0	0	21	0
27	0	0	0	9	0	0	0	1	53	2	1	0	0	23	9	1
28	0		0	1	4	0	2	0	0	10	0	0	0	0	1	0
29	0	0	0	0	0	0	99	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	99	0	0	0
31	0	0	99	0	0	0	0	0	0	0	0	0	0	0	0	0
32	1	0	0	0	0	0	0	3	70	7	1	0	0	2	6	0
33	2	2		0	0	0			0	1	0			0	0	5
34	1	0	0		0	0			29	2	3			9	1	3
35	3	0	25	20	0	20			3	0	0	15	0	2	0	7
36	5	0	25	1	0	4	2	0	7	0	0	32	22	0	0	0
37	7	0	4	10	0	15	0	0	29	0	0	3	20	4	4	2
38	30		8	24	0	1	0	0	10	1	1	1	0	7	1	4
39	32	0	4	40	3	2	0	0	4	1	1	0	0	1	1	1
40	29	0	0	14	0	0	0	0	3	0	0	2	0	5	0	7
41	3	0	0	22	0	0	0	0	0	0	0	3	0	2	1	1
42	4	0	0	2	0	0	0	0	1	0	0	0	0	0	0	0
43	0	0	1	3	0	0	0	0	0	0	0	0	0	1	0	0
44	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
62	15	0	7	43	0	0	1	0	13	0	0	2	0	3	12	0
63	5	0	1	2	0	0	0	1	59	2	2	3	0	3	19	1
64	0	0	0	0	98	0	0	0	0	0	0	0	0	0	0	0
65	5	0	0	2	0	0	0	1	69	2	0	0	0	17	2	0
66	8	0	8	44	0	0	0	3	4	2	1	1	0	16	5	3
67	3	1	0	0	0	0	0	50	0	16	0	0	0	0	0	0
68	28	0	1	0	0	14	1	0	0	0	0	21	0	3	0	28
69	11	0	0	63	1	0	1	0	5	2	0	7	0	4	3	1
70	99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
71	0	0	0	0	5	0	2	0	0	0	0	1	0	0	0	0
72	4	0	18	60	0	0	1	0	1	0	0	0	0	11	1	2
73	3	1	0	0	0	0	0	14	0	2	2	0	0	0	0	0
74	0	0	0	0	0	0	0	1	0	95	0	0	0	0	0	0
75	1	0	0	0	0	6	0	4	2	1	0	1	0	0	3	78
76	0	0	90	1	0	0	0	0	0	0	0	6	0	0	0	1
77	11	0	5	20	0	0	1	0	7	0	0	0	40	2	2	7
78	2	0	5	29	0	2	2	0	21	0	0	5	0	20	3	3
79	1	0	0	2	0	1	1	0	72	6	0	2	0	4	6	3
80	0	0	0	0	0	0	0	0	8	0	0	0	1	0	88	0
81	28	0	8	11	0	2	0	0	24	0	0	1	0	4	11	7
82	13	0	2	5	0	0	1	31	8	8	3	1	0	11	4	1
83	1	0	0	0	7	0	0	0	0	1	0	0	0	0	0	1
84	0	0	93	2	0	0	0	0	0	1	0	2	0	0	0	0
85	4	1	1	0	0	0	0	1	12	4	2	3	0	34	20	4
86	1	5	0	1	16	5	3	3	0	6	3	0	0	1	3	1
87	0	0	0	3	1	74	0	1	2	4	0	1	0	2	6	2
88	6	1	6	35	3	0	5	5	14	3	1	0	0	6	8	2
89	6	0	16	42	2	3	3	0	2	0	0	5	0	5	0	5
	a	c	d	e	f	g	h	I	k	l	m	n	p	q	r	s
	677	24	629	664	168	250	152	268	879	436	40	255	282	266	404	325
	10.11%	0.36%	9.39%	9.91%	2.51%	3.73%	2.27%	4.00%	13.13%	6.51%	0.60%	3.81%	4.21%	3.97%	6.03%	4.85%

T	V	W	Y				P	CM	GAVIL	YFW	ST	HKR	DE
3	1	0	1	98	64.29%	D	0	3	1	1	12	3	71
0	0	0	65	98	66.33%	Y	6	1	9	76	0	6	0
0	0	0	95	98	**96.94%**	Y	0	0	0	98	0	0	0
2	0	0	0	98	28.57%	E	0	1	10	0	7	27	43
13	36	0	0	98	38.78%	I	0	1	80	1	13	2	1
0	0	0	0	98	**97.96%**	L	0	2	96	0	0	0	0
0	0	0	0	98	77.55%	G	1	0	76	0	0	1	9
0	71	0	0	98	72.45%	V	0	0	97	0	0	1	0
8	0	0	0	98	24.49%	S	21	0	10	0	32	11	17
3	1	0	0	98	38.78%	R	13	0	4	0	6	68	3
19	0	0	1	98	22.45%	N	0	0	10	1	38	5	20
0	1	0	0	98	**88.78%**	A	0	4	89	0	3	0	2
29	0	0	0	98	45.92%	S	0	0	4	1	74	4	5
3	1	0	0	98	24.49%	D	15	1	22	0	6	4	41
4	1	0	0	98	25.51%	D	0	0	15	0	13	10	53
3	1	0	0	98	53.06%	E	0	0	3	0	3	1	86
0	4	0	0	99	**84.85%**	I	0	0	98	0	0	1	0
1	0	0	0	99	**88.89%**	K	0	0	1	0	2	95	0
6	0	0	0	99	78.79%	K	0	0	1	0	11	86	1
1	0	0	0	99	79.80%	A	0	1	80	0	12	2	0
0	0	0	86	99	**86.87%**	Y	0	0	2	97	0	0	0
0	0	0	5	99	77.78%	R	0	0	0	6	0	93	0
1	1	0	0	99	62.63%	K	0	0	6	0	1	85	0
0	1	0	0	99	71.72%	L	0	3	74	0	0	11	1
0	1	0	0	99	**91.92%**	A	0	0	92	0	7	0	0
0	1	0	0	99	44.44%	L	0	13	51	0	0	34	0
0	0	0	0	99	53.54%	K	0	1	3	0	1	62	9
1	6	26	47	99	47.47%	Y	0	1	16	77	1	3	1
0	0	0	0	99	**100.00%**	H	0	0	0	0	0	99	0
0	0	0	0	99	**100.00%**	P	99	0	0	0	0	0	0
0	0	0	0	99	**100.00%**	D	0	0	0	0	0	0	99
0	9	0	0	99	70.71%	K	0	1	20	0	0	76	0
0	0	0	0	99	83.84%	N	1	2	3	0	5	5	0
4	0	0	0	99	43.43%	P	43	3	3	0	7	32	1
3	0	0	0	99	25.25%	D	0	0	23	0	10	4	45
0	0	0	1	99	32.32%	N	22	0	9	1	0	9	26
1	0	0	0	99	29.29%	K	20	0	22	0	3	33	14
2	0	0	0	91	32.97%	A	0	2	32	0	6	11	32
0	1	0	0	91	43.96%	E	0	1	36	3	1	5	44
3	0	0	0	63	46.03%	A	0	0	29	0	10	3	14
1	0	0	0	33			0	0	3	0	2	1	22
0	0	0	0	7			0	0	4	0	0	1	2
0	0	0	0	5			0	0	0	0	0	0	4
0	0	0	0	2			0	0	2	0	0	0	0
1	0	0	0	2			0	0	0	0	1	0	1
0	0	0	0	0			0	0	0	0	0	0	0
0	0	0	0	0			0	0	0	0	0	0	0
0	0	0	0	0			0	0	0	0	0	0	0
0	0	0	0	0			0	0	0	0	0	0	0
0	0	0	0	0			0	0	0	0	0	0	0
0	0	0	0	0									
0	0	0	0	0									
0	0	0	0	0									
0	0	0	0	0									
0	0	0	0	0									
0	0	0	0	0									
0	0	0	0	0									

0	0	0	0	0									
0	0	0	0	0									
0	0	0	0	0									
0	0	0	0	0									
3	0	0	0	99	43.43%	E	0	0	15	0	3	26	50
1	0	0	0	99	59.60%	K	0	2	8	0	2	78	3
0	0	0	1	99	**98.99%**	F	0	0	0	99	0	0	0
0	1	0	0	99	69.70%	K	0	0	9	0	0	71	2
0	4	0	0	99	44.44%	E	0	1	17	0	3	9	52
0	29	0	0	99	50.51%	I	0	1	98	0	0	0	0
2	1	0	0	99	28.28%	A	0	0	43	0	30	1	1
1	0	0	0	99	63.64%	E	0	0	13	1	2	9	63
0	0	0	0	99	**100.00%**	A	0	0	99	0	0	0	0
1	1	2	87	99	87.88%	Y	0	0	1	94	1	2	0
1	0	0	0	99	60.61%	E	0	0	4	0	3	3	78
5	72	0	0	99	72.73%	V	0	3	91	0	5	0	0
0	2	0	0	98	**96.94%**	L	0	0	98	0	0	0	0
2	0	0	0	98	79.59%	S	0	0	12	0	80	5	0
0	0	0	0	98	**91.84%**	D	0	0	0	0	1	0	91
1	2	0	0	98	40.82%	P	40	0	13	0	8	10	25
5	1	0	0	98	29.59%	E	0	0	5	0	8	26	34
0	0	0	0	98	73.47%	K	0	0	8	0	3	79	2
0	0	1	0	98	**89.80%**	R	1	0	0	1	0	96	0
2	0	0	0	98	28.57%	A	0	0	30	0	9	35	19
2	5	2	1	98	31.63%	I	0	3	57	3	3	13	7
0	0	0	88	98	**89.80%**	Y	0	0	2	95	1	0	0
0	0	0	0	98	**94.90%**	D	0	0	1	0	0	0	95
7	3	0	2	98	34.69%	Q	0	3	12	2	11	32	1
2	3	0	45	98	45.92%	Y	0	8	18	61	3	6	1
0	0	2	0	98	75.51%	G	0	0	79	3	2	8	3
3	0	0	0	98	35.71%	E	0	2	14	3	5	27	41
4	2	0	3	98	42.86%	E	0	0	11	5	9	5	58
t	v	w	y	6697			282	64	1894	729	479	1435	1293
154	263	33	528	6697			282	64	1894	729	479	1435	1293
2.30%	3.93%	0.49%	7.88%	100.00%									

NQ		
7	98	72.45%
0	98	77.55%
0	98	**100.00%**
10	98	43.88%
0	98	**81.63%**
0	98	**97.96%**
11	98	77.55%
0	98	**98.98%**
7	98	32.65%
4	98	69.39%
24	98	38.78%
0	98	**90.82%**
10	98	75.51%
9	98	41.84%
7	98	54.08%
5	98	**87.76%**
0	99	**98.99%**
1	99	**95.96%**
0	99	86.87%
4	99	80.81%
0	99	**97.98%**
0	99	**93.94%**
7	99	**85.86%**
10	99	**74.75%**
0	99	**92.93%**
1	99	51.52%
23	99	62.63%
0	99	77.78%
0	99	**100.00%**
0	99	**100.00%**
0	99	**100.00%**
2	99	76.77%
83	99	83.84%
10	99	43.43%
17	99	45.45%
32	99	26.26%
7	99	22.22%
8	91	35.16%
1	91	39.56%
7	63	22.22%
5	33	66.67%
0	7	14.29%
1	5	80.00%
0	2	100.00%
0	2	50.00%
0	0	#DIV/0!
0	0	#DIV/0!
0	0	#DIV/0!
0	0	#DIV/0!
0	0	#DIV/0!

	a	c	d	e	f	g	h
1	0.0%	3.1%	**64.3%**	**8.2%**	0.0%	0.0%	0.0%
2	0.0%	1.0%	0.0%	0.0%	**11.2%**	0.0%	5.1%
3	0.0%	0.0%	0.0%	0.0%	3.1%	0.0%	0.0%
4	**9.2%**	1.0%	**15.3%**	**28.6%**	0.0%	0.0%	1.0%
5	0.0%	1.0%	0.0%	1.0%	1.0%	0.0%	0.0%
6	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
7	0.0%	0.0%	6.1%	**3.1%**	0.0%	**77.6%**	0.0%
8	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
10	**7.1%**	0.0%	**10.2%**	**7.1%**	0.0%	2.0%	0.0%
11	2.0%	0.0%	0.0%	3.1%	0.0%	0.0%	0.0%
12	0.0%	0.0%	**14.3%**	6.1%	0.0%	**10.2%**	3.1%
13	**88.8%**	4.1%	2.0%	0.0%	0.0%	1.0%	0.0%
14	0.0%	0.0%	**5.1%**	0.0%	1.0%	4.1%	0.0%
15	**10.2%**	0.0%	**24.5%**	**17.3%**	0.0%	4.1%	0.0%
16	**11.2%**	0.0%	**28.6%**	**25.5%**	0.0%	2.0%	0.0%
17	2.0%	0.0%	**34.7%**	**53.1%**	0.0%	0.0%	1.0%
18	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
19	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
20	1.0%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%
23	**79.8%**	1.0%	0.0%	0.0%	0.0%	1.0%	0.0%
24	0.0%	0.0%	0.0%	0.0%	11.1%	0.0%	0.0%
25	0.0%	0.0%	0.0%	0.0%	1.0%	0.0%	8.1%
26	1.0%	0.0%	0.0%	0.0%	0.0%	1.0%	0.0%
27	**2.0%**	0.0%	0.0%	1.0%	0.0%	0.0%	1.0%
28	**91.9%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
29	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
30	0.0%	0.0%	0.0%	**9.1%**	0.0%	0.0%	0.0%
31	0.0%	1.0%	0.0%	1.0%	**4.0%**	0.0%	**2.0%**
32	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**100.0%**
33	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
34	0.0%	0.0%	**100.0%**	0.0%	0.0%	0.0%	0.0%
35	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
36	2.0%	2.0%	0.0%	0.0%	0.0%	**0.0%**	5.1%
37	**1.0%**	0.0%	0.0%	1.0%	0.0%	**0.0%**	2.0%
38	**3.0%**	0.0%	**25.3%**	**20.2%**	0.0%	**20.2%**	1.0%
39	**5.1%**	0.0%	25.3%	**1.0%**	0.0%	4.0%	2.0%
40	**7.1%**	0.0%	4.0%	**10.1%**	0.0%	**15.2%**	0.0%
41	**33.0%**	1.1%	**8.8%**	**26.4%**	0.0%	1.1%	0.0%
42	**35.2%**	0.0%	4.4%	**44.0%**	3.3%	2.2%	0.0%
43	**46.0%**	0.0%	0.0%	**22.2%**	0.0%	0.0%	0.0%
44	**9.1%**	0.0%	0.0%	**66.7%**	0.0%	0.0%	0.0%
45	**57.1%**	0.0%	0.0%	**28.6%**	0.0%	0.0%	0.0%
46	**0.0%**	0.0%	20.0%	**60.0%**	0.0%	0.0%	0.0%
47	**100.0%**	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%
48	**0.0%**	0.0%	0.0%	**50.0%**	0.0%	0.0%	0.0%
49	**#DIV/0!**	#DIV/0!	#DIV/0!	**#DIV/0!**	#DIV/0!	#DIV/0!	#DIV/0!
50	**#DIV/0!**	#DIV/0!	#DIV/0!	**#DIV/0!**	#DIV/0!	#DIV/0!	#DIV/0!
51	**#DIV/0!**	#DIV/0!	#DIV/0!	**#DIV/0!**	#DIV/0!	**#DIV/0!**	#DIV/0!
52	**#DIV/0!**	#DIV/0!	#DIV/0!	**#DIV/0!**	#DIV/0!	#DIV/0!	#DIV/0!
53	#DIV/0!	#DIV/0!	#DIV/0!	**#DIV/0!**	#DIV/0!	#DIV/0!	#DIV/0!

5	99	50.51%	63	**15.2%**	0.0%	**7.1%**	**43.4%**	0.0%	0.0%	1.0%
6	99	78.79%	64	**5.1%**	0.0%	1.0%	2.0%	0.0%	0.0%	0.0%
0	99	**100.00%**	65	0.0%	0.0%	0.0%	0.0%	**99.0%**	0.0%	0.0%
17	99	71.72%	66	5.1%	0.0%	0.0%	2.0%	0.0%	0.0%	0.0%
17	99	52.53%	67	**8.1%**	0.0%	8.1%	**44.4%**	0.0%	0.0%	0.0%
0	99	**98.99%**	68	3.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%
24	99	24.24%	69	**28.3%**	0.0%	1.0%	0.0%	0.0%	**14.1%**	1.0%
11	99	63.64%	70	**11.1%**	0.0%	0.0%	**63.6%**	1.0%	0.0%	1.0%
0	99	**100.00%**	71	**100.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1	99	**94.95%**	72	0.0%	0.0%	0.0%	0.0%	5.1%	0.0%	2.0%
11	99	78.79%	73	**4.0%**	0.0%	**18.2%**	**60.6%**	0.0%	0.0%	1.0%
0	99	**91.92%**	74	3.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%
0	98	**100.00%**	75	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1	98	81.63%	76	1.0%	0.0%	0.0%	0.0%	0.0%	**6.1%**	0.0%
6	98	**92.86%**	77	0.0%	0.0%	**91.8%**	1.0%	0.0%	0.0%	0.0%
2	98	40.82%	78	**11.2%**	0.0%	5.1%	**20.4%**	0.0%	0.0%	1.0%
25	98	34.69%	79	**2.0%**	0.0%	5.1%	**29.6%**	0.0%	2.0%	2.0%
6	98	80.61%	80	1.0%	0.0%	0.0%	2.0%	0.0%	1.0%	1.0%
0	98	**97.96%**	81	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
5	98	30.61%	82	**28.6%**	0.0%	8.2%	**11.2%**	0.0%	2.0%	0.0%
12	98	58.16%	83	**13.3%**	0.0%	2.0%	**5.1%**	0.0%	0.0%	1.0%
0	98	**96.94%**	84	1.0%	0.0%	0.0%	0.0%	**7.1%**	0.0%	0.0%
2	98	**96.94%**	85	0.0%	0.0%	**94.9%**	2.0%	0.0%	0.0%	0.0%
37	98	32.65%	86	**4.1%**	1.0%	1.0%	**0.0%**	0.0%	0.0%	0.0%
1	98	62.24%	87	1.0%	5.1%	0.0%	1.0%	**16.3%**	**5.1%**	3.1%
3	98	**80.61%**	88	0.0%	0.0%	0.0%	3.1%	1.0%	**75.5%**	0.0%
6	98	27.55%	89	6.1%	1.0%	**6.1%**	**35.7%**	3.1%	0.0%	**5.1%**
10	98	11.22%	90	**6.1%**	0.0%	**16.3%**	**42.9%**	2.0%	3.1%	3.1%
521	6697									
521	6697									

I	k	l	m	n	p	q	r	s	t	v	w	y	
0.0%	**3.1%**	0.0%	0.0%	**6.1%**	0.0%	1.0%	0.0%	**9.2%**	**3.1%**	1.0%	0.0%	1.0%	1
0.0%	1.0%	**9.2%**	0.0%	0.0%	**6.1%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**66.3%**	1
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**96.9%**	1
0.0%	**26.5%**	1.0%	0.0%	0.0%	0.0%	**10.2%**	0.0%	5.1%	2.0%	0.0%	0.0%	0.0%	1
38.8%	1.0%	**6.1%**	0.0%	0.0%	0.0%	0.0%	1.0%	0.0%	**13.3%**	**36.7%**	0.0%	0.0%	1
0.0%	0.0%	**98.0%**	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1
0.0%	1.0%	0.0%	0.0%	**5.1%**	1.0%	6.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1
15.3%	1.0%	**11.2%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**72.4%**	0.0%	0.0%	1
0.0%	**8.2%**	1.0%	0.0%	0.0%	**21.4%**	7.1%	3.1%	**24.5%**	**8.2%**	0.0%	0.0%	0.0%	1
1.0%	**30.6%**	0.0%	0.0%	0.0%	**13.3%**	4.1%	**38.8%**	3.1%	3.1%	1.0%	0.0%	0.0%	1
0.0%	2.0%	0.0%	0.0%	**22.4%**	0.0%	2.0%	0.0%	**19.4%**	**19.4%**	0.0%	0.0%	1.0%	1
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.1%	0.0%	1.0%	0.0%	0.0%	1
0.0%	4.1%	0.0%	0.0%	8.2%	0.0%	2.0%	0.0%	**45.9%**	**29.6%**	0.0%	0.0%	0.0%	1
2.0%	**4.1%**	5.1%	1.0%	3.1%	15.3%	6.1%	0.0%	**3.1%**	3.1%	1.0%	0.0%	0.0%	1
1.0%	**7.1%**	0.0%	0.0%	**4.1%**	0.0%	**3.1%**	3.1%	**9.2%**	4.1%	1.0%	0.0%	0.0%	1
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.1%	0.0%	0.0%	3.1%	1.0%	0.0%	0.0%	1
84.8%	1.0%	10.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**4.0%**	0.0%	0.0%	1
0.0%	**88.9%**	0.0%	0.0%	0.0%	0.0%	1.0%	**7.1%**	1.0%	1.0%	0.0%	0.0%	0.0%	1
0.0%	**78.8%**	0.0%	0.0%	0.0%	0.0%	0.0%	**8.1%**	**5.1%**	6.1%	0.0%	0.0%	0.0%	1
0.0%	1.0%	0.0%	0.0%	3.0%	0.0%	**1.0%**	1.0%	**11.1%**	1.0%	0.0%	0.0%	0.0%	1
0.0%	0.0%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**86.9%**	1
0.0%	**8.1%**	0.0%	0.0%	0.0%	0.0%	0.0%	**77.8%**	0.0%	0.0%	0.0%	0.0%	**5.1%**	1
2.0%	**62.6%**	1.0%	0.0%	1.0%	0.0%	**6.1%**	**23.2%**	0.0%	1.0%	1.0%	0.0%	0.0%	1
0.0%	**8.1%**	**71.7%**	3.0%	0.0%	0.0%	10.1%	2.0%	0.0%	0.0%	1.0%	0.0%	0.0%	1
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.1%	0.0%	**1.0%**	0.0%	0.0%	1
6.1%	**13.1%**	**44.4%**	**13.1%**	1.0%	0.0%	0.0%	**21.2%**	0.0%	0.0%	1.0%	0.0%	0.0%	1
1.0%	**53.5%**	**2.0%**	1.0%	0.0%	0.0%	23.2%	**9.1%**	1.0%	0.0%	0.0%	0.0%	0.0%	1
0.0%	0.0%	**10.1%**	0.0%	0.0%	0.0%	0.0%	1.0%	0.0%	1.0%	**6.1%**	**26.3%**	**47.5%**	1
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1
0.0%	0.0%	0.0%	0.0%	0.0%	**100.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1
3.0%	**70.7%**	7.1%	1.0%	0.0%	0.0%	2.0%	**6.1%**	0.0%	0.0%	**9.1%**	0.0%	0.0%	1
0.0%	0.0%	1.0%	0.0%	**83.8%**	1.0%	0.0%	0.0%	5.1%	0.0%	0.0%	0.0%	0.0%	1
0.0%	**29.3%**	2.0%	3.0%	1.0%	**43.4%**	**9.1%**	1.0%	**3.0%**	4.0%	0.0%	0.0%	0.0%	1
0.0%	3.0%	0.0%	0.0%	**15.2%**	0.0%	2.0%	0.0%	**7.1%**	3.0%	0.0%	0.0%	0.0%	1
0.0%	7.1%	0.0%	0.0%	**32.3%**	**22.2%**	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	1.0%	1
0.0%	**29.3%**	0.0%	0.0%	3.0%	**20.2%**	4.0%	4.0%	**2.0%**	1.0%	0.0%	0.0%	0.0%	1
0.0%	**11.0%**	1.1%	1.1%	1.1%	0.0%	7.7%	1.1%	**4.4%**	2.2%	0.0%	0.0%	0.0%	1
0.0%	**4.4%**	1.1%	1.1%	0.0%	0.0%	1.1%	1.1%	**1.1%**	0.0%	1.1%	0.0%	0.0%	1
0.0%	**4.8%**	0.0%	0.0%	3.2%	0.0%	**7.9%**	0.0%	**11.1%**	4.8%	0.0%	0.0%	0.0%	1
0.0%	**0.0%**	0.0%	0.0%	9.1%	0.0%	**6.1%**	3.0%	**3.0%**	3.0%	0.0%	0.0%	0.0%	1
0.0%	**14.3%**	**0.0%**	**0.0%**	0.0%	0.0%	0.0%	**0.0%**	0.0%	**0.0%**	0.0%	0.0%	0.0%	1
0.0%	**0.0%**	**0.0%**	0.0%	**0.0%**	0.0%	**20.0%**	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	1
0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1
0.0%	0.0%	**0.0%**	**0.0%**	**0.0%**	0.0%	0.0%	0.0%	0.0%	50.0%	**0.0%**	0.0%	0.0%	1
#DIV/0!	**#DIV/0!**	#DIV/0!	**#DIV/0!**	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	**#DIV/0!**	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
#DIV/0!	**#DIV/0!**	**#DIV/0!**	#DIV/0!	**#DIV/0!**	#DIV/0!	**#DIV/0!**	#DIV/0!	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	#DIV/0!	#DIV/0!	#DIV/0!
#DIV/0!	**#DIV/0!**	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	**#DIV/0!**	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
#DIV/0!	**#DIV/0!**	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	**#DIV/0!**	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
#DIV/0!	**#DIV/0!**	**#DIV/0!**	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	**#DIV/0!**	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

0.0%	**13.1%**	0.0%	0.0%	2.0%	0.0%	**3.0%**	**12.1%**	0.0%	3.0%	0.0%	0.0%	0.0%	1
1.0%	**59.6%**	**2.0%**	2.0%	3.0%	0.0%	3.0%	**19.2%**	1.0%	1.0%	0.0%	0.0%	0.0%	1
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	1
1.0%	**69.7%**	2.0%	0.0%	0.0%	0.0%	**17.2%**	**2.0%**	0.0%	0.0%	1.0%	0.0%	0.0%	1
3.0%	**4.0%**	**2.0%**	1.0%	1.0%	0.0%	**16.2%**	**5.1%**	3.0%	0.0%	4.0%	0.0%	0.0%	1
50.5%	0.0%	**16.2%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**29.3%**	0.0%	0.0%	1
0.0%	**0.0%**	0.0%	0.0%	**21.2%**	0.0%	**3.0%**	0.0%	**28.3%**	2.0%	1.0%	0.0%	0.0%	1
0.0%	**5.1%**	2.0%	0.0%	7.1%	0.0%	**4.0%**	3.0%	1.0%	1.0%	0.0%	0.0%	0.0%	1
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1
0.0%	0.0%	0.0%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	1.0%	1.0%	2.0%	**87.9%**	1
0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	11.1%	1.0%	**2.0%**	1.0%	0.0%	0.0%	0.0%	1
14.1%	0.0%	**2.0%**	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**5.1%**	**72.7%**	0.0%	0.0%	1
1.0%	0.0%	**96.9%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.0%	0.0%	0.0%	1
4.1%	**2.0%**	1.0%	0.0%	1.0%	0.0%	0.0%	3.1%	**79.6%**	**2.0%**	0.0%	0.0%	0.0%	1
0.0%	0.0%	0.0%	0.0%	**6.1%**	0.0%	0.0%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	1
0.0%	**7.1%**	0.0%	0.0%	0.0%	**40.8%**	2.0%	2.0%	**7.1%**	1.0%	2.0%	0.0%	0.0%	1
0.0%	**21.4%**	0.0%	0.0%	5.1%	0.0%	**20.4%**	3.1%	3.1%	**5.1%**	**1.0%**	0.0%	0.0%	1
0.0%	**73.5%**	6.1%	0.0%	2.0%	0.0%	4.1%	6.1%	**3.1%**	0.0%	0.0%	0.0%	0.0%	1
0.0%	**8.2%**	0.0%	0.0%	0.0%	1.0%	0.0%	**89.8%**	0.0%	0.0%	0.0%	1.0%	0.0%	1
0.0%	**24.5%**	0.0%	0.0%	1.0%	0.0%	4.1%	**11.2%**	**7.1%**	2.0%	0.0%	0.0%	0.0%	1
31.6%	**8.2%**	**8.2%**	3.1%	1.0%	0.0%	**11.2%**	**4.1%**	1.0%	2.0%	**5.1%**	2.0%	1.0%	1
0.0%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	0.0%	0.0%	0.0%	**89.8%**	1
0.0%	0.0%	1.0%	0.0%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1
1.0%	**12.2%**	**4.1%**	2.0%	3.1%	0.0%	**34.7%**	**20.4%**	**4.1%**	7.1%	3.1%	0.0%	2.0%	1
3.1%	0.0%	**6.1%**	3.1%	0.0%	0.0%	1.0%	3.1%	1.0%	2.0%	3.1%	0.0%	**45.9%**	1
1.0%	2.0%	**4.1%**	0.0%	1.0%	0.0%	2.0%	**6.1%**	2.0%	0.0%	0.0%	2.0%	0.0%	1
5.1%	**14.3%**	3.1%	1.0%	0.0%	0.0%	6.1%	**8.2%**	**2.0%**	3.1%	0.0%	0.0%	0.0%	1
0.0%	2.0%	**0.0%**	0.0%	5.1%	**0.0%**	5.1%	0.0%	**5.1%**	4.1%	2.0%	0.0%	3.1%	1

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Organism	Name	Type	12	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	20a
Agrobacterium tum	AGR_C_1376	III							m	k	r	d	a	r	h	e	d	i	k	a	a	
Agrobacterium tum	AGR_C_3642	III	d	p	y	v	l	l	g	v	e	r	d	a	d	e	a	a	i	k	t	a
Agrobacterium tum	AGR_L_2405	III	k	a	f	d	t	l	g	l	s	s	s	a	k	q	e	e	i	k	r	r
Agrobacterium tum	AGR_pAT_76	III	k	a	f	d	t	l	g	l	s	p	d	a	t	s	s	e	i	r	s	r
Agrobacterium tum	DjlA	III	d	p	y	r	v	l	g	v	s	p	s	d	d	f	l	d	i	r	k	r
Agrobacterium tum	DnaJ-like	III	d	p	y	s	i	l	g	v	k	r	d	a	r	h	e	d	i	k	a	a
Agrobacterium tum	DnaJ-like	III	k	a	f	d	t	l	g	l	s	p	d	a	t	s	s	e	i	r	s	r
Agrobacterium tum	DnaJ-like	III	k	a	f	d	t	l	g	l	s	s	s	a	k	q	e	e	i	k	r	r
Anabaena variabil	DnaJ2	III	t	y	y	s	l	l	g	l	h	p	s	a	s	v	i	d	i	r	r	a
Anopheles gambiae	agCP10644	III	d	y	y	a	t	l	n	l	p	r	s	a	t	q	e	e	i	s	k	a
Anopheles gambiae	agCP11847	III	s	f	y	d	v	l	e	v	s	r	t	a	t	l	e	e	i	r	r	s
Anopheles gambiae	agCP12595	III	d	y	y	e	v	l	g	v	a	k	d	a	t	d	s	d	i	k	k	a
Anopheles gambiae	agCP13657	III	n	f	y	t	l	l	n	i	n	q	t	a	t	l	a	e	i	k	r	a
Anopheles gambiae	agCP13828	III	d	i	y	g	l	l	e	v	d	i	a	a	t	e	q	e	i	r	k	a
Anopheles gambiae	agCP1526	III	d	a	y	s	i	l	g	v	s	p	d	c	s	q	e	q	i	r	k	h
Anopheles gambiae	agCP1689	III	d	y	y	k	i	l	g	v	k	r	t	a	t	k	q	e	i	v	k	a
Anopheles gambiae	agCP2255	III	t	h	y	n	v	l	k	l	q	p	n	c	s	a	r	d	v	r	t	a
Anopheles gambiae	agCP2825	III	f	e	l	l	k	l	k	k	d	f	n	i	d	t	l	k	l	v	q	n
Anopheles gambiae	agCP3373	III	n	a	y	k	v	l	g	i	s	a	t	a	s	q	v	e	i	k	t	l
Anopheles gambiae	agCP3909	III	d	p	y	e	i	l	g	v	p	l	g	s	s	q	k	e	i	k	k	a
Anopheles gambiae	agCP4190	III	d	l	y	a	l	l	n	c	s	e	t	s	t	v	d	q	i	q	a	e
Anopheles gambiae	agCP4373	III	n	i	y	e	l	f	g	v	e	k	s	a	s	d	q	e	i	k	k	a
Anopheles gambiae	agCP4755	III	d	y	y	k	i	l	g	v	t	k	q	a	s	e	d	e	i	k	k	a
Anopheles gambiae	agCP6258	III	d	f	y	a	v	l	g	v	s	r	t	a	s	f	n	d	i	k	k	a
Anopheles gambiae	agCP6733	III	s	h	y	d	s	l	g	v	t	p	s	a	t	q	n	d	i	k	q	a
Anopheles gambiae	agCP6760	III	n	p	f	e	v	l	q	l	d	c	d	t	p	l	e	q	i	k	k	k
Anopheles gambiae	agCP7787	III	e	a	s	l	i	l	g	v	s	p	s	a	s	k	a	k	v	k	d	a
Anopheles gambiae	agCP8805	III	k	c	y	r	l	l	g	v	n	e	q	s	d	q	n	t	v	r	q	a
Anopheles gambiae	agCP8926	III	n	y	f	r	v	l	g	v	k	s	n	a	s	e	n	d	i	k	k	a
Anopheles gambiae	ebiP1755	III	d	p	y	s	i	l	g	v	h	k	r	a	s	m	q	d	i	r	r	a
Anopheles gambiae	ebiP4417	III	d	l	d	f	d	v	s	k	n	p	h	p	e	e	s	a	i	r	k	a
Anopheles gambiae	ebiP5528	III	a	k	w	t	k	c	e	m	h	q	l	v	s	a	a	d	v	k	k	i
Anopheles gambiae	ebiP5613	III														k	q	i	r	k	a	
Anopheles gambiae	ebiP9397	III	h	v	l	g	l	n	k	m	r	f	t	a	t	d	e	d	i	k	r	a
Arabidopsis thali	ARG1	III	d	p	y	e	v	l	c	v	s	k	d	a	n	d	q	e	i	k	s	a
Arabidopsis thali	At1g02650	III	d	y	y	s	l	m	g	i	e	r	g	c	s	r	s	e	l	n	r	a
Arabidopsis thali	At1g10350	III	d	y	y	n	v	l	k	v	n	r	n	a	n	e	d	d	l	k	k	s
Arabidopsis thali	At1g16680	III	y	e	a	l	g	l	p	l	f	k	k	i	d	a	a	l	l	k	k	d
Arabidopsis thali	At1g21080	III	e	f	y	d	v	l	g	v	s	p	t	a	t	e	a	e	i	k	k	a
Arabidopsis thali	At1g24120	III	d	p	y	e	v	l	g	v	l	r	n	s	t	d	q	e	i	k	s	a
Arabidopsis thali	At1g24120	III	y	e	a	l	g	l	p	l	f	k	k	i	d	a	a	l	l	k	k	d
Arabidopsis thali	At1g56300	III	s	y	y	t	i	l	g	i	r	k	d	a	s	v	s	d	i	r	t	a
Arabidopsis thali	At1g59725	III	d	y	y	n	v	l	n	v	n	p	s	a	t	e	d	d	l	k	k	s
Arabidopsis thali	At1g59725	III	s	y	y	t	i	l	g	i	r	k	d	a	s	v	s	d	i	r	t	a
Arabidopsis thali	At1g59980	III	n	p	y	e	v	l	g	i	p	s	n	s	t	d	q	e	i	k	s	a
Arabidopsis thali	At1g61770	III	d	c	y	a	l	l	g	v	a	q	d	a	n	a	s	d	i	k	r	s
Arabidopsis thali	At1g62970	III	d	y	y	n	v	l	n	v	n	p	s	a	t	e	d	d	l	k	k	s	q
Arabidopsis thali	At1g65280	III	s	p	y	d	v	l	g	v	n	h	n	m	a	a	d	n	m	k	k	r
Arabidopsis thali	At1g69070	III	g	l	g	i	q	v	g	g	g	i	s	p	l	p	n	e	v	h	a	a
Arabidopsis thali	At1g71000	III	t	y	y	e	i	l	g	v	a	v	d	s	s	a	e	q	i	r	r	a
Arabidopsis thali	At1g72070	III	s	h	y	t	v	l	g	l	t	p	l	a	s	q	t	e	v	k	r	a
Arabidopsis thali	At1g77930	III	s	p	y	d	t	l	e	l	d	r	n	a	e	e	e	q	i	k	v	a
Arabidopsis thali	At1g79030	III	y	e	a	l	g	v	p	r	h	k	k	i	d	a	a	v	l	k	k	e
Arabidopsis thali	At1g79940	III	d	p	f	s	i	l	g	l	e	p	g	v	t	d	s	e	i	k	k	a
Arabidopsis thali	At1g80920	III	d	p	y	k	t	l	k	i	r	p	d	s	s	e	y	e	v	k	k	a
Arabidopsis thali	At2g01710	III	i	l	q	i	e	d	l	t	e	s	s	t	d	n	d	l	i	k	k	q
Arabidopsis thali	At2g05230	III	d	y	y	a	v	l	g	l	k	p	s	a	g	k	r	e	v	k	k	q

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Arabidopsis thaliAt2g17880 III   s l y e i l e i p v   g   s   t   s   q   e   i   k   s   a
Arabidopsis thaliAt2g22360 III   d y y s v l g v s k   n   a   t   k   a   e   i   k   s   a
Arabidopsis thaliAt2g25560 III   d h y g v l g l n p   e   a   d   d   e   i   v   r   k   r
Arabidopsis thaliAt2g26890 III   e i s n i s k q i q   n   l   d   e   e   k   l   k   r   q
Arabidopsis thaliAt2g33735 III   d h y k v l e l n c   d   a   s   d   d   e   i   r   s   s
Arabidopsis thaliAt2g35540 III   e w y k v l k v e p   f   s   h   i   n   t   i   k   q   q
Arabidopsis thaliAt2g35720 III   e l y a l l n l s p   e   a   s   d   e   e   i   r   k   a
Arabidopsis thaliAt2g35795 III   e a a l i l g v r e   s   v   a   a   e   k   v   k   e   a
Arabidopsis thaliAt2g41000 III   d h y q v l g v t r   n   a   t   k   k   e   v   k   d   a
Arabidopsis thaliAt2g41520 III   d f f l i m g v k t   s   d   s   a   a   d   i   k   k   a
Arabidopsis thaliAt2g42080 III   r q a l g l s p s g   p   l   n   l   k   d   v   k   h   a
Arabidopsis thaliAt2g42750 III   d y y a v l g l l p   d   a   t   q   e   e   i   k   k   a
Arabidopsis thaliAt2g47440 III   d y y g l i g v r r   g   c   t   r   s   e   l   d   r   a
Arabidopsis thaliAt3g04980 III   d w y g v l q v q p   y   a   d   a   d   t   i   k   k   q
Arabidopsis thaliAt3g06340 III   d w y g i l q v e q   i   a   n   d   v   i   i   k   k   q
Arabidopsis thaliAt3g11450 III   a l l g l s n l r y   l   a   t   e   d   q   i   r   k   s
Arabidopsis thaliAt3g12170 III   n l y e v l g v e a   t   a   s   p   q   e   i   r   k   a
Arabidopsis thaliAt3g13310 III   s l y e l l k v n e   t   a   s   l   t   e   i   k   t   a
Arabidopsis thaliAt3g14200 III   n l y a v l g l k k   e   c   s   k   t   e   l   r   s   a
Arabidopsis thaliAt3g47940 III   d y y n i l k v n h   n   a   t   e   d   d   l   k   k   a
Arabidopsis thaliAt3g58020 III   r q t l g l s s s g   p   l   n   l   e   d   v   k   i   a
Arabidopsis thaliAt3g62190 III   k i l l g f p p n s   r   p   d   p   s   q   v   k   a   a
Arabidopsis thaliAt3g62570 III   d y y g l v g v r r   g   c   t   r   s   e   l   d   r   a
Arabidopsis thaliAt4g02100 III   d y y a l m g i r r   d   c   s   r   s   e   l   d   r   a
Arabidopsis thaliAt4g07990 III   v l g l s r s r a t   p   y   t   e   a   e   i   k   k   a
Arabidopsis thaliAt4g09350 III   s h y q f l g v s t   d   a   d   l   e   e   i   k   s   a
Arabidopsis thaliAt4g10130 III   t y y e i l s v k e   d   a   s   y   e   e   i   r   n   s
Arabidopsis thaliAT4g13830 III   s f y d l l g v t e   s   v   t   l   p   e   i   k   q   a
Arabidopsis thaliAt4g19580 III   d w y g i l g i d p   l   a   d   e   e   a   v   k   k   q
Arabidopsis thaliAt4g19590 III   d w y g i l g v d p   l   a   d   e   e   v   v   k   k   q
Arabidopsis thaliAT4g21180 III   e p f g i l g l e p   g   a   s   d   s   e   i   k   k   a
Arabidopsis thaliAt4g36040 III   s l y d v l e v p l   g   a   t   s   q   d   i   k   s   a
Arabidopsis thaliAt4g37480 III   n a y d i l n v s e   t   s   s   i   a   e   i   k   a   s
Arabidopsis thaliAt5g03160 III   d w y k i l g i s r   t   a   s   i   s   e   i   k   k   a
Arabidopsis thaliAt5g05750 III   d y y e i l g l k s   n   c   s   v   e   d   l   r   k   s
Arabidopsis thaliAt5g06110 III   a l l g l g n l r y   l   a   t   d   d   q   i   r   k   s
Arabidopsis thaliAt5g06410 III   f q i f g l e k k y   e   i   d   p   g   s   l   e   g   k
Arabidopsis thaliAt5g09540 III   w y a v l r i s r l   t   q   s   p   e   h   v   a   t   q
Arabidopsis thaliAt5g12430 III   d m y l v l g v v p   s   c   s   a   s   d   i   r   k   a
Arabidopsis thaliAt5g16650 III   d y y k i l e v d y   d   a   t   e   e   l   i   r   l   n
Arabidopsis thaliAt5g18140 III   n h y a v l g i a r   n   a   t   q   g   d   i   k   r   a
Arabidopsis thaliAt5g18750 III   d w y k i l q v e q   t   a   d   e   n   t   i   k   k   q
Arabidopsis thaliAt5g22080 III   n p f e h l n l s f   d   s   s   t   d   d   v   k   r   q
Arabidopsis thaliAt5g23240 III   d l y d l l g i d r   s   s   d   k   s   q   i   k   s   a
Arabidopsis thaliAt5g23590 III   l g l a s g e e a l   k   l   t   e   k   e   i   a   k   a
Arabidopsis thaliAt5g25530 III   d y y d i l k v n r   n   a   t   e   d   d   l   k   k   s
Arabidopsis thaliAt5g27240 III   n w y g i l q v m h   f   a   d   d   a   t   i   k   k   q
Arabidopsis thaliAT5g37380 III   d w y g i l n a s p   r   d   d   d   e   t   l   k   r   k
Arabidopsis thaliAt5g37440 III   d w y g v l g v d p   l   s   d   d   e   t   v   k   k   h
Arabidopsis thaliAt5g37760 III   l y p k l d g l k t   s   v   d   d   d   q   l   k   k   q
Arabidopsis thaliAt5g49060 III   d y y a i l g l e k   n   c   s   v   d   e   i   r   k   a
Arabidopsis thaliAt5g49580 III   y s a l g l a r y g   n   v   d   m   a   y   l   k   r   e
Arabidopsis thaliAt5g53150 III   d w y g v l g v d p   f   a   s   d   e   a   l   k   k   q
Arabidopsis thaliAt5g59610 III   s p y e i l g v s p   s   a   t   p   q   d   i   k   r   a
Arabidopsis thaliAt5g62780 III   d w y g i l g v d p   l   a   d   d   e   t   v   k   k   h
Arabidopsis thaliAt5g64360 III   d w y a v l r l g r   l   a   q   n   p   e   h   v   a   t   q
Arabidopsis thaliATJ6      III   s l y e v l g v e r   r   a   t   s   q   e   i   r   k   a
Arabidopsis thaliAuxilin-li III   c g w e a v s i t d   l   i   t   s   s   a   v   k   k   v
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Arabidopsis thaliF16P17.12 III   d w y a v l r l v r l t h n p e l v a t q
Arabidopsis thaliF18B13.2 III    d p f s i l g l e p g v t d s e i   k k a
Arabidopsis thaliF19K19.3 III    y e a l g l p l f k k i   d a a   l   l   k k d
Arabidopsis thaliF22K20.12 III   v y y d v l g v t p s a s e e e i r k a
Arabidopsis thaliF24J7.130 III   d w y r v l g v d p l a d d e a v k k r
Arabidopsis thaliJ8        III   d p y k t l k i r p d s s e y e v k k a
Arabidopsis thaliMQB2.10   III   d w y g i l g v d p l a d d e t v k k h
Arabidopsis thali Putative 2 III s y y t v l g i r k d a s v s d i r t a
Arabidopsis thaliYUP8H12R.3III   y e a l g v p r h k k i d a a v l k k e
Aspergillus fumig J domain cIII  f l y a v l d l q p g v p e s d i k l q
Azotobacter vinelHscB      III   f a l f d l e p d f r l d q d r l a v r
BK virus         Large T an III  m d l l g l e r a a w g n l p l m r k a
BK virus         Small T an III  m d l l g l e r a a w g n l p l m r k a
Bombyx mori      JDP       III   d y y a l l g c d e n s t v e q i t a e
Borrelia burgdorfBB0602    III   n p y s v l g l t y s a s d d e v k k a
Borrelia burgdorfDnaJ-2    III   d y y n i l g i q k n a s n e e i k k a
Bos taurus       Auxilin   III   t k w k p v g m a d l v t p e q v k k v
Bos taurus       DnaJ1     III   n p f h v l g v e a t a s d v e l k k a
Bos taurus       Jdp1      III   d y y t l l g c d e l s s v e q i l a e
Bos taurus       MRJ       III   d y y e v l g v q r h a s a e d i k k a
Bos taurus       CSP1      III   s l y h v l g l d k n a t s d d i k k s
Bos taurus       CSP2      III   s l y h v l g l d k n a t s d d i k k s
Bos taurus       PKR inhibi III  d y y k i l g v k r n a k k q e i i k a
Bovine polyomavir T antigen III  e l r g l l g t p d i g n a d t l k k a
Bradyrhizobium jaID370     III   k a l q v m g l n v d a t l g d i k a r
Brassica rapa    SP5       III   y e a l g f p r h k r i d d a v l k k e
Brucella melitensDJLA      III   d p y a i l g i d r g a s f e e a r k r
Brucella melitensDnaJ-like III   k a l a t l g l d a n s t g d k i k a r
Buchnera aphidico HscB     III   f a l f n l p k k y i i d k f l l s k n
Buchnera aphidico HscB homolIII  f t l f d l p r k f n i d k k l l s q n
Budgerigar fledgllarge T an III  r l t e l l c l p v t a t a a d i k t a
Budgerigar fledglSmall T an III  r l t e l l c l p v t a t a a d i k t a
Budgerigar fledglLarge T an III  r l t e l l g l p v t a t a a d i k t a
Caenorhabditis elC01G10.12 III   n y y e ii g v s a s a t r q e i r d a
Caenorhabditis elC04A2.7   III   d a y s v f g l r s d c s d d d i   k r n
Caenorhabditis elC25D7.10 III   n y y e ii g v s a s a t r q e i r d a
Caenorhabditis elDNJ-11    III   k v l g l s k l r w q a t s d e i r f c
Caenorhabditis elDNJ-15    III                                 m q f f v k
Caenorhabditis elDNJ-2     III   c y d v l e v n r e e f d k q k l a k a
Caenorhabditis elDNJ-21    III   e a a k i l g v a p s a k p a k i k e a
Caenorhabditis elDNJ-22    III   n p y k i l h l e k g c t d k e i q k a
Caenorhabditis elDNJ-24    III   y f p i y f f v l p a l e t l k k e c q
Caenorhabditis elDNJ-4     III   t h y e v l g v e s t a t l s e i k s a
Caenorhabditis elDNJ-8     III   k p s d i k k r k p k a n d v a d l t g
Caenorhabditis elRME-8     III   i l s v d l t n e e h r k p a f i r r q
Caenorhabditis elY39C12A.8 III   d f y k i l n v d k k a s p d e i r i a
Caenorhabditis elY63D3A.6a III   d p y q i l g l d q g a d e k a i k k a
Caenorhabditis elY63D3A.6b III   d p y q i l g l d q g a d e k a i k k a
Caenorhabditis elB0035.14 III    d y y e i l k i d k k a s d d d i r k e
Caenorhabditis elC55B6.2   III   d y y k i l g v k r n a s   k r e i t k a
Caenorhabditis elC56C10.11 III   d p y k v l g i s r r a s a   k e   i   k s a
Caenorhabditis elF11G11.7 III    d f y a i l n v p k d a t d d e i   i   k a
Caenorhabditis elK02G10.8 III    h l y n v l g i q k n a t d d e i k k a
Caenorhabditis elR74.4     III   d f y q l l g v e k m a s e a e i   k s a
Caenorhabditis elT03F6.2   III   c h y e v l e v e r d a d d d k i k k n
Caenorhabditis elT04A8.9   III   d h y k v l g l a q s a s q k d i   k s a
Caenorhabditis elT24H10.3 III    c l y e l l g v k k d c d e k a l   k k g
Caenorhabditis elY47H9C.5 III    d y y e l l g v e r d a d d r t i r k a
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Caenorhabditis elY54E10BL.4	III	d y y k i l g v r r n a n k r e i t k a
Campylobacter jej Cj1034c	III	n y f n t l e c t p q n d l s e i r q k
Campylobacter jej DjlA	III	e a f a i l e l p n n a d l n a v k k q
Caulobacter cresc CC0917	III	a a r a l l g v a a d a d e r e l r k a
Caulobacter cresc CC2164	III	e a r a i l g v g p e a s l a e v k a a
Caulobacter cresc DjlA	III	d p y a i l e v p p d a d d a t v r s a
Clostridium aceto DnaJ-like	III	n p y k v l g l n e n a s p d e i k k a
Clostridium perfr CPE0218	III	d y y e i l g v s e g a s k e e i r a a
Clostridium perfr CPE0246	III	d y f k e l n i q i d a s d n e v k k a
Coxiella burnetiiDjlA	III	d a y k v l g l t s a a t d s e i k k s
Cryptosporidium p DnaJ-like	III	n a y e v i g i p v d s d d s v i g k k
Danio rerio PRKRI	III	d y y k i l g v s r s a n k q e i i k a
Drosophila hetero TPR	III	d y y k i l g v s r r a t e d e v k k a
Drosophila melano Auxilin	III	a k w q r c e m s t m v t p t e v k k a
Drosophila melano Auxilin 2	III	a k w q r c e m s t m v t p t e v k k a
Drosophila melano CG10375	III	n p f e v l q i e p e v e l a d i k k r
Drosophila melano CG12020	III	t r f c f k e e g d r y p a t i p g d i
Drosophila melano CG13776	III	e c f r i l g v h e s a d q n t v r h a
Drosophila melano CG2790	III	c y y e e l e l q r n a n d g d i k s a
Drosophila melano CG2911	III	d f y e l l n v p s t a s f d e i k c s
Drosophila melano CG30156	III	n h y e v l r i s h h a t y s e v k r a
Drosophila melano CG7394	III	e a s l i l g v s p s a s k i k i k d a
Drosophila melano CG8014	III	e r q r f g k f s g d q f q t s s t e f
Drosophila melano CG8476	III	n h y q v l n v p v g s s d r e i k r a
Drosophila melano CG8531	III	n y y t f l n l p r d a t a e q i n t a
Drosophila melano CG9089	III	n s y k v l g v s a t a s q a e i t a a
Drosophila melano DnaJ-60	III	t h y e v l n i r n d c s t r e v r n a
Drosophila melano GH27269p	III	d a y s i l g v p p d s s q e q i r k h
Drosophila melano MTJ1 homol	III	a v l g l g k l r y e a s e d d v r r a
Drosophila melano CG11035	III	s h y d a l g i r r q c t q n e i k a a
Drosophila melano CG14650	III	d a y s i l g v p p d s s q e q i r k h
Drosophila melano CG17187	III	l y d l l g i s l e s d q n e i r k a
Drosophila melano CG3061	III	d y y e v l g v s k t a t d s e i k k a
Drosophila melano CG5001	III	d y y k i l g l p k t a t d d e i k k a
Drosophila melano CG6693	III	d v y k l m e l a r g a g e k e v k k a
Drosophila melano CG7130	III	d y y k i l g i e r n a s s e d v k k g
Drosophila melano CG7387	III	y y y k v l g v n r h a t i q q i r s a
Drosophila melano CG7556	III	n f y e f m g i n q t a t g a e v k r a
Drosophila melano CG7872	III	n c y d v l g v t r e s s k s e i g k a
Drosophila melano CG8286	III	d y y k i l g v k r s a s k q e i v k a
Drosophila melano CG8583	III	d p f e i l n v p p t s s q a e i k k a
Drosophila melano CG9828	III	n l y d v l k v a p d a t d e e i k k n
Drosophila melano CSP1	III	s l y e i l g l p k t a t g d d i k k t
Drosophila melano CSP2	III	s l y e i l g l p k t a t g d d i k k t
Drosophila melano CSP3/ Csp2	III	s l y e i l g l p k t a t g d d i k k t
Drosophila melano Csp32	III	s l y e i l g l p k t a t g d d i k k t
Drosophila melano dJDPa	III	d f y g l l h c d e n s s p e q i q a e
Drosophila melano dJDPb	III	d f y g l l h c d e n s s p e q i q a e
Drosophila melano GH03108	III	c y y e e l e l q r n a n d g d i k s a
Drosophila melano Tpr2	III	d y y k i l g i g r n a s d d e i k k a
Encephalitozoon c DnaJ-like	III	d y y g i l g v s r n a s q t e i k n a
Encephalitozoon c DnaJ-like	III	d p y n i l g v k r t s t d v e i t r a
Encephalitozoon c DnaJ-like	III	y k l l g f k e g e k p d e k e i k k a
Encephalitozoon c DnaJ-like	III	s i f n l l g l k k g a s k g e v r a r
Encephalitozoon c DnaJ-like	III	m s l y d v l k i p k d a t k e s v e k
Encephalitozoon c DnaJ-like	III	g y y k v l e l s p g a s v a e v r k a
Encephalitozoon c DnaJ-like	III	s p h e v l g l s p v s t r k e i r d r
Encephalitozoon cSec63-like	III	d p l e v l g i d q d t g e r e i k k r

Enterococcus faecEF0028		III						m	k	f	i	k	d	v	t	t	l	e	e	l	k	r	v			
Escherichia coli HscB		III	f	t	l	f	g	l	p	a	r	y	q	l	d	t	q	a	l	s	l	r				
Escherichia coli DjlA		III	d	a	c	n	v	l	g	v	k	p	t	d	d	a	t	t	i	k	r	a				
Escherichia coli YbeS		III	n	c	w	k	i	l	d	i	e	e	t	t	d	v	d	i	i	r	r	a				
Escherichia coli YbeV		III	t	c	w	q	i	l	e	i	e	s	t	t	q	i	d	ii	r	q	a					
Fusobacterium nuc TPR1		III	k	y	y	s	i	l	g	v	s	r	g	a	s	q	d	e	i	k	k	a				
Haemophilus influ HscB		III	f	q	i	f	d	l	p	v	d	f	q	l	d	e	k	v	l	n	a	r				
Haemophilus influ TransketolIII			k	s	g	s	h	d	s	h	g	a	p	l	g	d	e	e	i	d	l	t				
Haemophilus influ DjlA		III	d	a	y	k	v	l	g	v	t	e	s	d	e	q	s	t	v	k	r	a				
Haemophilus influBpl34		III	e	a	l	n	l	l	n	i	s	d	k	a	t	k	e	e	i	k	k	a				
Halobacterium sp. Ferredoxin		III	s	p	f	e	v	l	g	v	s	p	d	a	d	e	a	a	i	e	r	a				
Halobacterium sp. Vng1675h		III	s	d	y	r	v	l	d	l	e	p	g	a	d	e	e	a	v	t	a	a				
Hamster papovavir Middle T aIII			i	s	l	l	d	l	e	p	q	y	w	g	d	y	g	r	m	q	k	c				
Hamster papovavir Small T an		III	i	s	l	l	d	l	e	p	q	y	w	g	d	y	g	r	m	q	k	c				
Hamster polyomaviLarge T an		III	i	s	l	l	d	l	e	p	q	y	w	g	d	y	g	r	m	q	k	c				
Helicobacter pylo JHP1255		III	e	c	y	k	a	l	g	f	i	k	h	e	n	f	s	e	v	k	k	r				
Homo sapiens	adlican	III	e	v	f	l	k	t	k	d	d	a	i	n	g	d	k	k	a	k	k	g				
Homo sapiens	C21orf55	III	e	y	y	r	l	l	n	v	e	e	g	c	s	a	d	e	v	r	e	s				
Homo sapiens	cytokine i	III	n	p	f	h	v	l	g	v	e	a	t	a	s	d	v	e	l	k	k	a				
Homo sapiens	dJ1099D15.	III	w	l	y	w	v	l	g	v	q	r	e	a	s	d	g	e	v	r	r	g				
Homo sapiens	DKFZp434M1	III																								
Homo sapiens	DnaJA1-lik	III	f	c	y	a	l	g	v	k	l	n	a	a	q	k	y	y	k	k	k	v				
Homo sapiens	DnaJB12-li	III	d	y	y	e	i	l	e	v	r	r	g	a	s	d	e	d	l	k	k	a				
Homo sapiens	DnaJB9	III	s	y	y	d	i	l	g	v	p	k	s	a	s	e	r	q	i	k	k	a				
Homo sapiens	DnaJC6	III	t	k	w	k	p	v	g	m	a	d	l	v	t	p	e	q	v	k	k	v				
Homo sapiens	DnaJL1	III	n	f	y	q	f	l	g	v	q	q	d	a	s	s	a	d	i	r	k	a				
Homo sapiens	FLJ13236	III	l	a	y	q	v	l	g	l	s	e	g	a	t	n	e	e	i	h	r	s				
Homo sapiens	Gamma CSP	III																								
Homo sapiens	guanine nu	III	d	c	y	e	v	l	g	v	s	r	s	a	g	k	a	e	i	a	r	a				
Homo sapiens	Hsc3	III	d	y	y	e	v	l	g	l	q	r	y	a	s	p	e	d	i	k	k	a				
Homo sapiens	HsGAK	III	s	r	w	t	p	v	g	m	a	d	l	v	a	p	e	q	v	k	k	h				
Homo sapiens	Hspf2	III								m	g	p	g	e	g	q	a	k	g	d	k					
Homo sapiens	Jdp1	III	d	y	y	t	l	l	g	c	d	e	l	s	s	v	e	q	i	l	a	e				
Homo sapiens	KIAA0678	III	e	v	l	n	l	p	q	g	q	g	p	h	d	e	s	k	i	r	k	a				
Homo sapiens	KIAA0962	III	d	p	y	r	v	l	g	v	s	r	t	a	s	q	a	d	i	k	k	a				
Homo sapiens	KIAA1530	III	r	l	r	q	a	t	t	r	a	v	e	g	w	n	e	k	f	g	e	a				
Homo sapiens	LOC120526	III	d	w	y	s	i	l	g	a	d	p	s	a	n	i	s	d	l	k	q	k				
Homo sapiens	LOC127784	III	d	y	y	e	i	l	g	v	w	r	e	a	s	p	e	d	i	k	k	a				
Homo sapiens	LOC130410	III	l	n	d	r	a	l	w	v	k	q	s	t	t	k	e	e	l	k	k	a				
Homo sapiens	LOC131118	III	e	a	a	l	i	l	g	v	s	p	t	a	n	k	g	k	i	r	d	a				
Homo sapiens	LOC134218	III	c	h	y	e	a	l	g	v	r	r	d	a	s	e	e	e	l	k	k	a				
Homo sapiens	MCJ	III	e	a	g	l	i	l	g	v	s	p	s	a	g	k	a	k	i	r	t	a				
Homo sapiens	MDG1-like	III																								
Homo sapiens	MGC29463	III	n	y	y	e	i	l	g	v	s	r	d	a	s	d	e	e	l	k	k	a				
Homo sapiens	MIDA1-like	III	a	v	l	g	l	g	h	v	r	y	k	a	t	q	r	q	i	k	a	a				
Homo sapiens	Putative 2	III																								
Homo sapiens	Rap1	III	d	s	w	d	m	l	g	v	k	p	g	a	s	r	d	e	v	n	k	a				
Homo sapiens	Sacsin	III	e	v	t	s	v	v	e	q	a	w	k	l	p	e	s	e	r	k	k	i				
Homo sapiens	SB73	III	d	l	y	r	v	l	g	v	r	r	e	a	s	d	g	e	v	r	r	g				
Homo sapiens	Sec63	III	n	p	y	e	v	l	n	l	d	p	g	a	t	v	a	e	i	k	k	q				
Homo sapiens	TPR2	III	d	y	y	k	i	l	g	v	d	n	n	a	s	e	d	e	t	k	k	a				
Homo sapiens	TPR2-like	III	w	g	h	l	r	e	g	n	d	k	n	a	s	e	d	k	i	k	k	a				
Homo sapiens	WBSCR18	III	a	l	y	d	l	l	g	v	p	s	t	a	t	q	a	q	i	k	a	a				
Homo sapiens	Zrf1	III	a	v	l	g	l	g	h	v	r	y	k	a	t	q	r	q	i	k	a	a				
Homo sapiens	ZRF1-like	III	a	v	l	g	l	g	h	v	r	y	k	a	t	q	r	q	i	k	a	a				
Homo sapiens	CSP1	III	s	l	y	h	v	l	g	l	d	k	n	a	t	s	d	d	i	k	k	s				
Homo sapiens	CSP2	III	s	l	y	h	v	l	g	l	d	k	n	a	t	s	d	d	i	k	k	s				
Homo sapiens	CSP-beta	III	a	l	y	e	i	l	g	l	h	k	g	a	s	n	e	e	i	k	k	t				

Homo sapiens	DnaJB12	III	d y y e i l g v s r g a s d e d l k k a
Homo sapiens	DnaJC4 / M	III	t y y e l l g v h p g a s t e e v k r a
Homo sapiens	FLJ10634	III	d l y a l l g i e e k a a d k e v k k a
Homo sapiens	FLJ10737	III	d y y s l l n v r r e a s s e e l k a a
Homo sapiens	p58k / Dna	III	d y y k i l g v k r n a k k q e i i k a
Homo sapiens	Thioredoxi	III	d f y s l l g v s k t a s s r e i r q a
JC virus	Large T an	III	m d l l g l d r s a w g n i p v m r k a
JC virus	small t an	III	m d l l g l d r s a w g n i p v m r k a
Lactobacillus aci	DnaJ-like	III	d y y k v l g v d r d a s d q e i s s a
Legionella pneumo	DjlA	III	h a f a l l e v s p n a n k q e v r r a
Leishmania major	DnaJ3	III	d p h a i l g l p s s a s t a e i r k t
Leishmania major	L2027.03	III	e a l q v l e v s i d v d p k a l k k r
Leishmania major	L2027.07	III	a a l r t l g l a e e s t d a e v k r a
Leishmania major	L490.08	III	d p l v p p e v l l r d s a e n v q k s
Leishmania major	L490.11	III	e l l g l k g k e f s a t a k d i t k a
Leishmania major	LM12.127	III	r c y r t l g l d r g a a e a d i k r a
Leishmania major	Mdj6	III	n y y e v l g v t m h y k v a d i k k a
Leishmania major	protein ki	III	d y y k i l g l k k t a s a q e i r r a
Leishmania major	L4830.06	III	e l y q v l e l d a q c t t a e i s q q
Leishmania major	L796.7	III	d y y a i l d v l p r a s g e e i r r a
Lymphotropic poly	Large T an	III	m d l l q i t r a a w g n l s m m k k a
Macaca fascicular	Putative 1	III	e v t s v v e q a w k l p e s e r k k i
Macaca fascicular	hypothetic	III	n y y e i l g v s r d a s d e e l k k a
Manduca Sexta	JDP	III	d y y a l l g c d e n s t v e q i t a e
Marine archaeal g	DnaJ2	III	e a l t i l k i e q n s s q e e i k a s
Marine archaeal g	DnaJ	III	n y y l i l g l t n d s s q t e i k n q
Mesorhizobium lot	DjlA	III	d p y v v l g i e r g r p f e e v r k r
Mesorhizobium lot	mll0667	III	e a y k v l g l e a g a a a a a d v r k a
Mesorhizobium lot	mll3564	III	k a l e t l g l d t k a t g k d i k a r
Mesorhizobium lot	mll4676	III	d w h v v l n v v p t a s p d e i k s a
Mesorhizobium lot	mlr0945	III	d y y e l l e i s p n a n s e t i e r v
Methanosarcina ac	MA0088	III	d y y q l f d i p r g a n p e e i e n r
Methanosarcina ma	DnaJ	III	d y y q l f d i p r s a g l e e i e d k
Molluscum contagi	MC013L	III	d p h e v l g l p a g s s p d a v r a r
Monkey B-lymphotr	large T an	III	m d l l q i t r a a w g n l s m m k k a
Monkey B-lymphotr	Small T an	III	m d l l q i t r a a w g n l s m m k k a
Mouse plasmid L f	Large T an	III	l e l l k l p r q l w g d f g r m q q a
Mouse polyomaviru	Large T an	III	l e l l k l p r q l w g d f g r m q q a
Mus musculus	1700014P03	III	d y y a v l q v t r n s e d a q i k k a
Mus musculus	1810055D05	III	e a a l i l g v s p t a n k g k i r d a
Mus musculus	1810055D05	III	e a a l i l g v s p t a n k g k i r d a
Mus musculus	2700075B01	III	n y y d i l g v s h n a s d e e l k k a
Mus musculus	2810401H12	III	m s c w g v p s t a t q a q i k a a
Mus musculus	4930503B20	III	n y y k v l g v p r n a s s s d i k r a
Mus musculus	4930571C17	III	n f y s l l g v s k t a s s r e i r q a
Mus musculus	4933407H18	III	i p r d d k g q p l n p e d r a r e q r
Mus musculus	5730496F10	III	n y y e v l g v t k d a g d e d l k k a
Mus musculus	5730551F12	III	n p f h v l g v e a t a s d t e l k k a
Mus musculus	Abbp2	III	d f y k i l g v p r s a s i k d i k k a
Mus musculus	CSP-Beta	III	s l y e i l g l h k g a s c e e i k k t
Mus musculus	DnaJC3	III	d y y k i l g v k r n a k k q e i i k a
Mus musculus	DnaJC8	III	n p f e v l q i d p e v t d e e i k k r
Mus musculus	Fxr1h	III	e a a l i l g v s p t a n k g k i r d a
Mus musculus	GAK	III	s r w t p v s m a d l v t p e q v k k q
Mus musculus	Jdp1	III	d y y a l l g c d e l s s v e q i l a e
Mus musculus	LOC194335	III	y f y f v l p e t k n r t h a e i s q a
Mus musculus	LOC213472	III	s t d t e y t e v q m y v l v e k l k l
Mus musculus	LOC218853	III	l r i e t q k q t l n a r d e s i k k l

Mus musculus	LOC223891	III	l a h q v l g v p e g a t n e e i h r s
Mus musculus	LOC228540	III	d l y a l l g i e e k a a d k e v k k a
Mus musculus	LOC230935	III	d y y s l l n v r r e a s s e e l k a a
Mus musculus	LOC235394	III	m k c w a c r d m p h l r t
Mus musculus	MGC27620	III	e y y r l l n l d e g c s v d d v r e s
Mus musculus	MIDA1	III	a v l g l g h v r y t a t q r q i k a a
Mus musculus	mmDjC7	III	d w y s i l g a d p s a n m s d l k q k
Mus musculus	Rab-relate	III	d s w e m l g v r p g a s r e e v n k a
Mus musculus	Rab-relate	III	v s w e m l g v r p g a s r e e v n k v
Mus musculus	Sacsin	III	e v t s v v e q a w k l p e s e r k k i
Mus musculus	Sb73	III	d l y q v l g v r r e a s d g e v r r g
Mus musculus	Sec63	III	n p y e v l n l d p g a t v a e i k k q
Mus musculus	WBSCR18	III	a l y e l l g v p s t a t q a q i k a a
Mus musculus	xylanase B	III	s l y a v l e l k k g a e t a d i k k a
Mus musculus	Zrf1	III	a v l g l g h v r y t a t q r q i k a a
Mus musculus	Zrf2	III	a v l g l g h v r y t a t q r q i k a a
Mus musculus	Csp	III	s l y h v l g l d k n a t s d d i k k s
Mus musculus	DnaJB12	III	d y y e i l g v s r s a s d e d l k k a
Mus musculus	DnaJB9	III	s y y d i l g v p k s a s e r q i k k a
Mus musculus	DnaJC7	III	d y y k i l g v d k n a s e d e i k k a
Mus musculus	hDj9 / Erj	III	d f y k i l g v p r s a s i k d i k k a
Mus musculus	MCG18 / Hs	III	n y y e l l g v h p g a s a e e i k r a
Mus musculus	mDj5	III	d y y e v l g v q r y a s p e d i k r a
Mus musculus	mDj6	III	n y y e v l g v q s s a s p e d i k k a
Mus musculus	MTJ1	III	n f y e f l g v q q d a s s a d i r k a
Mus musculus	p58k / Dna	III	d y y k i l g v k r n t k k q e i i k a
Mycoplasma genita	MG002	III	n l y d l l e l p t t a s i k e i k i a
Mycoplasma genita	MG200	III	d y y e v l g i t p d a d q s e i k k a
Mycoplasma genita	Orf311	III	n l y d l l e l p t t a s i k e i k i a
Mycoplasma pneumo	MG200	III	d y y e v l g l s r d a d d n d i k k a
Neisseria meningi	NMA1461	III	d l y a v l g v s p q a g a d e i k r a
Neisseria meningi	HscB	III	f t l f r i e p a f d i d t e n l e q t
Neurospora crassa	Zuotin	III	k v l g l s k y r w r a t e e q i k r a
Neurospora crassa	9G6.140	III	d p w q v l g i a k t a d k t e i r t a
Nostoc sp. PCC 71	all2707	III	d y y r i l g l p l a a s d e q l r q a
Nostoc sp. PCC 71	all2916	III	d h h a i l c v a v d a d a k e i r k r
Nostoc sp. PCC 71	all3048	III	r y y r v l e l e v g a t l e e v n q a
Nostoc sp. PCC 71	all4355	III	d c y r l l g l r s g a s f a d i k a s
Nostoc sp. PCC 71	all4413	III	h a y k v l g l p q d a a f a d i k q t
Nostoc sp. PCC 71	all4643	III	d y y a i l g v s k t a t p e e i k q a
Nostoc sp. PCC 71	alr0246	III	h a y e i l g l k p g a s q v e v k q a
Nostoc sp. PCC 71	alr2979	III	d p y a v l g i p v t a d e k k i l t r
Nostoc sp. PCC 71	alr2991	III	d y y e i l g v t k d a t n e d i k k n
Nostoc sp. PCC 71	alr2993	III	t y y s l l g l h p s a s v i d i r r a
Nostoc sp. PCC 71	alr4553	III	n h y e i l k v s p k a s q a e i k q a
Oryza sativa	ARG1	III	d p y e v l s v p r d s s d q e i k s a
Oryza sativa	B1045D11.2	III	d f y g v l q v d v m a d e a t i k k q
Oryza sativa	OJ1014_G12	III	d y y q i l g l e k d c t v e d v r k a
Oryza sativa	OSJNBa0003	III	s s g n l t n n i e n i d e e k l k r q
Oryza sativa	OSJNBa0027	III	s s g n l t n n i e n i d e e k l k r q
Oryza sativa	OSJNBa0056	III	d w h t l l g v r r g d g l d a a k k q
Oryza sativa	OSJNBa0090	III	s y y a v l g v h p g a s a a e i r a a
Oryza sativa	OSJNBa0090	III	d w y s i l s v e s s a d d e t l k k q
Oryza sativa	OSJNBa0093	III	d w y r i l q v l p r d d a a k i d a q
Oryza sativa	OSJNBb0031	III	l g l p q p r s d l v t h h d a v k k q
Oryza sativa	OSJNBb0048	III	s a y e v l g v g e t s s s a e i k a s
Oryza sativa	P0025D05	III	d y y r t l g i e r g a s k a e v k a a
Oryza sativa	P0402A09.1	III	t l y d l l g i s s e g t l d e v r a a

Oryza sativa	P0435H01.2	III	d y y a v l g v m p d a t p q q i k k a
Oryza sativa	P0516D04.3	III	s p y d v v g i n w k m s s d n i k k r
Oryza sativa	P0592G05.1	III	d l y g i l d i s a s d d d e k i k k q
Oryza sativa	P0648C09.2	III	l y h r i l n i p r e t s p q e i r a a
Oryza sativa subs	DnaJ	III	a y y d t l g v s v d a s p a e i k k a
Pasteurella multo	DjlA	III	d a y k v l g v s a t d d q q t v k r a
Phaseolus vulgari	DnaJ	III	s l y d i l g i p a g a s s q e i k a a
Picea glauca	EMB1	III	t f y s i l g v n k d s s s a e i r s a
Plasmodium falcip	RESA precu	III	l y y d i l g v g v n a d m n e i t e r
Plasmodium falcip	RESA2	III	r f y d i l g v d i n a d m n n i d k s
Plasmodium falcip	RESA-like	III	l y y d i l g v g v n a d m n e i t e r
Plasmodium falcip	RESA	III	t y y d i l n i n a n s k l e e i k e k
Plasmodium falcip	RESA-like	III	t y y d l l n v e p d a s f d e i k h s
Plasmodium falcip	RESA-like	III	t y y d i l n v y p t s e l s e i k s n
Polyomavirus cerc	Large T an	III	m d l l q i t r a a w g n l s m m k k a
Polyomavirus cerc	Small T an	III	m d l l q i t r a a w g n l s m m k k a
Polyomavirus muri	Large T an	III	m h l l k l p m e q y g n f p l m r k a
Polyomavirus sp	Large T an	III	l e l l k l p r q l w g d f g r m q q a
Pseudomonas aerug	HscB	III	f a l f d l q p g f r i d l e a l g n r
Pseudomonas aerug	HscB-2	III	f a q f d l q p a f l v d l d e l g q r
Pseudomonas aerug	PA0598	III	e a l l l l g v e a g s e p a l i k r a
Pseudomonas aerug	DjlA	III	e a l l l l g v e a g s e p a l i k r a
Pseudomonas denit	ORF2	III	k a f e t l g l g a s a t t a d i k a a
Pseudomonas syrin	HopPmaI	III	l y e w l g l s d m t a s p a a v k k a
Ralstonia solanac	HscB	III	f s l f g l p e h f e v d d g a l n a a
Rattus norvegicus dopamine r		III	n p f h v l g v e a t a s d i e l k k a
Rattus norvegicus	GAK	III	s r w t p v s m a d l v t p e q v k k q
Rattus norvegicus	Jdp1	III	d y y t l l g c d e l s s v e q i l a e
Rattus norvegicus	MIDA1	III	a v l g l g h v r y k a t q r q i k a a
Rattus norvegicus	CSP	III	s l y h v l g l d k n a t s d d i k k s
Rattus norvegicus	DnaJ-like	III	n y y k v l g v p q d a s s s d i k k a
Rattus norvegicus	p58k	III	d y y k i l g v k r n a k k q e i i k a
Rhesus polyomavir	Large T an	III	m d l l g l e r s a w g n i p l m r k a
Rickettsia conori	HscB	III	f q l l g l p q e y n i n l k i l e k q
Saccharomyces cer	Jac1p	III	k t f p k k l p i w t i d q s r l r k e
Saccharomyces cer	YGL128c	III	l p t p l d v h t i y d d l p q i k r k
Saccharomyces cer	YJL162c	III	t y y s i l g l t s n a t s s e v h k s
Saccharomyces cer	YJR097w	III	t h y e i l r i p s d a t q d e i k k a
Saccharomyces cer	YPR061C	III	g i p k a g s g n p k l d k k s l k k k
Saccharomyces cer	Jem1	III	d y y k i l g v s p s a s s k e i r k a
Saccharomyces cer	Sec63	III	d p y e i l g i s t s a s d r d i k s a
Saccharomyces cer	YJL073w	III	d y y k i l g v s p s a s s k e i r k a
Saccharomyces cer	YNL227c	III	c y y e l l g v e t h a s d l e l k k a
Saccharomyces cer	Zuotin	III	a a m g l s k l r f r a t e s q i i k a
Salmonella enteri	DjlA	III	d a c n v l g v k t t d d a t t i k r a
Salmonella typhim	YbeS	III	t c w q v l g i e a t t d t d a i r q a
Salmonella typhim	YbeV	III	i c w e i l g i e p t t d l e c i r q a
Schizosaccharomyc	C4G9.19	III	t p y e i l e l p r t c t a n d i k r k
Schizosaccharomyc	cwf23	III	d y y e l l g i n e d a q d q e i h r a
Schizosaccharomyc	Putative 1	III	d y y a i l k l q k n a t f q q i r k q
Schizosaccharomyc	SPAC2E1P5.	III	t f y e l l e v p t k a s i k e i n r a
Schizosaccharomyc	SPAC926.05	III	y s v l n l k d g k t y t d d e i k e a
Schizosaccharomyc	SPBC1734.0	III	n a y d v l d i l p g m s v d d i r n l
Schizosaccharomyc	SPBC1734.1	III	k l y e v l n v d v t a s q a e l k k a
Schizosaccharomyc	SPBC543.02	III	d h y k i l g v s k e a t d i e i k k a
Schizosaccharomyc	DnaJ	III	d y y e l l g i n e d a q d q e i h r a
Schizosaccharomyc	DnaJ	III	d y y t i l g a e s t s s y v e i r q q

Schizosaccharomyc DnaJ	III	t f y e l l e v p t k a s i k e i n r a
Schizosaccharomyc DnaJ 1	III	d p y s v l g v e k d a s d e l i r r a
Schizosaccharomyc SPAC6B12.0	III	d c y e i l q v n h d s d l q e i k a n
Schizosaccharomyc SPBC1773.0	III	d y y a i l k l q k n a t f q q i r k q
Schizosaccharomyc SPBC36B7.0	III	d p y e i l g i a k g t s v d d v r r h
SchizosaccharomycSPCC4G3.14	III	d p y k t l g v s k s a s a s e i k s a
SchizosaccharomycSPCC63.03	III	e l y l a l g l p k d a t s d q i k e s
SchizosaccharomycSPCC63.13	III	d y y a i l n i t p k a s a e e i k y a
SchizosaccharomycZuotin	III	a v l g l s k y r y k a d t e q i k k a
Simian virus 40 Large T an	III	m d l l g l e r s a w g n i p l m r k a
Simian virus 40 Small T an	III	m d l l g l e r s a w g n i p l m r k a
Sinorhizobium melSMc00003	III	d p y a i l g v r r t a g q e e i k a a
Sinorhizobium melSMc00699	III	k a f e t l g l a a s a t t a d i k a a
Sinorhizobium melSMc01853	III	d p y q v l g v s p k d d f s a i r k r
Sinorhizobium melSMc04233	III	d p y a l l g i e r d a d e r a v r t a
Spodoptera exiguabJDP	III	d y y t v l g l k p t a t r e q i r k k
Synechococcus sp DnaJ	III	d y y a l l g i p q s a d q a a i k a a
Synechocystis sp. DnaJ-like	III	s y y g v l e l h p a a s p v a i r r a
Synechocystis sp. sll1011	III	h y y e i l g l e v g a s l e e e i n e a
Synechocystis sp. sll1384	III	d h h a i l g c p l d a t p e e e i r k s
Takifugu rubripesUnknown	III	d a l q i l s l e v e a s l q d i t r s
Thermotoga maritiDnaJ-like	III	n p y e v l g v p p g a s k e e i e k a
Torpedo californiCCCS1	III	s l y i v l g l d k n a s p e d i k k s
Treponema pallidu TP0843	III	d y y r v l g v s h r a s t p e i k c a
Trypanosoma bruce CHR1.177	III	y e i l g l e q s g g a t d e q i r t a
Trypanosoma cruziPutative	III	v h f r v l g l p r g c d e a a l k k a
Trypanosoma cruziPutative 2	III	y y h r l g f c e e v h d l q r i k e h
Trypanosoma cruziTCJ1	III	a l y d v l g v p r t a s d v e i r r a
Vibrio cholerae HscB	III	f e l f g l p i q f e l d g s l l s s q
Vibrio cholerae VCA0788	III	q a l r l f e l t e e a s a v e i r k t
Vibrio cholerae VC0447	III	d a y e v l g v s e s a s a q e v k r a
Volvox carteri f. GlsA	III	s l l g l a n e r w t a s e a q i r a a
Xanthomonas axono XAC0471	III	n p y e a l g l e p d a t t a e i d l a
Xanthomonas campe XCC0454	III	n p y e a l g l e a d a t k a e i d l a
Xenopus laevis CSP	III	s l y h v l g l d k n a t t d d i k k c
Xestia c-nigrum g ORF23	III	e d l q f i q h s v d d n q t y t k p q
Xylella fastidiosXF0207	III	d p y r v m g l g a g a t n a e i e l a
Yersinia pestis DjlA	III	d a c k v l g v n s s d d s v a i k r a
Yersinia pestis HscB	III	f t l f g l p a r y l i d g n q l t t r

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21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47
w  r  t  k  a  k  t  v  h  p  d  a  n  r  d  d  p  d  a  s
y  r  k  v  a  k  a  a  h  p  d  s  g  g  d  g
y  k  e  l  v  k  k  h  h  p  d  a  n  g  g  d  r  g  s  e
y  k  e  r  l  k  m  h  h  p  d  a  n  d  g  d  r  n  s  e
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w  r  t  k  a  k  t  v  h  p  d  a  n  r  d  d  p  d  a  s
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y  k  k  l  a  l  q  l  h  p  d  k  n  h  a  p  g  a  v
f  r  t  l  s  v  v  l  h  p  d  k  s  d  a  e  d  a  n
y  r  k  k  a  l  q  c  h  p  d  k  n  p  d  n  p  k  a  a  q  l  f  q  e  l  s
y  k  k  i  a  v  l  v  h  p  d  k  n  k  q  p  g  a  e
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y  r  h  i  q  s  m  i  h  p  d  k  f  a  q  k  s  e  h  e  k  a  i  a  l
c  r  n  l  s  k  e  t  h  p  d  k  v  k  d  k  s  r  l  r  a  a  e
y  r  t  l  s  v  i  l  h  p  d  k  e  t  g  d  e
f  k  i  l  a  l  q  y  h  p  d  k  n  d  g  d  k  e  s  e
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y  r  k  r  a  l  v  h  h  p  d  r  h  a  n  a  t  d  e  e  k  k  e  q  e
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y  y  k  l  s  l  q  h  h  p  d  k  n  p  d  p  e  s  r
y  s  r  l  a  v  l  l  n  p  s  r  n  r  y  p  y  s  e
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y  h  k  l  a  k  i  w  h  p  d  r  w  t  k  d  p  f  r  s  g  e  a  k
f  k  r  l  a  l  k  y  h  p  d  v  h  k  g  q  d
y  r  r  l  a  k  f  y  h  p  d  v  y  d  g  k  g  t  l  e  e  g  e  t  a  e
y  r  k  k  a  m  l  v  h  p  d  k  n  m  g  s  p  l  a  s
y  r  r  l  s  i  q  y  h  p  d  k  n  p  d  p  e  a  n  k
f  r  q  l  a  k  k  y  h  p  d  v  c  r  g  s  n  c  g
y  r  r  l  a  l  l  l  h  p  d  k  n  r  f  p  f  a  d
y  k  k  m  a  v  l  l  h  p  d  k  n  k  c  i  g  a  d
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y r r l a r i c h p d v a r n s r d n s s a
y r k l a r n y h p d v n k d p g a e
y r k l a v m l h p d r n k s v g a e
y r k l a m r y h p d k n p e g r
f i r l a l k w h p d k f k e e d s a t
y r k l a l v l h p d k n p y v g c e
y r q w a q v y h p d k i q s p q m k e v a t
h r k v m v a n h p d a g g s h
f r r l a i k y h p d k h a q s p e h v r h n a t
y r k a a l r h h p d k a a q i l v r s e s e g p w l
y r t c a l k w h p d r h q g s t k e a a e
y y n c m k s c h p d l s g n d p e t t
h l l l c l r y k p d r a s s f i e r c e f t d q n d
y r k l a l l l l h p d k n k f a g a e
y k r l a l l l l h p d k n k l p g a e
y r e a a l k h h p d k l a k a k e a k k d e i e
y h k l a l r l h p d k n k d d e d a k
y r s l a k v y h p d a s e s d g
y k k l a l r w h p d r c s s m e f v e e a k
y k r l a m i w h p d k n p s t r r d e a e
y r a c a l k w h p d r h h t s t k n e a e
y r k k v w e s h p d l f p d d q k l v a e
n l l l c l r h k p d k a l a f m e r c d f f d q s e
y l l l n l k h k p e r s m s f i d r f e l t d d e e
f r e k a l e f h p d q n q d n k i v a e
y r r l s k e y h p d t t s l p l k t a s
y r s a i l h s h p d k l n n t s r s s s d d
y k q l a r k y h p d v s p p d r v e e y t
y k k l a l l l l h p d k n r f n g a e
y k r l a l l l l h p d k n n c e g a e
y r r l s i q y h p d k n p d p g r n a s w s s
y r r l a r i c h p d v a g t d r t s s s s a
f r r l a k e t h p d l i e s k k d p s n s
y k k l a l q w h p d k n v g n r e e a e
y r k l s l k v h p d k n k a p g s e
y r d a a l k h h p d k l a t l l l l e e t e e a k q
y k d w q k k k l h p d l v h n k s k k e r d y a a e q
y r r l t l l l l k l n i n r l p f a d
y r k a a l k h h p d k a g q s l t r n e t k d e r l
y r k l a l k w h p d k h k g d s a a t
y r l l a r k f h p d v n k d s k a g
y k k l a l h l h p d k n k l p g a e
y r k i s l m v h p d k c k h p q a q
y r a l q k r c h p d i a g d p g h
y k l k a l d l h p d k r p d d p d a h
y r k l a m k w h p d k n p n t k t e a e
v r k l a l l l l h p d k n q f p g a e
y r k l a l m l h p d k n k s i g a e
y k q l a l l l l h p d k n k c y g a e
y k k l a l l l l h p d k y n l n g a e
y r k l s l k v h p d k n k a p g s e
y r k k a m l v h p d k n m g n e r a a
y r k l v l m l h p d k n k c k g a e
y r k l a l k y h p d v n k e a n a q
y k t l a l l l l h p d k n r f n g a e e p a s s s s s
y r r l a l l l l n p s v n r l p f a d r a l k i v s d
y h k l a l k l h p d k n q d d k e a k
y r k a t l y v h p d k v q q k g a t l e q k y i a e

y s r l a v l l n p s r n r y p y s e
y r r l s i q y h p d k n p d p a f d p d s f f f y a
y r k k a m l v h p d k n m g s p l a s
y y i k a r q v h p d k n q g d p l a
y r k l a l l l h p d k n r f t g a e
f r q l a k k y h p d v c r g s n c g
y k t l a l l l h p d k n r f n g a e e n c v d
y r k l a m k w h p d r y a r n p g v a g e a k
y r k k a m l v h p d k n m g s p l a s
y r k k s l l i h p d k t k n p a a p
y r e l v r r v h p d r f a g a p e r e q r l a l
y l k k c k e f h p d k g g d e
y l k k c k e f h p d k g g d e
y k i l a l q h h p d k n d g e k e a e
y k s l v i k y h p d k f a n d p v r q k d a n
y k k l a i k y h p d k n k g n k i a e
y r k a v l v v h p d k a t g q p y e q y a k
y r q l a v m v h p d k n h h p r a e
f k v r a l e c h p d k h p e n s k a v
y r k l a l k w h p d k n p e n k e e a e
y r k l a l k y h p d k n p d n p e a a
y r k l a l k y h p d k n p d n p e a a
y r k l a l q w h p d n f q n e e e k k k a e
f l k a c k v h h p d k e v p e y g t s q w e q w w
y r a m v k r h h p d a n g g d r s t e
y r k k a m l v h p d k n m g c p l a s
y r s l v k e h h p d r l v a e g l p
y k e l v k l h h p d a n g g d r g s e
f y k l q l k f h p d l f i h h s e s
f y k l q l k f h p d l f i n d s e s
y r r t a l k y h p d k g g d e e k m k e l n t l m
y r r t a l k y h p d k g g d e e k m k e l n t l m
y r r t a l k y h p d k g g d e e k m k e l n t l m
f l k k t k q l h p d q s r k s s k s d s r v g w a t
y k r l a a l v s p d k c t i d a a d
f l k k t k q l h p d q s r k s s k s d s r v g w a t
y r q k v l k h h p d k k k h r g i v m e k e
f h q l q s k l h p d k f v m a t d e e k k l s e
y r a l a r k h h p d r v k n k e e k l l a e
h k k v m i v n h p d r g g s p y l a a k i n e a
y r a q c l k w h p d k n l d n k e e a e
y r k l a l k w h p d k h t d d k s k e e a e
f y a q s k k v h p d n s s e e s a t
d p t i a s d w h p d d p n t k k k d g d n s k q i s
y y k l a a k y h p d k n p e g r
f r k r i r e v h p d k c k h p s a t
w r d m s k i h h p d r g g d a
w r d m s k i h h p d r g g d a
y r k l a l k l h p d k c r a p h a t
y r k l a q k w h p d n f s d e e e k k k a e
y k s l a r e w h p d k r k d e a a s
y r k r c l m f h p d r f v d n d e k k d a e
y r k l a l r y h p d k n l d g d p e k t
y r k l a l k y h p d r n p n d a h a q
y r k l a l k w h p d k n p d r i e e c t
y y k l s k q h h p d t n p t n k e e a a
y y r q s m r w h p d k s n l v e e d m q t y t
f k k l a i k k h p d r n t d d p n a h

y r k m a q k w h p d n f q d e k e k k k a e
y l i l v k l y h p d f h q g k s a i e k a y a r
y r n l a k k y h p d i l n a n n v s e e e l k i g v
y r e a a k r a h p d r p t g d a
y n r l i q m a h p d k g g t e g l a a
w k a a l s s a h p d r a r a r g l p
y r e l a k k y h p d q y g n n p l k t l a e
f r k l s k l y h p d r y s s k d l p p e i i k e f e
y f n m t k k y p p e k f p
y r r l m s q h h p d k l m a k g l p p e m m k m a t
y r k l s l l i h p d k t s h e k a r
y r k l a q q w h p d n f q s e a d k k e a e
y r k k a m v h h p d r h t s s s a e v r k d e e
y r r a c l a v h p d k h n g t e n e e i a k
y r r a c l a v h p d k h n g t e n e e i a k
y r t l s i l v h p d k n p d n q e r a q
i f i a a d k p h h p d f e r r n q h d l v y
y l d l v k r v h p d s g t e e a s a
y r k m a l r w h p d k n p d r l a e a k
y k q l i l q c h p d k l r q l d d p n p g s e a q n
y h k l a l r l h p d k n k s p g a e
h k k i m l l n h p d r g g s p y l a a k i n e a
s v h k i t p r h p d p v k r i l c l t e v
f i e l s k k y h p d a n s q t r d s
y r k q s r m f h p d k h l d p d s k k m a e
y r k l s k e y h p d k v k d e g l r a q a h
f v q l s k l y h p d v k s n a a c p e r t
y k k i a v l v h p d k n k q a g a e
y r r m v l l h h p d k r k a k g e e v i q d d
y y k l s m l y h p d r n q g s e n a a
y k k i a v l v h p d k n k q a g a e
y r k k a l e c h p d k n p d n p k a v
y k k l a l q l h p d k n k a p g a v
y r k l a l r y h p d k n k a a n a e
y h k l s l l v h p d r v p e e q k a e s t
y r r m a l r y h p d k n d h p q a e
f y a l a k r y h p d s t h s e q k l
f r t l s i v l h p d k n p a e d a n
y r q l a r r y h p d l h r g a e a k a a a e
y r k a a q k w h p d n f r d e e k k v a e
y y r l s k v l h p d k e t g d e
y r k l a k e f h p d k n p d a g
y r k l a l k y h p d k n p d n v d a a
y r k l a l k y h p d k n p d n v d a a
y r k l a l k y h p d k n p d n v d a a
y r k l a l k y h p d k n p d n v d a a
y k v l a l q y h p d k n s g d k e a e
y k v l a l q y h p d k n s g d k e a e
y r k m a l r w h p d k n p d r l a e a k
y r k k a l v h h p d r h a n s s a e e r k e e e
f n a l i m k f h p d r t g m h e s s
y r r l q r i y h p d s r t g d r
y r k t v v e n k k k k k t k q q e k e w e
y l r k v l q i h p d r s k g d g
s y r s l v r l h c q s r g e m s p
y a k q q a k y h l d s p y
y k s l i l k v h p d v q k v h s s q a s
l r m l l m k y n l s k a p p e l r s e y e

y k k l a l k y h p d m g g t d k e m a q i n n e y e
f q d l q r q y h p d k f a s g s q a e q l a a v
y r k l m s e h h p d k l v a k g l p p e m m e m a k
y l a l l p s f h p e t d p
y l a r l p l c h p e t d p
y r k l a k e h h p d r f v n s s d s e k k y h e
y l k l q k a l h p d n f v s s n a l d q r v a m
r k a l g w e y a p f e i p a e y y a e w s a k e k g
y r r l m n e h h p d k l v a k g l p p e m m e m a k
y k k m a i k f h p d r n p a g a
y r r r v v e t h p d q g g s r
y r e k a q e l h p d r g g d t
y k k k c l q l h p d k g g n e
y k k k c l q l h p d k g g n e
y k k k c l q l h p d k g g n e
y l e l a k t y h p d l c d l k e k k a l y a
r r k l k l w k h s e k e p e t n v a e g r
f h k l a k q y h p d s g s n t a d s
y r q l a v m v h p d k n h h p r a e
y h k v s l q v h l d r v g e g d k e d a t
l k y h p d k g g d e
y r k l a l k y h s r k n l n e g
y h k l a l k f h p d k n h a p g t t
f h k l a m k y h p d k n k s p d a e
y r k a v l v v h p d k a t g q p y e q y a k
y r k l s l t l h p d k n k d e n a e
y q e l v k v w h p d h n l d q t e e a q
a l r y h p d k n p g n a q a a
y r q l a r r y h p d r y r p q p g d e g p g r t p q
y h k v a l k w h p d k n p e n k e e a e
y r r a v l a v h p d k a a g q p y e q h a k
g s p a p p q l h p d r d p g n p s l h
f k v r a l e c h p d k h p e n p k a v
y f r l a q k y h p d k n p e g r
y k k l a r e w h p d k n k d p g a e
y k k l a l g y h f l r h n k k v d f q d t n a r s l
y q k l i l m y h p d k q s t d v p a g t v e e c v
h q k l a l k w h p d e n p e n k k q r
y r k l a l k y h p d k n p n g
h r r i m l l n h p d k g g s p y i a a k i n e
y r k l a l k w h p d k n l d n a a e a a
h r r v m i l n h p d k g g s p y v a a k i n e
m k y h p d k n k s p d a e
y r k l a l k f h p d k n c a p g a t
h k a m v l k h h p d k r k a a g e p i k e g d n
m l y h p d k h r d p e l k s q a e
y r k l a v l l h p d k c v a p g s e
i r r l y l k w h p d k n p e n h d i a n
y h k v s l q v h p d r v g e g d k e d a t
y r l l s l k y h p d k g g d e
y h k w a l m h h p d w h s g g s a e v q k e e
y w k q a l k y h p h r h d g a s a g v q k e e
y y r q c f l y h p d r n s g s a e a a
h k a m v l k h h p d k r k a a g e p i k e g d n
h k a m v l k h h p d k r k a a g e p i k e g d n
y r k l a l k y h p d k n p d n p e a a
y r k l a l k y h p d k n p d n p e a a
y r k l a l k h h p d k n p d d p a a t

y r r l a l k f h p d k n h a p g a t
f f s k s k e l h p d r d p g n p s l h
y r q k a l s c h p d k n p d n p r a a
y r r l c m l y h p d k h r d p e l k s q a e
y r k l a l q w h p d n f q n e e e k k k a e
f k k l a l k l h p d k n p n n p n a h
y l k k c k e l h p d k g g d e d k m k r m n
y l k k c k e l h p d k g g d e d k m k r m n
i r n l a k k f h q d l e s l t r g q e
y r r l l s r n h p d k l i a q g l p e e m i k l a n
y r a l s k r y h p d h n k t e g a r
y r e l v k k n h p d a g g e e
f q a f a i q h h p d t n l v s a a a p s s s d e a s
f q r l a v c a h p d k
f r e a v r i h h p d v h p e g e a e n k k
y r r k a l l f h p d r n p n g a
y r a k a l l n h p d r v g k d p v a q e q a r
y r k l a k s s h p d q l r s k d m t d r e r e k q e
y r r l a l r y h p d r n a g a t v
f k r l a l q f h p d k t g g g a a t e v t s t v d a
y k n v s k l y h p d k g g d s
i r r l y l k w h p d k n p e n h d i a n
y r k l a l k f h p d k n c a p g a t
y k v l a l q y h p d k n d g d k e a e
y r k m a l e l h p d k n k e n y e d
y r k l a k q y h p d r n k d s s e
y r k l v s d n h p d r l i a r g l p q e f i k i a t
h r r l m q r l h p d v g g
y k e l v k r h h p d a n g g d r g s e
y r a a v k n y h p d r v s g l g t k l q e l a e
f r y f a m r y h p d n q d t g d e
y h y f a k k y h p d r a k s p d a h
y h y f a k k y h p d r a r s p d a h
y k d l c l r y h p d r n p g t g
y k n v s k l y h p d k g g d s a k m q r l n
y k n v s k l y h p d k g g d s
y k q q s l l l h p d k g g s h
y k q q s l l l h p d k g g s h
y r k l a l k n h p l k s s e p g a p
h r r i m l l n h p d k g g s p
h r r i m l l n h p d k g k q l l l l y
y k k l a l k f h p d k n c a p g a t
y y r q s f l y h p d r n p g s a e a a
f h q l a l q v h p d k n p g d k e a a e
f k k l a l k l h p d k n p n n p n a h
q q l q r q q a h p d w q d
y r k l a l k f h p d k n h a p g a t
y r q l a v m v h p d k n h h p r a e
y r k l a l q l h p d r n p d d p q a q
y r k l a l r h h p d k n p d d p s a a
y r k l a l q w h p d n f q n e e e k k k a e
f r q l s i l v h p d k n q d d a d r a k
h r r i m l l n h p d k g p l v e e g
y r r a v l v v h p d k a t g q p y e q y a k
f k i r a l e c h p d k h p e n s k a v
f a k r n k a q p p e v k a d s a m t e e k a n s q
h r k l a l r h h p d k n p d d p s a a
l e m l q s k g l p s k s l e d d n e r t r r m a e a

y r d l v k v w h p d h n r h q t e e a q
y r q k a l s c h p d k n p d n p r a a
y r r l c m l y h p d k h r d p e l k s q a e
l k r r i e n r h p d k n p e n k e e a e
f h k l a r q y h p d s g s s d a d s
h k a m v l k h h p d k r k a a g e p i k e g d n
y q k l i l l y h p d k q s a d v p a g t m e e c m
y r k l a v l l h p d k c v a p g s e
y r k l a v l l h p d k c v a p g s e
i r r l y l k w h p d k n p e n h d i a n
y h k v s l q v h p d r v e e d q k e d a t
y r l l s l k y h p d k g g d e
y y r q s f l y h p d r n p g s a e a a
y r k l a l q y h p d k n p d n p l a a
h k a m v l k h h p d k r k a a g e p i k e g d n
h k a m v l k h h p d k r k a a g e p i k e g d n
y r k l a l k y h p d k n p d n p e a a
y r k l a l k f h p d k n h a p g a t
f h k l a m k y h p d k n k s p d a e
y r k r a l m h h p d r h s g a s a e v q k e e e
y r k l a l q l h p d r n p d d p q a q
f f t k s k e l h p d r d p g n p a l h
y r k v a l k w h p d k n p e n k e e a e
y r k l a l r w h p d k n p d n k e e a e
y r k l s l t l h p d k n k d e n a e
y r k l a l q w h p d n f q n e e e k k k a e
y k r l a k r y h p d v n k l g s
f r k l a k k y h p d r n n a p d a a
y k r l a k r y h p d v n k l g s
f r k l a k k y h p d r n k a p d a a
y r k l a m k y h p d r n p g n p k a e
y r a l a a r f h p d k f a s a s a f e q k q a v
h r k k v l k h h p d k k a a a g r t e d d
y r k l v l k c h p d k v q d p t l k a e k q
y s d r i v q l p r r e y s q a a
y l k i a r h l h p d s s t i v t e t e k k l a s e
y k d l v f v w h p d r l p k d n v r l q q k a q
y r r l a q q y h p d i n p t d k k a q
y k t l v k k w h p d l f v n q p q m q k q a q
f r k l a r k y h p d v n p g n k q a e
y r k l v k i w h p d r f v d n e q k q q a e
y h v l a k l l h p d r y t n d n s l e k e l a t a
y r r l a r q y h p d l n p g n k d a e
y r e l s k r y h p d t t e l p a a l a
y r r l v k l f h p d s n q d t a d k
y r k l a l k f h p d k n a s n p e a s
f r k l a f s l h p d k n g f a g a e
y r k l s l k v h p d k n k a p g a e
y r k l a i k y h p d k n p e g r
y r k l a i k y h p d k n p e g r
l k l m r l l t h p d k n r s a a a d
y h r l a m k w h p d k i t s g r v d a e e a k
y r k l v l q l h p d k n k s v g a e
y r s i v r q v e p v r d d l p g a e
y r k l c l l v h p d k n t s a a a d
f h r l a k e t h p d v a a a a g s
f y r l a p l h h p d r h a a s d a a a r a a a g
y r r m a r k y h p d v s p p d a a a e n t

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y y n c m k a c h p d l s g n d p d v t
y w k l s l l v h p d k c p h p s a q
y r k l a l q t h p d k n k f s g a e
y k s l v k k w h p d k h p p s s k p e a e
y y l k a k q v h p d k n p g n p d a a
y r r l m n e n h p d k l v a k g l p k e m l e m a k
y r r l a r v c h p d v a a i d r k n s s a
y r k l a m k w h p d k w s t d p s s s e t a k
y f k l a e n y y p y q r s g s t v f
y f k l a k e h y p i n g s t i d d l
y f k l a e n y y p y q r s g s t v f

y y e v a s k y h p e k n i g n d k a f
y r k l a l q y h p d k n i n d p e a n
y y n l a l k y n p e s n l g n a e a l
y k n v s k l y h p d k g g d s a k m q r l n
y k n v s k l y h p d k g g d s a k m q r l n
f l r a c k i v h p d k g g s d e l s q e l i
y k q q s l l l h p d k g g s h
y r e l v r t v h p d r f a d a s e r e q r l a q
y r e l v r s v h p d r f a d a p e r e q r l a l
y r k l i s q h h p d k l a g a g a s v e r v r a a t
y r k l i s q h h p d k l a g a g a s v e r v r a a t
y k d l v k k h h p d a n g g d r g s e
y y n a s m k h h p d k n p g d a g a t
y r t v q s r a h p d r h a h a s d a e r r v a m
y r q l a v m v h p d k n h h p r a e
y r r a v l v v h p d k a t g q p y e q s a k
f k v r a l e c h p d k h p e n s k a v
h k t m v l k h h p d k r k a a g e p i k e g d n
y r k l a l k y h p d k n p d n p e g e
f h q l a l q v h p d k n p g d r e a a e
y r k l a l q w h p d n f q s e e e k k k a e
y l k k c k e f h p d k g g d e
y f a m q v k y h p d k a k t l q e k e q n l
y r q l q a q h h p d m a q q g s
y r t l a l k y h p d k h p d n p s i i
y l k l a r l l h p d k t k s d k s e
y r n r l l n t h p d k l s k s i h d t v s n
y h r y v k l y h p d h s d n i q i f s s e k v t n s
y l n l t k k y h p d k i k a n h n
y r k l s v k f h p d k l a k g l t p d e k s v m e
y l n l t k k y h p d k i k a n h n d k q e s i h
y r k k a l q y h p d k n p d n v e e a t
h r k q v v k y h p d k q s a a g g s l d q d
y r k l m s e h h p d k l v a k g l p p e m m e m a k
y l a l l p s f h p e t d p
y l a l l p s f h p e s d p
y i e l v k k h h p d k m k n a s q l a p t e s p p e
w r k t s l k y h p d k n p n d p k a a
y l f l a l q y h p d r n p g d e e r a v
y r k k s i l y h p d k n p k s k
y r k a l l l l f h p d k c k e k p s v v
y r k k s l m i h p d k n r d n p k a a
y r k l a l k y h p d k n p n a g
y r k l a l v y h p d k n a g n l e a e
w r k t s l k y h p d k n p n d p k a a
y l k l v l r y h p d r n p g r e a e v l
```

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y r k k s i l y h p d k n p k s k e l y t l l g l i v
y r k k a l q h h p d r i h d e e k k v e a r
y r k l a l q y h p d r n p g i e d y n
y l f l a l q y h p d r n p g d e e r a v
y k r l s i k f h p d k v r n m v n t t r e e v e
y y k l a k q y h p d a n p d k a a q
y y r l s r l f h p d r h t a d q k a a a e
y k k a a l e t h p d r v s p s a r a r a t
h l k k v l k h h p d k k a a s g n i n d d
y l k k c k e f h p d k g g d e
y l k k c k e f h p d k g g d e
w r s v a r a v h p d h n q d d p t a n
y k e l v k k h h p d a n g g d r g s e
y r v l v s e n h p d m l v a r g v p e e f h a i a n
y r r a v k t a h p d r g g d a
f l r l t r i s h p d k a p l t s
f r k l a r q c h p d l n p g d r q a e
y r e l s k r y h p d t t l l t p d i a t
y r d l a f v w h p d r l p r d n p r l l a k a a
y l k i a f q l h p d t s k a t n e e e q a l a a k
y r e l a k t w h p d h n p s k d a e
y r e l v k k y h p d r y k d h p l k d l a e
y r k l a l k y h p d k n p d n p e a s
f r k k a k a l h p d l v s h t a e l e c e a v a r e
y r r r c l e t h p d k q k d r s d
y h q k a l a l h p d r n p g g t
y r v l a k h y h p d n p s a p p n a k
y y k l a v v y h p d k n p d g v
f r a l q k r f h p d n f a t a s e r d r l m a v
w r k l a l r w h p d r e n g n a
y r k l m n e h h p d k l m a k g l p p e m m n v a k
y r k t c l e n h p d k a l i n v t d e a e r e r i v
y r r l m s r y h p d k v a n a d p e a r r q a e
y r r l m s r y h p d k v a n a s p e d r r q a e
y r k l a l k y h p d k n p d n p e a s
l r r l l l k y h p d k n p v y s k v s
y r r l m s r y h p d k l a q a s p q l r e q a e
y r k l m g e h h p d k l v a k g l p p e m m e m a k
y q e l q r q f h p d r f a t q p e r e r l a s m
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48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74
														a	r	f	a	e	i	g	q	a	y	d	l	l
														e	q	f	a	r	l	q	t	a	y	e	l	l
														e	r	f	r	a	v	v	q	a	y	q	l	l
														d	a	l	r	a	s	i	e	a	y	r	i	l
														e	l	h	a	a	a	n	e	r	m	a	a	l
														a	r	f	a	e	i	g	q	a	y	d	l	l
														d	a	l	r	a	s	i	e	a	y	r	i	l
														e	r	f	r	a	v	v	q	a	y	q	l	l
														r	q	f	q	q	i	n	e	a	y	a	t	l
														l	m	f	n	r	t	k	k	a	y	e	v	l
														d	q	f	i	r	i	d	e	a	w	k	t	l
														e	a	f	k	a	i	g	n	a	v	a	i	l
														i	r	f	r	n	l	v	s	v	y	e	v	l
k	a	l	e	i										l	m	d	v	s	a	r	a	a	y	d	r	l
														e	a	f	k	v	l	q	r	s	f	e	l	i
														k	k	f	i	d	v	a	a	a	k	e	v	l
														k	s	f	v	e	l	l	e	a	y	k	v	l
														e	w	s	s	l	v	n	k	a	y	k	t	l
														e	r	f	m	e	i	q	q	a	c	e	a	l
														k	a	f	m	k	l	t	k	a	y	q	a	l
														a	k	f	q	q	l	k	e	a	k	e	i	l
														e	k	f	k	v	l	s	k	l	y	n	i	l
														r	k	f	k	e	l	g	e	a	y	t	i	l
a	a	m	e											k	k	f	s	q	i	t	e	a	y	e	a	l
														e	k	f	r	d	i	t	a	a	y	e	v	l
														q	a	f	e	i	i	s	k	a	y	k	t	l
														k	d	f	m	d	n	t	k					
														e	r	f	q	e	v	d	s	a	f	r	i	l
														l	k	l	h	q	v	k	q	a	y	e	v	l
														t	r	f	v	e	i	k	q	s	y	e	l	l
														e	i	f	e	r	v	n	r	a	y	e	f	l
														m	i	f	m	e	l	n	n	a	w	t	e	f
														q	l	f	q	e	l	s	k	a	l	e	i	l
														d	y	f	h	c	i	t	m	a	y	e	t	l
														e	l	f	k	e	v	a	f	s	y	s	i	l
														d	r	f	d	i	i	d	e	q	e	l	v	s
														a	k	f	k	q	i	s	e	a	y	d	v	l
														e	s	f	k	k	l	q	s	a	y	e	v	l
														h	n	f	q	v	l	g	e	a	y	q	v	l
														d	m	f	k	e	v	t	f	s	y	n	i	l
														d	m	f	k	e	v	t	f	s	y	n	i	l
														r	r	f	q	q	i	q	e	a	y	s	v	l
														a	k	f	k	q	i	s	e	a	y	d	v	l
														a	k	f	k	q	i	s	e	a	y	d	v	l
														e	m	f	k	e	v	t	f	a	y	e	v	l
														k	l	f	v	k	i	a	t	a	y	e	i	l
														q	a	f	r	l	i	s	d	a	w	y	v	l
														k	a	f	k	e	l	q	d	p	e	k	r	k
														e	k	f	k	l	i	a	r	m	k	d	k	f
														r	r	f	q	q	i	q	e	a	y	s	v	l
														k	d	f	k	e	i	k	s	a	y	e	c	l
														a	r	f	i	k	i	q	a	a	y	e	l	l
														e	s	f	k	k	l	q	s	a	y	e	v	l
														y	f	v	e	f	i	s	k	a	y	q	a	l
														v	q	f	q	t	i	n	e	a	y	d	i	v
														q	a	f	r	f	v	l	d	a	w	e	v	l
														g	a	f	h	l	i	s	e	a	w	s	f	l

k k f i d i a a a k e v l
e q f e k i q i a y d n l
e k f q k i n e a y e k v
a l f r d v l a a y r l l
q l n a a r d r l i k p r
t e f i e v a e a k a a s
e k m r e i n e a y d f l
e k l a k i i e a y e a l
k e y r v i r d a y e t l
q k t q q i k k a y e q i
e a f e i l n k a y e e l
k k f i d i a s a k e v l
l k f k e v g e a y a i l
l i f m e l n n a w t d f
l i f m e l n n a w t d f
m a f d i v s r s w k i l
r q s i g l c q a f t g f
e r f q q v d e a f r v l
e r f q l i q q a y e v l
s d f n a i n a a w n
q a f r r i s e a a d c l
k d f l d k a k
t l l e r d p q t y s v c
e v f m k i c e a y q t l
i m f n r t k r a y e v l
q r f i e i q q a y s v l
a r f v q i s e a y k t l
e a f k v l q r a f e l i
d y f t c i t k a y e i l
k k f r e i n q a y e i l
e a f k v l q r a f e l i
e r f h e l s k a l e i l
e a f k a l g n a a g v l
d k f k e v a e a y e v l
e k f k v l s k l y q v l
e q f r e v v a a f e v l
k h f q e l s n a y n i l
i q f r n l v s i y e v l
t q f k l v a t a y e i l
k k f i d i a a a k e v l
k s f m m l s k a y q a l
d k f k e i s f a y e v l
d k f k e v n r a h s i l
d k f k e v n r a h s i l
d k f k e v n r a h s i l
d k f k e v n r a h s i l
a k f q q l k e a k e t l
a k f q q l k e a k e t l
e r f q l i q q a y e v l
l k f k e v g e a y a i l
a v s g m i q n a y a t l
e m y e e v r r a y e e i
e t f k k v n k a f g v l
d g y m r l v n a y e r y
d k f a e i n k a y t i l
m k n k l k n a a s d e e
k e a v e i m d a y t s i
e k q k t v n k a y g l v

a l f d k l k n t h k n k
q q s a t i n q a w q t l
q k a q e i q q a y e l i
q g f k q l r q a y e e a
q g f k a l r q a y e e a
n k m k e i n d a y e n l
q k s t e v n d a l k t l
a a a e k s w e e k f a a y a k a y p e l
e k t q q i q a a y d l i
e v m k a i n a a f e f l
e r f q l v r a a y d a i
e a f a r v n e a y e r l
e l m q q l n t l w t k l
e l m q q l n t l w t k l
e l m q q l n t l w t k l
k r f a i i q e a y s h i
r v f e s r r r i n m a n
a t f i r i e k a y r k v
e a f k v l r a a w d i v
r c f q i l e k v y s i l
v m f m r i a k a y a a l
d k f r q i s p a c q v l
g a f k a i g t a y a v l
a k f r e i a e a y e t l
m i f m e l n d a w s e f
t q f r q l v a i y e v l
r h f l e i q a a y e v l
e i f k e i n a a h a i l
s a e e a f l l v a t a y e t l
r k f k e v a e a y e v l
m i f m e l n d a w s e f
s r f v e l s e a y r v l
e t f q k l q k a k e i l
d m f e k v n k a y e f l
d k f i q i s k a y e i l
a e r k r e e e k q k h l d k i y q e r
q k f i e i d q a w k i l
e n s n k s g f s y f d i
e k f k q i s q v y k v i
a k d l l e g q a k k
e q f k l i q a a y d v l
a k d l l e t t t k h
a k f r e i a e a y e t l
d a f k a i g n a f a v l
d y f t c i t k a y e m l
r l f n l v h q a y e v l
d a f k a v v n a r t a l
e v f k h l q n e i n r l
r r f q i l g k v y s v l
v m f m r i a k a y a a l
g k f k e i g e a f t i f
e k i k e v a s w p e l v
e r f t r i s q a y v v l
d y f t c i t k a y e m l
d y f t c i t k a y e m l
d k f k e i n n a h a i l
d k f k e i n n a h a i l
e k f k e i n n a h a i l

e a f k a i g t a y a v l
s r f v e l s e a y r v l
e l f h q l s q a l e v l
r l f n l v h q a y e v l
k k f i d i a a a k e v l
g d f l k i n r a y e v l
f l y k k m e q g v k v a
f l y k k m e q g v k v a
d k f p a k v t e g f f e
d k t h q i m k a y e l i
e l y v q v r r a y k a l
a t m a r v t v a y e r l
s s t r s q a h a a e r m r l g t e a y q l l
n p s p s a n e a f l r l
r h m q r i i e a y k i l
e a f k a l q g d y e e a
q q m s a i n e a y d t l
k m f r d v n e a k e v l
e q f q r i e e a h r v l
d k h r v a t k r d e h a
a k m q r l n e l f q r v
e v f k h l q n e i n r l
d a f k a i g n a f a v l
a k f q q l k e a k e t l
t k f k k i t e a y n f l
e k m a k i n k a y e i l
t r v a a i n a a y e m i
t s f l a a r i n e a k d
d r f r d v l q a y r v l
h e t k r l n a a y q a a
s r f s e i l e a h n v l
e k f i k i k e a y e i l
e k f i k i k e a y e t l
v d f k a i t r a y r q l
e l f q r v q v t l m e i
a k m q r l n e l f q r v
a l m q e l n s l w g t f
a l m q e l n s l w g t f
e i f k q i a e a y d v l
y i a a k i n e a k d l l
w t v n g i a n s w c y e
e a f k a i g n a f a v l
e r f t r v s e a y l v l
e k f k q v a e a y h i l
g d f l k i n r a y e v l
p e f l k d v e a a t g v
d a f k k i g n a y a v l
e a f k i l r a a w d i v
e k f q d l g a a y e v l
e k f k e i n n a h t i l
k k f i d i a a a k e v l
k a f e a v d k a y k l l
l k p i p i c r s c s s i
m i f m e l n d a w s e f
e t f q k l q k a k e i l

e k f k e i n n a h t i l
e s q v s h l e v i l d q k e k e n i h l r e c i k

r h f l e i q a a y e v l
e l f h q l s q a l e v l
r l f n l v h q a y e v l
r k f k q v a e a y e v l
a t f i k i e e a y r n v
d y f t c i t k a y e m l
q k f i e i d q a w k i l
d a f k a v v n a r t a l
d a f k a l
e v f k h l q n e i n r l
r r f q i l g r v y a v l
v m f m r i a k a y a a l
e r f t r v s e a y l v l
e i f k e i n t a h a i l
d y f t c i t k a y e m l
d y f t c i t k a y e m l
d k f k e i n n a h a i l
e a f k a i g t a y a v l
a k f r e i a e a y e t l
k k f k e v g e a f t i l
e k f q d l g a a y e v l
s r f v e l n e a y r v l
r k f k e v a e a y e v l
k k f k q v s e a y e v l
t q f r q l v a i y e v l
k k f i d i a a a k e v l
q t f v e i n n a y s i l
k i f a e i n e a n d v l
q t f v e i n n a y s i l
q i f a e i n e a n d v l
e k f k e i q r a y d t l
m m s s t i n d a y r t l
n f f k c i q k a t e v l
d e f q k v q q a y e l l
i a s r k q l i e e a y v
l l s k l v n p a y e t l
d k l k a i n e a r d k l
d k f i a l t e a y r f l
e k m r l f n e a y t v l
a s f k e v n e a y e v l
t k i k r i n a a y n r v
t f t c l v n p a y e q l
e k f k i i g e a y e m l
r q f q q i n e a y a t l
e q i i r i n a a y e i l
e l f k e v a y s y s i l
a a f k l v a e a q s t l
d a f k a v s k a f q c l
e k f v a v q k a y e r l
e k f v a v q k a y e r l
g a f k l v t e a w e a i
s r f q q v h e a y q v l
g a f k m v q e a w t v l
a a l r l v n d a y a v l
g a f k l v q t a w d v l
s r f l q i l a a y e i l
g r f r r v y d a y t v l
r r f i e v q e a y e t l

n f c m f i n e v y t v l
e a f v k l n n a f k d l
s a f k l i q d a w d v l
a r f k a i t e a y e a l
q k f q e l g e a y q v l
e k t q q i q s a y d l i
d e f m k i h a a y s t l
l r f q q i q e a y s v l
h n f r k v n e a y q v l
k k f k e i n e a y q v l
h n f r k v n e a y q v l

k k f e l i n s a y q i l
e k f q k i n e a y q v l
t k f r d i n e a y q i l
e l f q r v q v t l m e i
e l f q r v q v t l m e i
s l y r r l e e s l p c l
a l m q e l n s l w g t f
a k a a e l n d a y q t l
e r a a q l n e a y q t l
e k t r e l q a a y a l v
e k t r e l q a a y a l v
e r f r a v i q a y q l l
a r f q d i s n a f s i l
q w a t r a n e a y q t l
e a f k v l r a a w d i v
m i f m e l n d a w s e f
e t f q k l q k a k e i l
d y f t c i t k a y e m l
d k f k e i n n g h a t l
e k f k q v a e a y q i l
k k f i d i a a a k e v l
e k m k k m n t l y k k m
i t a a e l n n a y s t l
e q s s t l n q a y h t l
h k f h l l s t a t n i l
e l f k a v v h a h s i l
v t i n k i q d a y k i l
d s k s p l l l t s s e k l h r f k v i s q a y d i l
d k q e s i h e t m s q i
e t y v q i t k a y e s l
e t m s q i n e a y e t l
q k f a v i r a a y e v l
g f f k i i q k a f e t l
q k a q e i q k a y e l i
q g f k q l r e a y e n a
q g f k r l r q a y e e a
i n k h n e e y f r l l l a a n a l l
e k f h m l q l a y n a l
k r f q r l q l a h e v l
e l y t l l g l i v n i l
y t i d q v k e a y q v l
d a f d i l k k a e s d l
d k f k e i s r a y e i l
a r f k e v g e a y t i l
e k f h m l q l a y n a l
p q f q l i q k a h e v l

n i l

r n t e t r k r y d y f l
i e f d k v a i a y g v l
e i f s q i n a a y n i l
k r f q r l q l a h e v l
k h y i e i t n a y r a l
d k f v e i k q a y e v l
e k f q i i q h a y e v l
e q f q l v n e a y y v l
s f f k c i q k a y e i l
e k m k k m n t l y k k m
e k m k k m n t l y k k m
e r f a e a g r a y e l l
d r f r a v i q a y q l l
d r m a v l n a a y e a i
e k f g k l q a a y d l l
e a f v f l r q a y s v i
e r f k q i s e a y e i l
v k f q r l n e a y a v l
r k l k e i n q a r d r l
l f s k f v n p a y e v l
a t f m k i h r a y e v l
e k m k q i n e a y a v l
e k f k e i n n a h a i l
r a l r r i l t a y e v l
a a f k k v q r a l d i l
e q f k r v n e a y e a l
v a f q s i k e a y e h v
e v f k e i s f a n s i l
q q a a q i n d a y q t l
e r f r i l c e a w n v l
e k s q q i q h a y e l i
e h f k t i q d a y d i l
k k a s q i n a a y d r i
k k a s q i n a a y d r i
e k f k e i n n a h g i l
a v l i n k c r n m l k k
q k v r q i n a a y d r i
q k a q e i q a a y d l i
q q a a t i n d a y q t l

75 76 77 78 79 80 81 82 83 84 85 86 87 88 89
k d s k k r d l y d q a r q a
k d p v r r r v f d d t g y d
k q s g f c
k l n g f c
n a a y a a i e k e r r v a
k d s k k r d l y d q a r q a
k l n g f c
k q s g f c
s n p d r r l n y d l k i g y
s d p h q r a i y d s l g v k
r d e r l r r i y d a e q m q
t d a e k r r s y d l y g s e
k d p g r r e k y d k v l k e
l n a k k a a q l r t k q l d
g e p e s r k e y d q s l a e
t d p e k r r q f d a g q d p
s k p e s r a a y d y e l s l
s k s i e r g k y l l t l n g
s k t r r k r r q r n k k s d
t d d e a r k n w e k y g n p
c d p e k r a s y d k w r n s
s n k d s r a i y d e r g t v
s d p v k k s r y d s g q d l
l v e v k h r t e s v v d l n
g n y r l r k l y d k g i l h
e n e a t r k k c l e v y e e

q e k f a k a r r g i v e d l
s d p k q r a a f i k d f n n
s d s e r r r a f d q y g i t
c s r n a l n t d g p n p s n
e s d a t q q n l f
m d v s a r a a y d r l l n a
g t v k n r r a f d s i d p e
s d p e k r r h y d n a g f e
v k n r a r m s t l l l y r l
s d p q r r q i y d q y g e e
s d s v k r r d y d e l l k k
s d p g q r q a y d t s g k s
s d p e k r r q f d s a g f e
s d p e k r r q f d s a g f e
n d e n k r s m y d v g l y d
s d p n k r q i y d q y g e d
s d p n k r q i y d q y g e d
s d p e n r r l y d t t g s e
k d n t t r a q y d y a i e h
s d p s r k t l y d r e l h l
a m d d k i k l k e e q e a f
k l i a p
s d e r k r s s y d v g l y d
m q k f e k e e e e m e i t e
m d s e k k v q y d m d n r v
s d f v k k r d y d e q l r k
t d s v s r e n f e k y g h p
l k q i k n q m e g t e e f e
s t p t k k s q f d g d l n l
s n e f n k s t f y y k r k k

s d p e k r a v y d r r t l l
s d d e k k s l y d r y g e a
s d k a k r a d y d l k r
q a t m q g l q g p q p w r l
s d p i a r q e y d k k r m r
s d k g e m v s g g s g g d e
s d e t k r l i y d l y g m e
l g k t k n s g s a f
n d d l k r a s y n a g s d s
s d p t k
c e k l s v n
s d p v q r m v y d e i h g y
i q k g y t a v t a i i a e e
s d q i k r s q y d n r y r s
l d r e k r t l h d n k r k t
m d p t r r r i f d s t d e f
g d e e k r a v y d q t g s v
a d p t t r a i y d s t l r v
s d s n k r f l y d v g a y n
s d p q k r q i y d l y g e e
c e k l a m n
e s g d v k g q w y y r a g v
q r g y t a l a a a i a e e e
v v t s n i a a v e k q r k a
k q e i k e k
s d e e t r r f y d w t l a q
s d a e l r v v y d n d l r s
s d p r r r v l y d r d l s m
s d q p c l i y n v q g q t q
s d k v k r i a y d q k r k l
t e a n k y f v e s i a k a y
s d p e k r s v y d r r m l r
s d s e k r a h y d r y l l s
g d d d k r a r f d r g e d l
s n e d t r r k y d g s g s d
m d s t k r r i f d s t d e f
g v n v n e e e t i t d p t l
s d p p r k s i y d r e l q l
s d p a k r s q y d l e e e m
m d p a k r f e y d f t g i y
s n e a t r t q y d r a l k l
l d k d k r r f h d m r r k p
l n d q e r d y i l t q v h a
s d p i s r q a y d k e q a k
k d e k a r k l f d d l l r i
y e v m f q v l s d p q k r a
a d k d k r s q y d i r r r i
s d k e k r a a y d r r k s l
s d k l q r s s y d q r r k k
s d k v k r t s y d q r r i s
s d g n s r r q f d q v g i v
l d s v k q k s y d d e l k r
s d k d k r i l y n v k r g k
i n s d s r r k y g s d s r a
c n k c t t r c c h f s t q n
l s q l g q s g f h p q t q s
g d e e k r a v y d q t g s i
n k e e l s

s d p s r k t l y d r e l h l
e f i s k a y q a l t d s v s
s d s v k r r d y d e l l k k
s d p v h r e a y d r t g k f
s d k s q r s s y d q k r k s
l k q l k i r w k g r r n l s
a s c n k p a e p a s s s s s
n d e n k r s m y d v g l y d
e l l i i l n l y i l k f l v
l d e k a r a y l d e c i a d
k s p s q r a r y l l s l q g
e q d v k v a h q p d f g t w
e q d v k v a h q p d f g t w
c d p s k r a l y d k w r r s
c k e r n i r
s s p d k k r n y d s l g n t
e n q g q k p l y
s n p e r r k e y e m k r m a
t n e a s r a r y d h w r r s
s d a k k r d i y d r y g k e
t d a t k r n i y d k y g s l
t d a t k r n i y d k y g s l
s d p e m r k k f d d g e d p
c d e e l e p s d n e e e n p
k t v v r e s
s d i v k k r d y d e e l r k
i n a a w a s i e k q l e t a
k q a g f c
k g y k i l q d s l n r a i h
k g y k t l k n f l n r a i y
t l e d s d p e p e e s g y a
t l e d s d p e p e e s g y a
t l e d s d p e p e e s g y a
r n e e k r k e y d l a f s r
g y k d s r s e y t l e n l k
r n e e k r k e y d l a f s r
g m s d v k r q a f d s v d h
a d p f k r a k y l i k e y g
k d d e a k t n y d y y l d h

y d k e k r e e y d n r e e r
t d k k k r a d l d r t e n p
r r p a d r r l y d y q l r g
h e l r a e t y f g m i r l l
s s e t a n n s g m p d s h r
m d p a k r r q y d l q n a e
t d k e a r e n w e k y g n p
t d k e a r e n w e k y g n p
s d t d k r r q y d q y g a e
q d e e k r r q f d q g v d p
s d p l r k e r y d r f g t f
l d p k q r a i y d a l g v q
s n p n k r r v y d e m g e t
s d p n k r r q y d v s g p s
s d p r e r e f y d r h r e s
s s e d k r k a y d m t r i r
s d e e k r k i y d e t g s v
k d e n l r k k y d q f g e k

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s n e e k r r a f d n g q d p
k a l y k n n t
k k h l e r
q d t p v v r h h f p p a v t
g s a r v e p
i n a a f s t v m r e r r e l
m k k s q n t t y n n s s y g
k
i d k s k r d s y i l e t f d
r k v r s m v

t d p e m r q k f d s g e d p
s d a q k k s r y d n g h d i
e n d a t q q n m f n a
e n d a t q q n m f n a
e n e l t r k r c l e v y e e
t f f i c t l d r r q l k v v
q e k f a k g r r n i q e d e
s d p q e r s w y d n h r e q

t d c q k r i e y n i a t a v

t l r p l t d v f a l v r d k
h r v n s r q i y d s r l r m
s d p q q r a i y d s v g e k
s k i k s n r r r k n k q y q
i k p e r r r d y d d s l l w
g e p e n r l i y d q s i a e
g t s k p r r s f d s v d p e
g n y r l r r l y d k g i v h
g e p e n r l i y d q s i a e
t d e s a r a a y d k v l k a
t d a e k r k n y d l y g i n
s d k s k r e v y d k y g e d
t d t q k r a l y d e q g v i
f d k e k r e i y d q h g e e
t d e t k r l e y d q l g g i
k d p s r r e k y d r v l k e
r d e e s r t d y d y m l d n
t d p e k r r q f d n g e d p
t d d v a k e n y e k y g n p
s d p e k r r i y d r y g l k
s d q t k r n i y d n y g s l
s d q t k r n i y d n y g s l
s d q t k r n i y d n y g s l
s n q t k r n i y d n y g s l
c d p e k r a i y d k w r n s
c d p e k r a i y d k w r n s
s d p q e r s w y d n h r e q
s d a h k k s r y d s g q d i
g n p e k r r r y d m s r e d
c k s p a v e i v p v e d v r
t d k k k r e m y n k g i d p
a r g e e p d s i p y l i c s
k d r y k r d f y d v f g e v
r e k i k k e c g e m s a r l
m k s p p l f e f y n e e l f
s n k k r y e a w l n s e s k
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e g e y y q k e t t e t p q e
r h p l m r a e y l l s l h g
k q q k g f k
l r i a q s p a k s v w q p e
l r l a v n p v e e a d d e e
t k
k d p i l r a e a i i a l n t
a a e f k r r v s g e l p t n
c k a k g w k
n s l e s e v f t h t d t e n
e a g d a d g f d e a d v d t
q g d a
k d g l y r v r l l l g p s q
k d g l y r v r l l l g p s q
k d g l y r v r l l l g p s q
k k h a
k q i n p e r w a d i l a k v
l s h v i e q t n a s q s k g
s n a e k r k e y e m k r m a
g d r e q r a v y d e q g t v
t d e e s r k n w e e f g n p
s d a k k s e l y v k g g k p
s n p e k r k h k v y v y s n
s d a n r r k e y d t l g h s
e n q g q k p l y
k d d e r r q r y d d i l i n
s q p r k p w g s r r
s d s k k r k i y d q h g s l
k v s q a a a e l
s n d e k r d i y d k y g t e
e n q g s r p l f
s r e q s r r s y d d q l r s
t n e e s r a r y d h w r r s
c t k s a k i v d g p d p e n
s n e e k r s n y d q y g d a
a s q a e r e m q g n a a n r
g n e e t k r e y d l q r c e
g f i n t s f g s l g h g g l
s d a t k r e l y n k g r

s d p q e r a w y d n h r e a

s d a n r r k e y d t l g h s
s n p d k r l r y d e y g d e
s d p v k r r a f n s v d p t
s d p q t r a i y d i y g k r
l k n i k
e k q a f l d q n a d r a s r
s d r e q r a v y d e q g t v
t d e e s r k n w e e f g n p
s d p k k k t r
q g l c s i a y n t w g f h r
g s a t l r r k y d r g l l s
s d p v k r r a f n s v d p t
s d p v k r r a f n s v d p t
t d a t k r n i y d k y g s l
t d a t k r n i y d k y g s l
t d i s k r s i y d k y g s l

s n p e k r k q y d q f g d d
s r e q s r r s y d d q l r s
t d a a a r a a y d k v r k a
s d p q t r a i y d i y g k r
s d p e m r k k f d d g e d p
k d e d l r k k y d k y g e k
h q p d f g t w n s p e v p t
h q p d f g t w n s s e v g c
v f t p e l a k r r g t r m d
c e t k g w
v d r e a f e e e e k q t v q
s e l t n r e r e a f k l q k
r r i p y g v r q h i l r g e
t m m k d k a l e l l r n g v
h n p k t k k f y d s g e m s
l t d a r r r g a r g g g v p
l d s e k r a q y d a m r c f
l d e e k r a r y d s g e d v
s d l r q r q l y d t v g r e
s a n a g v a h s n a a g a s
q v t l m e i r s q c g s s s
e k q a f l d q n a d r a s r
s n p d k r l r y d e y g d e
c e p s k r a l y d k w r q s
k k n k v d n t i h q q t k k
s d k k l k a e y d k f c k l
e r g l r h a
v l l s n h n
k q a g l c
r t q k g f
k d p v k r a q y d i q h k d
k d p q k r k a y d m f l p p
k d p q k r k a y d m s l p p
r a m r r f c v r l s l h d v
r s q c g s s s s q g y f s e
q v t l m e i r s q c g s s s
k t e v y n l r m n l g g t g
k t e v y n l r m n l g g t g
s d p v k r g i y d k f g e e
e g q a k k
c l c v s s f p v v d h i v v
s n p d k r l r y d e y g d e
g s t i l r r k y d r g l l s
s d a k k r k d y d r s r w n
k d e d l r k k y d k y g e k
d l g s s r s s k k g k g k k
s n p e k r k q y d l t g s e
s n p e r r k e y e m k r m a
s d s e k r k q y d t y g e e
t d t s k r n i y d k y g s l
s d p e m r k k f d d g e d p
l d
c r r s i l s c s t s y d q n
e n q g s r p l f
c n a e s r a r y d h w r r s
t e p d s s s t l d s y g q n
t d t s k r n i y d k y g s l
s f e v f g r q f l w l a t t

s q p k k p r a s
t d a a a r a a y d k v r k a
s d p q t r a i y d i y g k r
s d a k k r d i y d k y g k e
l s h a i k r m h a g q d k a
s d p v k r r a f n s v d p t
g n e e t k k k y d l q r h e
l k n i n g r k t e g l p f e

e k q a f l d q n a d r a s r
s d k e q k a v y d e q g t v
t d e e s r k n w e e f g n p
g s t i l r r k y d r g l l s
t d p t k k k i y d r h g s l
s d p v k r r a f n s v d p t
s d p v k r r a f n s v d p t
t d a t k r n i y d k y g s l
s n p e k r k q y d q f g d d
s d a n s r k e y d t i g h s
s d p k k k t r y d s g q d l
s d s e k r k q y d t y g e e
s r e e s r r n y d h q l h s
s n v e k r d i y d k y g k e
s d s k k r s v y d r a g c d
k d d e r r q r y d d v l i n
s d p e m r k k f d d g e d p
s d p n q k e k y d s m l k v
s n p k k r a n y d k y g f d
s d p n q k e k y d s m l k v
s n p k k r a n y d k y g h d
s d l s k r m q y d a s f r r
k n p i d r a a y l l k t s g
l d p i k r r q f d s v d e e
n n d e e r a k y e h q v r m
v l s d p k e r s s y d q l y
s v e r t r s e y i i v l s q
r s l n g n g k a h h v y h h
l t v v p p e d t a q k s k q
s d q k
s d a d k r k k y d q f g q y
k s v t p t v e k p a s a t p
k n k h e r q s i l e s l r s
s d a t k r a q y d q f s r y
s n p d r r l n y d l k i g y
g d n q s r l n y d e e l r d
s d p e k r r q y d t a g f e
s d r t k r r a y d i k w r i
s d a e s r k r y d l v g s d
q a s m q g l q g p q v w r l
q
s s g h a p f f s g d d v e r
s d e k r r a l y d s g m y d
s d k t k r a l y d q k r k l
s d p a k k v r y d s t v a n
s t r h p p p g a t a a a a s
s d s q r r a h y d i y l r s
h s d a t r a a y d h l p r t
s d p s r r a t y d r a l a r

t d p i q r a v y d e i h g y
q d p e k r g v i d e k i k k
s d k d k k r s y d q k r f g
l d q q e n r a v f g v c c n
s d p s k r e a y d k h g k e
c k t k g w k
s d p d k r a n y d r s l f r
s d d t k r a l y d a g m y e
g d i d k k r w y n k y g y d
g d i d n k r k y n q y g y n
g d i d k k r w y n k y g y d

s n e e l r r k y n s d g r s
s d e n r r k m y d e g g m k
s l d q r r m n y n k y g l n
r s q c g s s s s q g y f s e
r s q c g s s s s q v a w f f
s t q d f i e t d i l q i p s
k t e v y n l r m n l g g t g
k s v p r r a l y l l a l r g
k s a p r r a l y l l t l s g
r e r e g f r
r e r e g f r
k q a g f c
s d p e k r k a y d s g r m n
r d p l k r a t y l l h l r g
s n p e r r k e y e m k r m a
e n q g s r p l f
s n a e s r a r y d h w r r s
s d p v k r r a f n s v d p t
k d g t k r n i y d k y g s l
s d a k k r k d y d r s r w s
s d p e m r r k f d d g e d p
e d g v k y a h q p d f g g f
k d a l k r a e y m l l l q n
k d p l r r s q y m l k l l r
t n a d v r p h y d r w l i e
t d e d q k l r y d r d l k i
s n i k t r r e y d r l i l e
c d p k k k i v y d t t r q g
n e a y e t l s d d d k r k e
t d e l v r q n y l k y g h p
s d d d k r k e y d l s r s n
s d p q e r a w y d s h k e q
t d s n k r a q y d s c d f v
k e q k g f k
l q g t t s p a i t v v d e d
q h w a a s p a e d a k m e e
s d k r r r e e y d r f g i h
i d v q l r k a y d s e r f a
s d a t k r l i y d q l f g l
r n t e t r k r y d y f l k n
s s e k d r q q y q i k q e e
v n d k i r e s l d s a y t a
a d e e k r a t y d r f g e e
s d p e s r r r f d s g v d l
i d v q l r k a y d s e r f a
k d p k l r e l f d q r r l l

k n g f p r w k g t g y l y s
s d k k r r k h y d k t g q l
s n d d k r k w h e k d y l r
s d a t k r l i y d q l f g l
t d d k t r e n y a l y g t p
q d p k k k k a f d t y g a g
s d p s k k e i y d n f g e q
s d n s r r a q y d r e s a s
s d p v r r r q f d s v d e n
e d g v k y a h q p d f g g f
e d g v k y a h q p d f g g f
r d p v r r s r y d w a r r e
k q a g f c
e r e r r a a
k d p v r r k v y d d t g y d
g l e e s v r a a y d q f n v
s d p d r r a e y q r f s r y
s n p d r r s v y d l q i g y
k e l l e l e l s a k t s q i
s r e n d r k e h l l i i q q
l q r h r t q h g r
m s g e f s e t p g q e n v h
t d a t k r n i y d k y g s l
s d p g r r a k f d l l y a r
g d p e t r l t y d s s r p f
c v h f r r n g g r d s a n v
a s n t k k a p d r n k m d e
s d p a r r r l y d s e r l r
k d p l r r a e y l l s l q g
r q d s l v
r k e k g i k
s d p a k r r e f d s t d e f
q r l r k r
q r q r k r
a d s t k r n i y d k y g s l
c i v m
q r r c r r
k r e k g f k
k h p l k r a e y m l s l q g

	A	C	D	E	F	G	H	I	K	L	M	N	P	Q	R	S
1	22	8	186	37	16	3	6	7	18	15	14	55	0	1	9	48
2	56	14	14	12	26	4	23	6	6	60	1	1	63	5	6	14
3	15	3	4	1	31	6	11	4	0	66	2	0	3	3	5	**5**
4	46	1	40	100	14	39	11	4	58	51	0	17	3	25	25	29
5	10	1	12	**5**	8	25	2	140	8	97	4	2	6	7	4	3
			4	**2**		15	0	11	6	399	7	1	3	1	2	6
7	1	4	10	51	3	279	10	1	28	4	1	36	20	15	5	13
8	6	12	**2**	**7**	2	3	3	66	8	112	11	5	10	8	23	4
9	34	1	57	55	3	14	15	6	33	8	3	25	57	25	44	84
10	39	2	10	38	13	7	7	6	66	14	2	5	94	20	84	24
11	7	0	74	26	3	58		**4**	30	24	5	69	6	9	16	57
12	298	22	16	**1**	1	23	2	18	0	14	3	2	5	2	3	46
13	9	0	95	12	1	12		**0**	11	1	0	37	7	5	4	169
14	39	1	84	57	16	11	4	17	38	38	6	10	37	47	11	32
15	72	0	68	114	1	20	0	5	35	4	2	18	13	41	23	51
16	30	1	93	214	1	0	1	6	24	17	5	5	1	55	9	4
17	3	0	1	0	2	0	2	309	4	69	20	0	1	0	4	2
18	5	0	8	11	1	7	6	8	281	8	0	11	0	11	113	8
19	55	3	13	14	1	1	3	4	237	7	0	7	1	29	71	28
20	293		**3**	15	1	7		**5**	16	4	0	10	0	38	35	35
21	0	1	1	0	58	1	23	5	0	5	0	1	0	1	2	2
22	2	0	0	**1**	9	0	25	4	88	35	0	2	1	10	281	4
23	27	0	12	29	2	0	2	7	228	11	2	17	1	27	91	12
24	29	4	0	0	4	0	0	16	51	309	24	0	0	14	17	1
25	259	26	0	0	0	1	0	13	1	13	22	3	1	16	2	70
26	6	0	**1**	**3**	7	1	0	20	107	223	30	4	6	13	33	18
27	12	1	3	46	1	1	4	13	153	80	19	6	1	70	49	10
28	8	19	0	0	39	1	61	5	2	72	0	18	1	1	2	4
29	1	0	0	**1**	0	0	480	0	6	1	0	5	3	0	0	1
30	0		**0**	0	1	0	0	0	1	4	0	0	489	1	1	3
31	0	0	472	11	1	0	1	1	1	2	0	1	0	1	2	5
32	17	0	**1**	**3**	2	0	6	4	292	14	3	16	1	8	87	13
33	23	14	8	7	29	49	33	7	6	26	1	206	4	7	17	19
34	37	3	14	5	0	63	15	7	73	12	10	11	121	22	32	33
35	60	4	105	34	9	84	16	4	12	17	2	46	8	14	6	45
36	45	1	76	49	3	27		**7**	25	6	3	75	69	14	11	47
37	39	0	29	42	3	86	6	7	33	12	1	13	73	17	31	41
38	101	5	36	82	3	13		**5**	47	33	3	17	8	10	11	26
39	103	0	18	93	5	6		**8**	32	18	10	8	28	12	23	29
40	84	3	11	74	2	3	7	8	24	9	4	8	9	20	5	26
41	22		**9**	49	0	5	1	**3**	36	6	2	6	3	28	19	15
42	41		**6**	34	5	3	1	**7**	16	14	11	2	1	8	13	7
43	17	0	6	36	3	8	2	**5**	15	12	7	17	0	6	4	8
44	25	0	15	23	1	4	1	3	13	1	1	4	0	4	4	5
45	15	2	1	19	1	1	1	4	1	9	10	7	2	5	4	3
46	18	0	1	7	1	1	0	3	3	1	4	3	2	3	2	5
47	3	0	2	8	0	1	0	0	6	3	0	3	0	3	0	5
48	5	0	1	2	0	2	0	2	3	0	0	1	0	0	0	4
49	5	0	1	2	0	0	0	1	2	1	0	1	1	0	0	6
50	1	0	1	2	1	0	0	1	4	2	1	0	0	1	1	4
51	0	0	2	5	0	0	1	1	1	1	0	0	0	0	1	2
52	0	0	0	2	0	1	0	1	2	1	0	1	1	0	2	2
53	0	0	1	5	0	0	1	1	1	1	0	0	0	1	0	2
54	2	0	1	3	0	0	0	0	0	2	0	0	0	0	0	0
55	0	1	0	2	0	0	2	0	0	1	0	0	0	0	1	0
56	2	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0
57	1	0	0	0	0	1	0	1	1	0	0	0	0	0	1	1

58	1	0	1	0	0	0	0	0	0	2	1	0	0	0	0	1
59	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	1
60	0	0	1	0	0	0	0	0	1	0	0	0	0	1	0	0
61	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
62	45	0	65	165	3	19	7	6	45	12	11	6	2	38	31	17
63	70	1	10	19	10	6	8	16	156	37	16	6	2	27	63	10
64	17	2	3	0	377	0	2	6	4	16	25	2	1	3	2	16
65	26	1	10	16	0	3	11	37	165	16	30	11	2	72	50	13
66	42	12	21	114	7	2	5	17	65	51	8	4	3	60	46	10
67	10	3	2	2	1	2	0	216	5	123	7	1	0	1	4	7
68	47	6	10	12	2	35	11	8	27	16	3	124	1	78	21	52
69	57	2	27	142	8	4	5	6	71	9	3	42	4	42	28	15
70	408	0	2	6	0	3	0	8	1	21	2	3	1	2	3	17
71	3	3	2	6	28	1	27	8	29	11	4	7	1	6	10	3
72	45	8	50	172	2	10	4	0	29	6	4	20	3	46	22	42
73	30	8	8	19	13	2	3	94	16	47	10	6	2	5	19	5
74	9	1	1	6	17	1	1	34	5	376	6	4	0	1	2	4
75	11	22	1	26	1	28	6	8	62	27	10	8	0	18	22	186
76	8	0	251	20	5	7	3	1	26	14	3	64	0	20	18	29
77	46	3	27	67	2	18	5	13	39	13	2	12	135	29	14	30
78	33	6	42	96	8	18	6	17	49	23	4	24	10	25	20	27
79	27	2	5	18	17	16	1	6	185	21	9	12	9	23	50	39
80	7	8	5	11	8	7	3	7	50	12	3	12	7	7	299	13
81	90	1	14	36	7	7	0	9	66	22	4	23	16	22	82	36
82	41	3	13	42	8	7	14	52	31	37	7	26	2	42	41	25
83	9	3	7	10	48	8	6	6	7	10	6	8	5	8	6	17
84	14	0	261	26	6	12	6	7	3	27	4	24	10	7	10	6
85	13	2	28	34	4	12	8	19	53	44	13	27	7	41	38	49
86	25	2	18	24	23	47	12	8	31	26	5	1	2	27	22	31
87	16	2	21	23	11	128	5	17	6	64	5	6	10	13	58	14
88	19	5	35	44	14	17	15	12	41	23	11	21	16	19	37	49
89	25	1	27	59	13	19	9	10	22	45	4	25	29	16	25	44
	a	c	d	e	f	g	h	I	k	l	m	n	p	q	r	s
	3245	275	2598	2667	986	1336	1014	1449	3484	3121	476	1347	1444	1383	2296	1948
	9.56%	0.81%	7.65%	7.86%	2.91%	3.94%	2.99%	4.27%	10.27%	9.20%	1.40%	3.97%	4.25%	4.07%	6.77%	5.74%

T	V	W	Y						P	CM	GAVIL	YFW	ST
23	4	3	14	489	38.04%	D			0	22	51	33	71
6	18	22	133	490	27.14%	Y			63	15	144	181	20
8	1	17	306	491	**62.32%**	Y			3	5	92	354	13
18	7	2	1	491	20.37%	E			3	1	147	17	47
19	138	0	1	492	28.05%	I	28.05%		6	5	410	9	22
4	16	1	1	492	**81.10%**	L			3	10	442	11	10
8	3	1	0	493	56.59%	G			20	5	288	4	21
2	208	0	2	494	42.11%	V			10	23	395	4	6
24	4	1	2	495	16.97%	S			57	4	66	6	108
14	20	9	21	495	18.99%	P		13.33% K	94	4	86	43	38
72	4	18	5	495	14.55%	D		14.95% N	6	5	97	26	129
14	20	0	5	495	**60.20%**	A			5	25	373	6	60
127	1	1	0	495	34.14%	S			7	0	23	2	296
18	23	0	6	495	16.97%	D	11.52%		37	7	128	22	50
14	13	0	3	497	22.94%	E			13	2	114	4	65
20	8	0	3	497	43.06%	E			1	6	61	4	24
2	78	0	0	497	**62.17%**	I			1	20	459	2	4
13	6	0	0	497	**56.54%**	K			0	0	34	1	21
19	3	0	1	497	47.69%	K			1	3	70	2	47
14	7	0	0	497	58.95%	A			0	5	316	1	49
0	1	9	387	497	**77.87%**	Y			0	1	12	454	2
0	2	3	30	497	56.54%	R			1	0	43	42	4
17	9	0	3	497	45.88%	K			1	2	54	5	29
7	17	3	1	497	62.17%	L			0	28	371	8	8
8	60	0	3	498	52.01%	A			1	48	346	3	78
1	26	2	0	501	44.51%	L			6	30	276	9	19
8	22	1	1	501	30.54%	K			1	20	128	3	18
10	54	54	150	501	29.94%	Y			1	19	140	243	14
0	0	0	3	501	**95.81%**	H			3	0	2	3	1
0	0	0	0	501	**97.60%**	P			489	1	4	1	3
0	1	0	2	501	**94.21%**	D			0	0	4	3	5
10	22	2	0	501	58.28%	K			1	3	57	4	23
12	19	2	11	500	41.20%	N			4	15	124	42	31
22	19	0	1	500	24.20%	P			121	13	138	1	55
20	3	0	3	492	21.34%	D			8	6	168	12	65
18	6	0	2	492	15.24%	D			69	4	91	5	65
12	11	0	10	466	18.45%	G			73	1	155	13	53
9	18	0	6	437	23.11%	A			8	8	170	9	35
21	10	0	1	429	24.01%	A			28	10	145	6	50
10	19	0	3	329	25.53%	A			9	7	123	5	36
9	6	2	5	227					3	3	42	7	24
17	2	2	2	193					1	12	67	9	24
3	9	0	4	162					0	7	51	7	11
6	4	0	1	115					0	1	37	2	11
4	6	3	0	98					2	12	35	4	7
0	1	2	2	59					2	4	24	5	5
7	3	0	0	44					0	0	10	0	12
0	1	1	0	22					0	0	10	1	4
0	0	1	0	21					1	0	7	1	6
1	1	0	0	21					0	1	5	1	5
0	5	0	0	19									
3	1	0	0	17									
0	0	0	0	13									
0	1	1	0	10									
0	1	0	0	8									
1	1	0	0	7									
1	0	0	0	7									

0	0	0	0	6									
2	0	0	0	6									
0	0	0	0	3									
0	0	0	0	1									
14	10	1	3	500	33.00%	E		2	11	92	7	31	
18	12	2	11	500	31.20%	K		2	17	141	23	28	
9	4	0	11	500	**75.40%**	F		1	27	43	388	25	
15	22	0	0	500	33.00%	K		2	31	104	**0 28**		
12	18	1	2	500	22.80%	E		3	20	130	10	22	
6	109	0	1	500	43.20%	I		0	10	460	2	13	
30	14	1	1	499	24.85%	N	10.42%	1	9	120	**4 82**		
23	7	0	4	499	28.46%	E		4	5	83	12	38	
8	10	1	1	497	**82.09%**	A		1	2	450	**2 25**		
2	4	44	297	496	59.88%	Y		1	7	27	**369 5**		
25	1	0	7	496	34.68%	E		3	12	62	**9 67**		
49	153	0	4	493	31.03%	V		2	18	326	17	54	
0	24	0	1	493	**76.27%**	L		0	7	444	18	4	
48	7	0	2	493	37.73%	S		0	32	81	3	234	
13	8	0	1	491	**51.12%**	D		0	3	38	**6 42**		
16	13	1	4	489	27.61%	P		135	5	103	**7 46**		
35	40	0	6	489	19.63%	E		10	10	131	14	62	
27	8	1	9	485	38.14%	K		9	11	78	**27 66**		
7	8	3	5	482	**62.03%**	R		7	11	41	16	20	
14	13	2	1	465	19.35%	A		16	5	141	10	50	
14	26	11	5	447	11.63%	I		2	10	163	24	39	
7	4	8	262	445	**58.88%**	Y		5	9	37	**318 24**		
7	4	0	4	438	**59.59%**	D		10	4	64	10	13	
17	12	4	11	436	12.16%	K		7	15	100	19	66	
24	31	11	64	434	14.75%	Y		2	7	137	98	55	
9	11	4	9	432	29.63%	G		10	7	236	**24 23**		
20	12	2	18	430	11.40%	S		16	16	83	**34 69**		
17	24	3	12	429	13.75%	E		29	5	123	28	61	
t	v	w	y	33939				1443	749	10673	3139	3096	
1164	1552	263	1891	33939				1444	751	10703	3140	3112	
3.43%	4.57%	0.77%	5.57%	100.00%									

HKR	DE	NQ		
33	223	56	489	45.60%
35	26	6	490	36.94%
16	5	3	491	**72.10%**
94	140	42	491	28.51%
14	17	9	492	**83.33%**
8	6	2	492	**89.84%**
43	61	51	493	58.42%
34	9	13	494	**79.96%**
92	112	50	495	21.82%
157	48	25	495	31.72%
54	100	78	495	26.06%
5	17	4	495	**75.35%**
18	107	42	495	59.80%
53	141	57	495	28.48%
58	182	59	497	36.62%
34	307	60	497	**61.77%**
10	1	0	497	**92.35%**
400	19	22	497	**80.48%**
311	27	36	497	62.58%
60	18	48	497	63.58%
25	1	2	497	**91.35%**
394	1	12	497	**79.28%**
321	41	44	497	**64.59%**
68	0	14	497	**74.65%**
3	0	19	498	**69.48%**
140	4	17	501	55.09%
206	49	76	501	41.12%
65	0	19	501	48.50%
486	1	5	501	**97.01%**
2	0	1	501	**97.60%**
4	483	2	501	**96.41%**
385	4	24	501	76.85%
56	15	213	500	42.60%
120	19	33	500	24.20%
34	139	60	492	28.25%
44	125	89	492	25.41%
70	71	30	466	33.26%
62	118	27	437	27.00%
59	111	20	429	33.80%
36	85	28	329	25.84%
56	58	34	227	25.55%
30	40	10	193	15.54%
21	42	23	162	25.93%
18	38	8	115	32.17%
6	20	12	98	20.41%
5	8	6	59	13.56%
6	10	6	44	22.73%
3	3	1	22	45.45%
2	3	1	21	4.76%
5	3	1	21	23.81%

	a	c	d	e	f	g
1	4.5%	1.6%	**38.0%**	**7.6%**	3.3%	0.6%
2	11.4%	2.9%	2.9%	2.4%	**5.3%**	0.8%
3	3.1%	0.6%	0.8%	0.2%	6.3%	1.2%
4	**9.4%**	0.2%	**8.1%**	**20.4%**	2.9%	7.9%
5	2.0%	0.2%	2.4%	1.0%	1.6%	5.1%
6	0.2%	0.6%	0.8%	0.4%	1.8%	3.0%
7	0.2%	0.8%	2.0%	**10.3%**	0.6%	**56.6%**
8	1.2%	2.4%	0.4%	1.4%	0.4%	0.6%
10	**6.9%**	0.2%	**11.5%**	**11.1%**	0.6%	2.8%
11	7.9%	0.4%	2.0%	7.7%	2.6%	1.4%
12	1.4%	0.0%	**14.9%**	5.3%	0.6%	**11.7%**
13	**60.2%**	4.4%	3.2%	0.2%	0.2%	4.6%
14	1.8%	0.0%	**19.2%**	2.4%	0.2%	2.4%
15	**7.9%**	0.2%	**17.0%**	**11.5%**	3.2%	2.2%
16	**14.5%**	0.0%	**13.7%**	**22.9%**	0.2%	4.0%
17	6.0%	0.2%	**18.7%**	**43.1%**	0.2%	0.0%
18	0.6%	0.0%	0.2%	0.0%	0.4%	0.0%
19	1.0%	0.0%	1.6%	2.2%	0.2%	1.4%
20	11.1%	0.6%	2.6%	2.8%	0.2%	0.2%
23	**59.0%**	1.0%	0.6%	3.0%	0.2%	1.4%
24	0.0%	0.2%	0.2%	0.0%	11.7%	0.2%
25	0.4%	0.0%	0.0%	0.2%	1.8%	0.0%
26	5.4%	0.0%	2.4%	5.8%	0.4%	0.0%
27	**5.8%**	0.8%	0.0%	0.0%	0.8%	0.0%
28	**52.0%**	5.2%	0.0%	0.0%	0.0%	0.2%
29	1.2%	0.0%	0.2%	0.6%	1.4%	0.2%
30	2.4%	0.2%	0.6%	**9.2%**	0.2%	0.2%
31	1.6%	3.8%	0.0%	0.0%	**7.8%**	0.2%
32	0.2%	0.0%	0.0%	0.2%	0.0%	0.0%
33	0.0%	0.2%	0.0%	0.0%	0.2%	0.0%
34	0.0%	0.0%	**94.2%**	2.2%	0.2%	0.0%
35	3.4%	0.0%	0.2%	0.6%	0.4%	0.0%
36	4.6%	2.8%	1.6%	1.4%	5.8%	**9.8%**
37	**7.4%**	0.6%	2.8%	1.0%	0.0%	**12.6%**
38	**12.2%**	0.8%	**21.3%**	**6.9%**	1.8%	**17.1%**
39	**9.1%**	0.2%	15.4%	**10.0%**	0.6%	5.5%
40	**8.4%**	0.0%	6.2%	**9.0%**	0.6%	**18.5%**
41	**23.1%**	1.1%	**8.2%**	**18.8%**	0.7%	3.0%
42	**24.0%**	0.0%	4.2%	**21.7%**	1.2%	1.4%
43	**25.5%**	0.9%	3.3%	**22.5%**	0.6%	0.9%
44	**9.7%**	0.4%	4.0%	**21.6%**	0.0%	2.2%
45	**21.2%**	0.5%	3.1%	**17.6%**	2.6%	1.6%
46	**10.5%**	0.0%	3.7%	**22.2%**	1.9%	4.9%
47	**21.7%**	0.0%	13.0%	**20.0%**	0.9%	3.5%
48	**15.3%**	2.0%	1.0%	**19.4%**	1.0%	1.0%
49	**30.5%**	0.0%	1.7%	**11.9%**	1.7%	1.7%
50	**6.8%**	0.0%	4.5%	**18.2%**	0.0%	2.3%
51	**22.7%**	0.0%	4.5%	**9.1%**	0.0%	**9.1%**
52	**23.8%**	0.0%	4.8%	**9.5%**	0.0%	0.0%
53	4.8%	0.0%	4.8%	**9.5%**	4.8%	0.0%

83	230	44	500	46.00%
227	29	33	500	45.40%
8	3	5	500	**77.60%**
226	26	83	500	45.20%
116	135	64	500	27.00%
9	4	2	500	**92.00%**
59	22	202	499	40.48%
104	169	84	499	33.87%
4	8	5	497	**90.54%**
66	8	13	496	**74.40%**
55	222	66	496	44.76%
38	27	11	493	**66.13%**
8	7	5	493	**90.06%**
90	27	26	493	47.46%
47	271	84	491	**55.19%**
58	94	41	489	27.61%
75	138	49	489	28.22%
236	23	35	485	48.66%
352	16	19	482	**73.03%**
148	50	45	465	30.32%
86	55	68	447	36.47%
19	17	16	445	**71.46%**
19	287	31	438	**65.53%**
99	62	68	436	22.71%
65	42	28	434	22.58%
69	44	19	432	**54.63%**
93	79	40	430	21.63%
56	86	41	429	28.67%
6776	5239	2727	33842	
6794	5265	2730	33939	

63	**9.0%**	0.0%	**13.0%**	**33.0%**	0.6%	3.8%
64	**14.0%**	0.2%	2.0%	3.8%	2.0%	1.2%
65	3.4%	0.4%	0.6%	0.0%	**75.4%**	0.0%
66	5.2%	0.2%	2.0%	3.2%	0.0%	0.6%
67	**8.4%**	2.4%	4.2%	**22.8%**	1.4%	0.4%
68	2.0%	0.6%	0.4%	0.4%	0.2%	0.4%
69	**9.4%**	1.2%	2.0%	2.4%	0.4%	**7.0%**
70	**11.4%**	0.4%	5.4%	**28.5%**	1.6%	0.8%
71	**82.1%**	0.0%	0.4%	1.2%	0.0%	0.6%
72	0.6%	0.6%	0.4%	1.2%	5.6%	0.2%
73	**9.1%**	1.6%	**10.1%**	**34.7%**	0.4%	2.0%
74	6.1%	1.6%	1.6%	3.9%	2.6%	0.4%
75	1.8%	0.2%	0.2%	1.2%	3.4%	0.2%
76	2.2%	4.5%	0.2%	5.3%	0.2%	**5.7%**
77	1.6%	0.0%	**51.1%**	4.1%	1.0%	1.4%
78	**9.4%**	0.6%	5.5%	**13.7%**	0.4%	3.7%
79	**6.7%**	1.2%	8.6%	**19.6%**	1.6%	3.7%
80	5.6%	0.4%	1.0%	3.7%	3.5%	3.3%
81	1.5%	1.7%	1.0%	2.3%	1.7%	1.5%
82	**19.4%**	0.2%	3.0%	**7.7%**	1.5%	1.5%
83	**9.2%**	0.7%	2.9%	**9.4%**	1.8%	1.6%
84	2.0%	0.7%	1.6%	2.2%	**10.8%**	1.8%
85	3.2%	0.0%	**59.6%**	5.9%	1.4%	2.7%
86	**3.0%**	0.5%	6.4%	**7.8%**	0.9%	2.8%
87	5.8%	0.5%	4.1%	5.5%	**5.3%**	**10.8%**
88	3.7%	0.5%	4.9%	5.3%	2.5%	**29.6%**
89	4.4%	1.2%	**8.1%**	**10.2%**	3.3%	4.0%
90	**5.8%**	0.2%	**6.3%**	**13.8%**	3.0%	4.4%

h	I	k	l	m	n	p	q	r	s	t	v	w	y		
1.2%	1.4%	**3.7%**	3.1%	2.9%	**11.2%**	0.0%	0.2%	1.8%	**9.8%**	**4.7%**	0.8%	0.6%	2.9%	1	38.04%
4.7%	1.2%	1.2%	**12.2%**	0.2%	0.2%	**12.9%**	1.0%	1.2%	2.9%	1.2%	3.7%	4.5%	**27.1%**	1	27.14%
2.2%	0.8%	0.0%	13.4%	0.4%	0.0%	0.6%	0.6%	1.0%	1.0%	1.6%	0.2%	3.5%	**62.3%**	1	**62.32%**
2.2%	0.8%	**11.8%**	10.4%	0.0%	3.5%	0.6%	**5.1%**	5.1%	5.9%	3.7%	1.4%	0.4%	0.2%	1	20.37%
0.4%	**28.5%**	1.6%	**19.7%**	0.8%	0.4%	1.2%	1.4%	0.8%	0.6%	**3.9%**	**28.0%**	0.0%	0.2%	1	28.46%
0.0%	2.2%	1.2%	**81.1%**	1.4%	0.2%	0.6%	0.2%	0.4%	1.2%	0.8%	3.3%	0.2%	0.2%	1	**81.10%**
2.0%	0.2%	5.7%	0.8%	0.2%	**7.3%**	4.1%	3.0%	1.0%	2.6%	1.6%	0.6%	0.2%	0.0%	1	56.59%
0.6%	**13.4%**	1.6%	**22.7%**	2.2%	1.0%	2.0%	1.6%	4.7%	0.8%	0.4%	**42.1%**	0.0%	0.4%	1	42.11%
3.0%	1.2%	**6.7%**	1.6%	0.6%	5.1%	**11.5%**	5.1%	8.9%	**17.0%**	**4.8%**	0.8%	0.2%	0.4%	1	16.97%
1.4%	1.2%	**13.3%**	2.8%	0.4%	1.0%	**19.0%**	4.0%	**17.0%**	4.8%	2.8%	4.0%	1.8%	4.2%	1	13.33%
1.6%	0.8%	6.1%	4.8%	1.0%	**13.9%**	1.2%	1.8%	3.2%	**11.5%**	**14.5%**	0.8%	3.6%	1.0%	1	13.94%
0.4%	3.6%	0.0%	2.8%	0.6%	0.4%	1.0%	0.4%	0.6%	9.3%	2.8%	4.0%	0.0%	1.0%	1	**60.20%**
0.6%	0.0%	2.2%	0.2%	0.0%	7.5%	1.4%	1.0%	0.8%	**34.1%**	**25.7%**	0.2%	0.2%	0.0%	1	34.14%
0.8%	3.4%	**7.7%**	7.7%	1.2%	2.0%	7.5%	9.5%	2.2%	**6.5%**	3.6%	4.6%	0.0%	1.2%	1	11.52%
0.0%	1.0%	**7.0%**	0.8%	0.4%	**3.6%**	2.6%	**8.2%**	4.6%	**10.3%**	2.8%	2.6%	0.0%	0.6%	1	13.68%
0.2%	1.2%	4.8%	3.4%	1.0%	1.0%	0.2%	11.1%	1.8%	0.8%	4.0%	1.6%	0.0%	0.6%	1	43.06%
0.4%	**62.2%**	0.8%	13.9%	4.0%	0.0%	0.2%	0.0%	0.8%	0.4%	0.4%	**15.7%**	0.0%	0.0%	1	62.17%
1.2%	1.6%	**56.5%**	1.6%	0.0%	2.2%	0.0%	2.2%	**22.7%**	1.6%	2.6%	1.2%	0.0%	0.0%	1	**56.54%**
0.6%	0.8%	**47.7%**	1.4%	0.0%	1.4%	0.2%	5.8%	**14.3%**	**5.6%**	3.8%	0.6%	0.0%	0.2%	1	47.69%
1.8%	1.0%	3.2%	0.8%	0.0%	2.0%	0.0%	**7.6%**	7.0%	**7.0%**	2.8%	1.4%	0.0%	0.0%	1	58.95%
4.6%	1.0%	0.0%	1.0%	0.0%	0.2%	0.0%	0.2%	0.4%	0.4%	0.0%	0.2%	1.8%	**77.9%**	1	**77.87%**
5.0%	0.8%	**17.7%**	7.0%	0.0%	0.4%	0.2%	2.0%	**56.5%**	0.8%	0.0%	0.4%	0.6%	**6.0%**	1	56.54%
0.4%	1.4%	**45.9%**	2.2%	0.4%	3.4%	0.2%	**5.4%**	**18.3%**	2.4%	3.4%	1.8%	0.0%	0.6%	1	45.88%
0.0%	3.2%	**10.3%**	**62.2%**	4.8%	0.0%	0.0%	2.8%	3.4%	0.2%	1.4%	3.4%	0.6%	0.2%	1	62.17%
0.0%	2.6%	0.2%	2.6%	4.4%	0.6%	0.2%	3.2%	0.4%	14.1%	1.6%	**12.0%**	0.0%	0.6%	1	52.01%
0.0%	**4.0%**	**21.4%**	**44.5%**	**6.0%**	0.8%	1.2%	2.6%	**6.6%**	3.6%	0.2%	5.2%	0.4%	0.0%	1	44.51%
0.8%	2.6%	**30.5%**	**16.0%**	3.8%	1.2%	0.2%	14.0%	**9.8%**	2.0%	1.6%	4.4%	0.2%	0.2%	1	30.54%
12.2%	1.0%	0.4%	**14.4%**	0.0%	3.6%	0.2%	0.2%	0.4%	0.8%	2.0%	**10.8%**	**10.8%**	**29.9%**	1	29.94%
95.8%	0.0%	1.2%	0.2%	0.0%	1.0%	0.6%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.6%	1	**95.81%**
0.0%	0.0%	0.2%	0.8%	0.0%	0.0%	**97.6%**	0.2%	0.2%	0.6%	0.0%	0.0%	0.0%	0.0%	1	**97.60%**
0.2%	0.2%	0.2%	0.4%	0.0%	0.2%	0.0%	0.2%	0.4%	1.0%	0.0%	0.2%	0.0%	0.4%	1	**94.21%**
1.2%	0.8%	**58.3%**	2.8%	0.6%	3.2%	0.2%	1.6%	**17.4%**	2.6%	2.0%	**4.4%**	0.4%	0.0%	1	58.28%
6.6%	1.4%	1.2%	5.2%	0.2%	**41.2%**	0.8%	1.4%	3.4%	3.8%	2.4%	3.8%	0.4%	2.2%	1	41.20%
3.0%	1.4%	**14.6%**	2.4%	2.0%	2.2%	**24.2%**	**4.4%**	6.4%	**6.6%**	4.4%	3.8%	0.0%	0.2%	1	24.20%
3.3%	0.8%	2.4%	3.5%	0.4%	**9.3%**	1.6%	2.8%	1.2%	**9.1%**	4.1%	0.6%	0.0%	0.6%	1	21.34%
1.6%	1.4%	5.1%	1.2%	0.6%	**15.2%**	**14.0%**	2.8%	2.2%	**9.6%**	3.7%	1.2%	0.0%	0.4%	1	15.45%
1.3%	1.5%	**7.1%**	2.6%	0.2%	2.8%	**15.7%**	3.6%	6.7%	**8.8%**	2.6%	2.4%	0.0%	2.1%	1	9.01%
0.9%	1.1%	**10.8%**	7.6%	0.7%	3.9%	1.8%	2.3%	2.5%	**5.9%**	2.1%	4.1%	0.0%	1.4%	1	18.76%
0.9%	1.9%	**7.5%**	4.2%	2.3%	1.9%	6.5%	2.8%	5.4%	**6.8%**	4.9%	2.3%	0.0%	0.2%	1	24.01%
2.1%	2.4%	**7.3%**	2.7%	1.2%	2.4%	2.7%	**6.1%**	1.5%	**7.9%**	3.0%	5.8%	0.0%	0.9%	1	22.49%
0.4%	1.3%	**15.9%**	2.6%	0.9%	2.6%	1.3%	**12.3%**	8.4%	**6.6%**	4.0%	2.6%	0.9%	2.2%	1	21.59%
0.5%	3.6%	**8.3%**	**7.3%**	**5.7%**	1.0%	0.5%	4.1%	**6.7%**	3.6%	**8.8%**	1.0%	1.0%	1.0%	1	21.24%
1.2%	3.1%	**9.3%**	**7.4%**	4.3%	**10.5%**	0.0%	**3.7%**	2.5%	4.9%	1.9%	**5.6%**	0.0%	2.5%	1	22.22%
0.9%	2.6%	**11.3%**	0.9%	0.9%	3.5%	0.0%	3.5%	3.5%	4.3%	5.2%	3.5%	0.0%	0.9%	1	20.00%
1.0%	4.1%	1.0%	**9.2%**	**10.2%**	**7.1%**	2.0%	5.1%	4.1%	3.1%	4.1%	**6.1%**	3.1%	0.0%	1	19.39%
0.0%	**5.1%**	**5.1%**	1.7%	**6.8%**	5.1%	3.4%	5.1%	3.4%	**8.5%**	0.0%	1.7%	3.4%	3.4%	1	11.86%
0.0%	0.0%	**13.6%**	**6.8%**	0.0%	**6.8%**	0.0%	**6.8%**	0.0%	**11.4%**	**15.9%**	**6.8%**	0.0%	0.0%	1	18.18%
0.0%	**9.1%**	**13.6%**	0.0%	0.0%	4.5%	0.0%	0.0%	0.0%	**18.2%**	0.0%	4.5%	4.5%	0.0%	1	9.09%
0.0%	4.8%	**9.5%**	4.8%	0.0%	4.8%	4.8%	0.0%	0.0%	**28.6%**	0.0%	0.0%	4.8%	0.0%	1	0.00%
0.0%	4.8%	**19.0%**	**9.5%**	4.8%	0.0%	0.0%	4.8%	4.8%	**19.0%**	4.8%	4.8%	0.0%	0.0%	1	19.05%

1.4%	1.2%	**9.0%**	2.4%	2.2%	1.2%	0.4%	**7.6%**	**6.2%**	3.4%	2.8%	2.0%	0.2%	0.6%	1	6.20%
1.6%	3.2%	**31.2%**	**7.4%**	3.2%	1.2%	0.4%	5.4%	**12.6%**	2.0%	3.6%	2.4%	0.4%	2.2%	1	31.20%
0.4%	1.2%	0.8%	3.2%	5.0%	0.4%	0.2%	0.6%	0.4%	3.2%	1.8%	0.8%	0.0%	2.2%	1	**75.40%**
2.2%	7.4%	**33.0%**	3.2%	6.0%	2.2%	0.4%	**14.4%**	**10.0%**	2.6%	3.0%	4.4%	0.0%	0.0%	1	33.00%
1.0%	3.4%	**13.0%**	**10.2%**	1.6%	0.8%	0.6%	**12.0%**	**9.2%**	2.0%	2.4%	3.6%	0.2%	0.4%	1	22.80%
0.0%	**43.2%**	1.0%	**24.6%**	1.4%	0.2%	0.0%	0.2%	0.8%	1.4%	1.2%	**21.8%**	0.0%	0.2%	1	43.20%
2.2%	1.6%	**5.4%**	3.2%	0.6%	**24.8%**	0.2%	**15.6%**	4.2%	**10.4%**	6.0%	2.8%	0.2%	0.2%	1	24.85%
1.0%	1.2%	**14.2%**	1.8%	0.6%	8.4%	0.8%	**8.4%**	5.6%	3.0%	4.6%	1.4%	0.0%	0.8%	1	28.46%
0.0%	1.6%	0.2%	4.2%	0.4%	0.6%	0.2%	0.4%	0.6%	3.4%	1.6%	2.0%	0.2%	0.2%	1	**82.09%**
5.4%	1.6%	5.8%	2.2%	0.8%	1.4%	0.2%	1.2%	2.0%	0.6%	0.4%	0.8%	8.9%	**59.9%**	1	59.88%
0.8%	0.0%	5.8%	1.2%	0.8%	4.0%	0.6%	9.3%	4.4%	**8.5%**	5.0%	0.2%	0.0%	1.4%	1	34.68%
0.6%	**19.1%**	3.2%	**9.5%**	2.0%	1.2%	0.4%	1.0%	3.9%	1.0%	**9.9%**	**31.0%**	0.0%	0.8%	1	31.03%
0.2%	6.9%	1.0%	**76.3%**	1.2%	0.8%	0.0%	0.2%	0.4%	0.8%	0.0%	4.9%	0.0%	0.2%	1	**76.27%**
1.2%	1.6%	**12.6%**	5.5%	2.0%	1.6%	0.0%	3.7%	4.5%	**37.7%**	**9.7%**	1.4%	0.0%	0.4%	1	37.73%
0.6%	0.2%	5.3%	2.9%	0.6%	**13.0%**	0.0%	4.1%	3.7%	5.9%	2.6%	1.6%	0.0%	0.2%	1	**51.12%**
1.0%	2.7%	**8.0%**	2.7%	0.4%	2.5%	**27.6%**	5.9%	2.9%	**6.1%**	3.3%	2.7%	0.2%	0.8%	1	27.61%
1.2%	3.5%	**10.0%**	4.7%	0.8%	4.9%	2.0%	**5.1%**	4.1%	5.5%	**7.2%**	**8.2%**	0.0%	1.2%	1	19.63%
0.2%	1.2%	**38.1%**	4.3%	1.9%	2.5%	1.9%	4.7%	10.3%	**8.0%**	5.6%	1.6%	0.2%	1.9%	1	38.14%
0.6%	1.5%	**10.4%**	2.5%	0.6%	2.5%	1.5%	1.5%	**62.0%**	2.7%	1.5%	1.7%	0.6%	1.0%	1	**62.03%**
0.0%	1.9%	**14.2%**	4.7%	0.9%	4.9%	3.4%	4.7%	**17.6%**	**7.7%**	3.0%	2.8%	0.4%	0.2%	1	19.35%
3.1%	**11.6%**	**6.9%**	**8.3%**	1.6%	5.8%	0.4%	**9.4%**	**9.2%**	5.6%	3.1%	**5.8%**	2.5%	1.1%	1	11.63%
1.3%	1.3%	1.6%	2.2%	1.3%	1.8%	1.1%	1.8%	1.3%	3.8%	1.6%	0.9%	1.8%	**58.9%**	1	**58.88%**
1.4%	1.6%	0.7%	6.2%	0.9%	5.5%	2.3%	1.6%	2.3%	1.4%	1.6%	0.9%	0.0%	0.9%	1	**59.59%**
1.8%	4.4%	**12.2%**	**10.1%**	3.0%	6.2%	1.6%	**9.4%**	**8.7%**	**11.2%**	3.9%	2.8%	0.9%	2.5%	1	1.61%
2.8%	1.8%	7.1%	**6.0%**	1.2%	0.2%	0.5%	6.2%	5.1%	7.1%	5.5%	7.1%	2.5%	**14.7%**	1	14.75%
1.2%	3.9%	1.4%	**14.8%**	1.2%	1.4%	2.3%	3.0%	**13.4%**	3.2%	2.1%	2.5%	0.9%	2.1%	1	29.63%
3.5%	2.8%	**9.5%**	5.3%	2.6%	4.9%	3.7%	4.4%	**8.6%**	**11.4%**	4.7%	2.8%	0.5%	4.2%	1	10.23%
2.1%	2.3%	5.1%	**10.5%**	0.9%	5.8%	**6.8%**	3.7%	5.8%	**10.3%**	4.0%	5.6%	0.7%	2.8%	1	5.83%

Organism	Name	Type	12	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Arabidopsis thaliana	At1g02650	III	h	v	l	g	l	n	k	m	r	f	t	a	t	d	e	d	i
Arabidopsis thaliana	At1g09260	III	d	y	y	s	l	m	g	i	e	r	g	c	s	r	s	e	l
Arabidopsis thaliana	At1g62970	III	d	y	y	n	v	l	n	v	n	p	s	a	t	e	d	d	l
Arabidopsis thaliana	At2g47440	III	d	y	y	g	l	i	g	v	r	r	g	c	t	r	s	e	l
Arabidopsis thaliana	At3g62570	III	d	y	y	g	l	v	g	v	r	r	g	c	t	r	s	e	l
Arabidopsis thaliana	At4g02100	III	d	y	y	a	l	m	g	i	r	r	d	c	s	r	s	e	l
Arabidopsis thaliana	At5g09540	III	w	y	a	v	l	r	i	s	r	l	t	q	s	p	e	h	v
Arabidopsis thaliana	At5g64360	III	d	w	y	a	v	l	r	l	g	r	l	a	q	n	p	e	h
Arabidopsis thaliana	F16P17.12	III	d	w	y	a	v	l	r	l	v	r	l	t	h	n	p	e	l
Caenorhabditis elegans	C04A2.7	III	d	a	y	s	v	f	g	l	r	s	d	c	s	d	d	d	i
Clostridium perfringens	CPE0246	III	d	y	f	k	e	l	n	i	q	i	d	a	s	d	n	e	v
Encephalitozoon cuniculi	DnaJ-like 3	III	y	k	l	l	g	f	k	e	g	e	k	p	d	e	k	e	i
Encephalitozoon cuniculi	DnaJ-like 6	III	m	s	l	y	d	v	l	k	i	p	k	d	a	t	k	e	s
Encephalitozoon cuniculi	DnaJ-like 7	III	g	y	y	k	v	l	e	l	s	p	g	a	s	v	a	e	v
Encephalitozoon cuniculi	Sec63-like	III	d	p	l	e	v	l	g	i	d	q	d	t	g	e	r	e	i
Escherichia coli	YbeS	III	n	c	w	k	i	l	d	i	e	e	t	t	d	v	d	i	i
Escherichia coli	YbeV	III	t	c	w	q	i	l	e	i	e	s	t	t	q	i	d	i	i
Haemophilus influenzae	Transketolase	III	k	s	g	s	h	d	s	h	g	a	p	l	g	d	e	e	i
Homo sapiens	adlican	III	e	v	f	l	k	t	k	d	d	a	i	n	g	d	k	k	a
Homo sapiens	dJ1099D15.1	III	w	l	y	w	v	l	g	v	q	r	e	a	s	d	g	e	v
Homo sapiens	DnaJA1-like	III	f	c	y	a	l	g	v	k	l	n	a	a	q	k	y	y	k
Homo sapiens	KIAA1530	III	r	l	r	q	a	t	t	r	a	v	e	g	w	n	e	k	f
Homo sapiens	TPR2-like	III	w	g	h	l	r	e	g	n	d	k	n	a	s	e	d	k	i
Lactobacillus acidophilus	DnaJ-like	III	d	y	y	k	v	l	g	v	d	r	d	a	s	d	q	e	i
Mus musculus	1700014P03	III	d	y	y	a	v	l	q	v	t	r	n	s	e	d	a	q	i
Mus musculus	LOC194335	III	y	f	y	f	v	l	p	e	t	k	n	r	t	h	a	e	i
Mus musculus	LOC218853	III	l	r	i	e	t	q	k	q	t	l	n	a	r	d	e	s	i
Nostoc sp. PCC 7120	all2707	III	d	y	y	r	i	l	g	l	p	l	a	a	s	d	e	q	l
Oryza sativa	OSJNBa0093F16.20	III	d	w	y	r	i	l	q	v	l	p	r	d	d	a	a	k	i
Plasmodium falciparum	RESA precursor	III	l	y	y	d	i	l	g	v	g	v	n	a	d	m	n	e	i
Plasmodium falciparum	RESA2	III	r	f	y	d	i	l	g	v	d	i	n	a	d	m	n	n	i
Plasmodium falciparum	RESA-like 2	III	l	y	y	d	i	l	g	v	g	v	n	a	d	m	n	e	i
Plasmodium falciparum	RESA	III	t	y	y	d	i	l	n	i	n	a	n	s	k	l	e	e	i
Plasmodium falciparum	RESA-like	III	t	y	y	d	i	l	n	v	y	p	t	s	e	l	s	e	i
Salmonella typhimurium	YbeS	III	t	c	w	q	v	l	g	i	e	a	t	t	d	t	d	a	i
Salmonella typhimurium	YbeV	III	i	c	w	e	i	l	g	i	e	p	t	t	d	l	e	c	i

18	19	20	20a	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
k	r	a		y	l	l	l	n	l	r	y	k	s	e	r	s	m	t	s	i	d	r	f	d	i	i	d	e	q
n	r	a		y	r	d	i	l	v	k	l	y	p	d	t	n	k	s	i	a	a	k							
k	k	s	q	y	s	r	l	a	v	l	l	n	p	s	r	n	r	y	p	y	s	e							
d	r	a		h	l	l	l	c	l	r	y	k	p	d	r	a	s	s	f	i	e	r	c	e	f	t	d	q	n
d	r	a		n	l	l	l	c	l	r	h	k	p	d	k	a	l	a	f	m	e	r	c	d	f	f	d	q	s
d	r	a		y	l	l	l	n	l	k	h	k	p	e	r	s	m	s	f	i	d	r	f	e	l	t	d	d	e
a	t	q		y	r	r	l	t	l	l	l	k	l	n	i	n	r	l	p	f	a	d							
v	a	t	q	y	r	r	l	a	l	l	l	n	p	s	v	n	r	l	p	f	a	d	r	a	l	k	i	v	s
v	a	t	q	y	s	r	l	a	v	l	l	n	p	s	r	n	r	y	p	y	s	e							
k	r	n		y	k	r	l	a	a	l	v	s	p	d	k	c	t	i	d	a	a	d							
k	k	a		y	f	n	m	t	k	k	y	p	p	e	k	f	p												
k	k	a		y	r	k	t	v	v	e	n	k	k	k	k	k	t	k	q	q	e	k	e	w	e				
v	e	k		s	y	r	s	l	v	r	l	h	c	q	s	r	g	e	m	s	p								
r	k	a		y	a	k	q	q	a	k	y	h	l	d	s	p	y												
k	k	r		l	r	m	l	l	m	k	y	n	l	s	k	a	p	p	e	l	r	s	e	y	e				
r	r	a		y	l	a	l	l	p	s	f	h	p	e	t	d	p												
r	q	a		y	l	a	r	l	p	l	c	h	p	e	t	d	p												
d	l	t		r	k	a	l	g	w	e	y	a	p	f	e	i	p	a	e	y	y	a	e	w	s	a	k	e	k
k	k	g		r	r	k	l	k	l	w	k	h	s	e	k	e	p	e	t	n	v	a	e	g	r				
r	r	g		y	h	k	v	s	l	q	v	h	l	d	r	v	g	e	g	d	k	e	d	a	t				
k	k	v		y	r	k	l	a	l	k	y	h	s	r	k	n	l	n	e	g									
g	e	a		y	k	k	l	a	l	g	y	h	f	l	r	h	n	k	k	v	d	f	q	d	t	n	a	r	s
k	k	a		y	w	k	q	a	l	k	y	h	p	h	r	h	d	g	a	s	a	g	v	q	k	e	e		
s	s	a		i	r	n	l	a	k	k	f	h	q	d	l	e	s	l	t	r	g	q	e						
k	k	a		y	r	k	l	a	l	k	n	h	p	l	k	s	s	e	p	g	a	p							
s	q	a		f	a	k	r	n	k	a	q	p	p	e	v	k	a	d	s	a	m	t	e	e	k	a	n	s	q
k	k	l		l	e	m	l	q	s	k	g	l	p	s	k	s	l	e	d	d	n	e	r	t	r	r	m	a	e
r	q	a		y	s	d	r	i	v	q	l	p	r	r	e	y	s	q	a	a									
d	a	q		y	r	s	i	v	r	q	v	e	p	v	r	d	d	l	p	g	a	e							
t	e	r		y	f	k	l	a	e	n	y	y	p	y	q	r	s	g	s	t	v	f							
d	k	s		y	f	k	l	a	k	e	h	y	p	i	n	g	s	t	i	d	d	l							
t	e	r		y	f	k	l	a	e	n	y	y	p	y	q	r	s	g	s	t	v	f							
k	e	k		y	y	e	v	a	s	k	y	h	p	e	k	n	i	g	n	d	k	a	f						
k	s	n		y	y	n	l	a	l	k	y	n	p	e	s	n	l	g	n	a	e	a	l						
r	q	a		y	l	a	l	l	p	s	f	h	p	e	t	d	p	q											
r	q	a		y	l	a	l	l	p	s	f	h	p	e	s	d	p	q											

```
47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76
e  l  v  s  v  k  n                          r  a  r  m  s  t  l  l  l  y  r  l  i  q  k
                                             s  a  f  e  i  i  n  y  a  w  k  i  l  s  d
                                             q  a  f  r  l  i  s  d  a  w  y  v  l  s  d
d  v  d  s  v  r                             d  r  a  k  m  s  s  l  l  l  y  r  l  i  q
e  i  s  s  v  k  d                          r  a  k  m  s  s  l  l  l  y  r  l  i  q  r
e  e  l  d  s  v  k  d  r  a  r  m  s        t  l  l  l  y  r  l  i  q  k  g  y  s  v  v
                                             q  a  l  k  l  v  s  d  a  w  y  v  l  s  d
d  a  w  f  v  l  s                          d  p  f  k  k  s  f  y  d  r  e  l  q  l  s
                                             q  a  f  r  l  i  s  d  a  w  y  v  l  s  d
                                             q  v  y  e  l  v  d  v  a  f  s  a  i  g  y
                                             k  e  y  r  v  i  r  d  a  y  e  t  l  i  d
                                             e  t  f  k  k  v  n  k  a  f  g  v  l  t  d
                                             d  k  f  a  e  i  n  k  a  y  t  i  l  k  d
                                             m  k  n  k  l  k  n  a  a  s  d  e  e  r  e
                                             e  k  q  k  t  v  n  k  a  y  g  l  v  s  n
                                             q  g  f  k  q  l  r  q  a  y  e  e  a  l  r
                                             q  g  f  k  a  l  r  q  a  y  e  e  a  l  r
g  a  a  a  e  k  s  w  e                    e  k  f  a  a  y  a  k  a  y  p  e  l  a  a
                                             r  v  f  e  s  r  r  r  i  n  m  a  n  k  q
                                             r  c  f  q  i  l  e  k  v  y  s  i  l  g  d
                                             d  k  f  r  q  i  s  p  a  c  q  v  l  s  d
l  a  e  r  k  r  e  e  e                    e  k  q  k  h  l  d  k  i  y  q  e  r  a  s
                                             e  k  i  k  e  v  a  s  w  p  e  l  v  q  g
                                             d  k  f  p  a  k  v  t  e  g  f  f  e  v  f
                                             e  i  f  k  q  i  a  e  a  y  d  v  l  s  d
t  e  p  d  s  s  s  t  l  d  s  y  g  q     n  k  i  v
a  e  s  q  v  s  h  l  e  v  i  l  d  q     k  e  k  e  n  i  h  l  r  e  c  i  k  s  f
                                             i  a  s  r  k  q  l  i  e  e  a  y  v  v  l
                                             a  a  l  r  l  v  n  d  a  y  a  v  l  s  d
                                             h  n  f  r  k  v  n  e  a  y  q  v  l  g  d
                                             k  k  f  k  e  i  n  e  a  y  q  v  l  g  d
                                             h  n  f  r  k  v  n  e  a  y  q  v  l  g  d
                                             k  k  f  e  l  i  n  s  a  y  q  i  l  s  n
                                             t  k  f  r  d  i  n  e  a  y  q  i  l  s  l
                                                g  f  k  q  l  r  e  a  y  e  n  a  l  q
                                                g  f  k  r  l  r  q  a  y  e  e  a  q  h
```

77 78 79 80 81 82 83 84 85 86 87 88 89
g y y a v l s d i e t v e
p e k r k d y n i k k r f
p s r k t l y d r e l h l
k g y t a v t a i i a e e
g y t a l a a a i a e e e
t s n i a a v e k q r k a
p p r k s i y d r e l q l
q l g q s g f h p q t q s
p s r k t l y d r e l h l
k d s r s e y t l e n l k
k s k r d s y i l e t f d
k k k r e m y n k g i d p
r y k r d f y d v f g e v
k i k k e c g e m s a r l
k k r y e a w l n s e s k
i a q s p a k s v w q p e
l a v n p v e e a d d e e
e f k r r v s g e l p t n
i n p e r w a d i l a k v
r e q r a v y d e q g t v
a k k s e l y v k g g k p
q a e r e m q g n a a n r
l c s i a y n t w g f h r
t p e l a k r r g t r m d
p v k r g i y d k f g e e

e v f g r q f l w l a t t
s d p k e r s s y d q l y
p a k k v r y d s t v a n
i d k k r w y n k y g y d
i d n k r k y n q y g y n
i d k k r w y n k y g y d
e e l r r k y n s d g r s
d q r r m n y n k y g l n
g t t s p a i t v v d e d
w a a s p a e d a k m e e

	a	c	d	e	f	g	h	I	k	l	m	n	p	q	r	s
1	0	0	14	1	1	1	1	1	1	3	1	1	0	0	2	0
2	1	5	0	0	2	1	0	0	1	2	0	0	1	0	1	2
3	1	0	0	0	2	1	1	1	0	4	0	0	0	0	1	0
4	5	0	5	3	1	3	0	0	4	3	0	1	0	3	2	3
5	1	0	1	1	0	1	1	10	1	7	0	0	0	0	1	0
6	0	0	1	1	2	1	0	1	0	21	2	1	0	1	1	0
7	0	0	1	2	0	15	0	1	4	1	0	4	1	2	2	1
8	0	0	1	2	0	0	1	9	2	5	1	1	0	1	1	1
9	1	0	5	5	0	5	0	1	0	2	0	2	1	2	6	1
10	4	0	0	2	1	0	0	2	2	3	0	1	6	1	9	2
11	2	0	5	2	0	4	0	1	2	2	0	8	1	0	1	1
12	14	5	2	0	0	1	0	0	0	1	0	1	1	1	1	3
13	1	0	8	2	0	3	1	0	1	0	0	0	0	3	1	10
14	1	0	10	4	0	0	1	1	1	3	3	3	1	0	4	0
15	4	0	6	8	0	1	0	0	3	0	0	4	2	1	1	5
16	1	1	3	19	0	0	1	2	4	0	0	1	0	2	0	1
17	1	0	0	0	1	0	1	20	1	7	0	0	0	0	0	1
18	1	0	6	0	0	1	0	0	13	0	0	1	0	0	7	2
19	3	0	0	5	0	0	0	0	11	1	0	0	0	5	8	2
20	18	0	0	0	0	2	0	0	2	1	0	2	0	2	3	2
21	0	0	0	0	1	0	1	1	0	2	0	1	0	0	2	1
22	2	0	0	1	4	0	1	0	3	8	0	0	0	0	10	3
23	5	0	2	1	0	0	0	0	12	4	2	3	0	0	6	1
24	0	0	0	0	0	0	0	2	0	24	1	0	0	2	3	1
25	14	2	0	0	0	1	0	1	1	7	0	3	0	2	0	1
26	2	0	0	2	0	0	0	0	4	13	1	0	4	0	1	2
27	1	0	0	3	0	1	0	0	12	6	0	2	0	3	4	3
28	0	1	0	0	4	1	3	0	1	7	0	2	0	1	0	0
29	1	0	0	1	0	0	14	0	6	1	0	5	3	0	0	1
30	0	1	0	0	1	0	0	0	1	4	0	0	24	1	1	3
31	0	0	7	11	1	0	1	1	1	2	0	1	0	1	2	5
32	0	0	0	2	0	0	0	1	10	1	0	1	0	2	9	4
33	3	1	5	2	1	1	2	1	2	0	0	8	1	0	3	4
34	1	0	2	0	0	2	0	1	1	4	2	1	8	0	4	7
35	2	0	1	5	0	5	0	1	2	4	0	1	1	3	0	3
36	2	0	2	3	3	1	0	2	1	0	1	2	6	1	0	4
37	5	0	4	0	2	3	0	3	0	1	1	1	0	1	1	2
38	7	0	4	4	0	1	0	0	2	0	1	1	1	0	1	2
39	4	0	3	5	3	1	0	0	2	1	0	0	1	1	4	1
40	0	2	1	6	3	0	0	0	0	1	0	0	0	1	2	0
41	2	0	3	3	0	1	0	0	0	0	0	0	0	1	0	0
42	0	0	0	2	2	0	0	1	2	2	0	0	0	0	2	1
43	2	0	0	1	1	0	0	1	1	0	0	1	0	0	1	0
44	1	0	4	1	0	0	0	1	1	0	1	1	0	0	0	0
45	1	0	1	2	0	0	0	0	0	0	0	0	0	2	1	1
46	0	0	0	2	0	0	0	0	1	0	0	1	0	2	0	3
47	1	0	2	3	0	1	0	0	0	1	0	0	0	0	0	0
48	3	0	0	3	0	0	0	1	0	1	0	0	0	0	0	0
49	1	0	1	1	0	0	0	0	0	1	0	0	1	0	0	2
50	1	0	2	0	1	0	0	0	0	0	0	0	0	1	1	3
51	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	2
52	0	0	0	0	0	0	0	0	3	1	0	0	0	0	2	2
53	0	0	1	1	0	0	1	0	1	0	0	1	0	0	0	3
54	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0
55	0	0	0	2	0	0	0	0	0	1	0	0	0	0	1	0
56	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1

58	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
59	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	1
60	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
62	1	0	5	6	0	0	2	1	4	0	1	1	0	6	4	1
63	8	1	0	2	0	4	0	1	12	1	0	2	1	0	1	0
64	1	0	0	0	21	0	0	2	2	3	0	1	0	2	1	1
65	2	0	0	5	0	0	0	0	14	1	2	0	1	1	9	0
66	3	0	1	3	0	0	1	2	5	7	1	1	0	4	1	3
67	0	0	0	0	0	0	0	11	2	6	0	0	0	1	2	3
68	3	0	2	1	1	0	1	0	0	4	0	11	0	0	6	5
69	1	0	5	6	0	0	0	2	6	4	0	0	1	3	1	2
70	23	0	1	2	0	0	0	2	0	3	0	0	0	1	1	0
71	0	1	0	2	2	1	0	0	1	1	0	1	1	0	1	1
72	2	1	2	7	1	3	0	0	1	0	1	0	1	7	2	2
73	2	0	0	6	1	0	0	6	0	5	0	1	0	0	1	0
74	4	0	0	2	0	0	0	3	1	18	0	1	0	1	1	1
75	2	0	0	0	0	5	0	2	2	4	0	0	0	4	1	11
76	1	0	14	1	2	1	1	0	1	2	0	2	0	3	3	2
77	1	0	1	3	0	3	0	5	6	2	0	0	6	2	2	1
78	5	1	5	3	1	1	0	1	3	1	0	1	2	1	0	4
79	1	0	0	2	1	1	0	0	11	1	0	2	2	2	5	2
80	2	0	0	1	0	1	0	2	9	1	0	1	0	1	11	4
81	5	0	2	6	0	1	0	0	1	1	1	0	4	0	7	3
82	6	1	1	1	1	1	0	2	3	4	2	1	0	1	2	1
83	2	0	0	2	2	1	0	1	1	0	0	1	0	1	1	3
84	2	0	10	3	0	2	1	1	0	2	0	7	0	0	1	2
85	2	0	0	2	0	1	0	5	7	2	1	2	1	1	3	2
86	2	0	3	6	2	3	0	1	2	3	0	0	0	3	0	2
87	5	0	2	2	1	9	0	1	1	3	1	1	1	2	2	0
88	1	0	1	7	1	0	3	0	3	3	1	1	1	2	3	1
89	1	0	5	7	1	0	0	0	2	4	0	4	2	0	2	2
	a	c	d	e	f	g	h	I	k	l	m	n	p	q	r	s
	209	23	176	214	75	98	40	120	224	251	29	109	88	100	188	163
	8.29%	0.91%	6.98%	8.49%	2.98%	3.89%	1.59%	4.76%	8.89%	9.96%	1.15%	4.32%	3.49%	3.97%	7.46%	6.47%

t	v	w	y					P	CM	GAVIL	YFW	ST	HKR	DE	NQ
4	0	3	2	36	38.89% D			0	1	5	6	4	4	15	1
0	2	3	15	36	41.67% Y			1	5	6	20	2	2	0	0
0	0	4	21	36	**58.33%** Y			0	0	7	27	0	2	0	0
0	1	1	1	36	8.33% E			0	0	12	3	3	6	8	4
1	11	0	0	36	30.56% V	27.78% I		0	0	30	0	1	3	2	0
2	2	0	0	36	**58.33%** L			0	2	25	2	2	1	2	2
1	1	0	0	36	41.67% G			1	0	18	0	2	6	3	6
0	11	0	0	36	30.56% V			0	1	25	0	1	4	3	2
3	1	0	1	36	2.78% S			1	0	10	1	4	6	10	4
0	3	0	0	36	16.67% P	25.00% R	5.56% K	6	0	12	1	2	11	2	2
7	0	0	0	36	19.44% T	22.22% N	13.89% N	1	0	9	0	8	3	7	8
6	0	0	0	36	**38.89%** A			1	5	16	0	9	1	2	2
5	0	1	0	36	27.78% S			0	0	4	1	15	3	10	3
2	2	0	0	36	27.78% D			1	3	7	0	2	6	14	3
0	0	0	1	36	22.22% E			2	0	5	1	5	4	14	5
0	0	0	1	36	52.78% E			0	1	3	1	1	5	22	3
0	4	0	0	36	**55.56%** I			0	0	32	1	1	2	0	0
2	3	0	0	36	**36.11%** K			0	0	5	0	4	20	6	1
1	0	0	0	36	30.56% K			0	0	4	0	3	19	5	5
3	1	0	0	36	50.00% A			0	0	22	0	5	5	0	4
0	0	0	27	36	**75.00%** Y			0	0	3	28	1	3	0	1
0	0	1	3	36	27.78% R			0	0	10	8	3	14	1	0
0	0	0	0	36	33.33% K			0	2	9	0	1	18	3	3
1	2	0	0	36	66.67% L			0	1	28	0	2	3	0	2
2	2	0	0	36	38.89% A			0	2	25	0	3	1	0	5
0	6	1	0	36	36.11% L			4	1	21	1	2	5	2	0
0	0	1	0	36	33.33% K			0	0	8	1	3	16	3	5
0	3	0	13	36	36.11% Y			0	1	11	17	0	4	0	3
0	0	0	4	36	**38.89%** H			3	0	2	4	1	20	1	5
0	0	0	0	36	**66.67%** P			24	1	4	1	3	2	0	1
0	1	0	2	36	**19.44%** D			0	0	4	3	5	4	18	2
4	2	0	0	36	27.78% K			0	0	4	0	8	19	2	3
0	1	0	1	36	22.22% N			1	1	6	2	4	7	7	8
2	0	0	1	36	22.22% P			8	2	8	1	9	5	2	1
2	0	0	2	32	3.13% D			1	0	12	2	5	2	6	4
2	0	0	0	30	6.67% N	6.67% D		6	1	5	3	6	1	5	3
2	1	0	3	30	10.00% G	0.00% P		0	1	13	5	4	1	4	2
0	3	0	1	28	25.00% A			1	1	11	1	2	3	8	1
1	0	0	0	27	14.81% A			1	0	6	3	2	6	8	1
0	1	0	0	17	0.00% A			0	2	2	3	0	2	7	1
1	0	2	1	14				0	0	3	3	1	0	6	1
2	0	0	0	14				0	0	3	2	3	4	2	0
2	0	0	0	10				0	0	3	1	2	2	1	1
0	0	0	0	10				0	1	2	0	0	1	5	1
0	1	0	0	9				0	0	2	0	1	1	3	2
0	0	0	0	9				0	0	0	0	3	1	2	3
1	0	0	0	9				0	0	3	0	1	0	5	0
0	1	0	0	9				0	0	6	0	0	0	3	0
0	1	1	0	9				1	0	3	1	2	0	2	0
0	0	0	0	9				0	0	1	1	3	1	2	1
0	5	0	0	9											
0	1	0	0	9											
0	0	0	0	8											
1	0	1	0	5											
0	0	0	0	4											
0	1	0	0	3											
0	0	0	0	3											

0	0	0	1	3													
0	0	0	0	3													
0	0	0	0	2													
0	0	0	0	0													
2	0	0	0	34	17.65%	E			0	1	2	0	3	10	11	7	
1	2	0	0	36	33.33%	K			1	1	16	0	1	13	2	2	
0	0	0	2	36	**58.33%**	F			0	0	6	23	1	3	0	3	
0	1	0	0	36	38.89%	K			1	2	4	0	0	23	5	1	
1	1	0	1	35	8.57%	E			0	1	13	1	4	7	4	5	
1	8	0	1	35	31.43%	I			0	0	25	1	4	4	0	1	
0	1	0	0	35	31.43%	N			0	0	8	1	5	7	3	11	
1	1	0	2	35	17.14%	E			1	0	8	2	3	7	11	3	
0	1	1	0	35	**65.71%**	A			0	0	29	1	0	1	3	1	
0	0	4	19	35	54.29%	Y			1	1	2	25	1	2	2	1	
1	0	0	4	35	20.00%	E			1	2	5	5	3	3	9	7	
1	10	0	2	35	28.57%	V			0	0	23	3	1	1	6	1	
0	3	0	0	35	**51.43%**	L			0	0	28	0	1	2	2	2	
1	3	0	0	35	31.43%	S			0	0	16	0	12	3	0	4	
0	1	0	1	35	**40.00%**	D			0	0	5	3	2	5	15	5	
2	0	1	0	35	17.14%	P			6	0	11	1	3	8	4	2	
1	2	0	3	35	8.57%	E			2	1	10	4	5	3	8	2	
2	1	0	2	35	31.43%	K			2	0	4	3	4	16	2	4	
1	0	0	1	35	**31.43%**	R			0	0	6	1	5	20	1	2	
2	2	0	0	35	14.29%	A			4	1	9	0	5	8	8	0	
0	4	3	1	35	5.71%	I			0	3	17	5	1	5	2	2	
1	1	1	17	35	**48.57%**	Y			0	0	5	20	4	2	2	2	
3	1	0	0	35	**28.57%**	D			0	0	8	0	5	2	13	7	
0	3	2	1	35	20.00%	K			1	1	13	3	2	10	2	3	
2	1	1	4	35	11.43%	Y			0	0	10	7	4	2	9	3	
3	1	0	0	35	25.71%	G			1	1	19	1	3	3	4	3	
3	1	0	3	35	2.86%	S			1	1	5	4	4	9	8	3	
1	3	0	1	35	20.00%	E	5.71%	S	2	0	8	2	3	4	12	4	
t	v	w	y	2521					88	51	790	271	243	442	381	206	
90	126	32	166	2521					88	52	804	273	253	452	390	209	
3.57%	5.00%	1.27%	6.58%	100.00%													

			a	c	d	e	f	g	h	I
36	41.67%	1	0.0%	0.0%	**38.9%**	2.8%	2.8%	2.8%	2.8%	2.8%
36	55.56%	2	2.8%	13.9%	0.0%	0.0%	**5.6%**	2.8%	0.0%	0.0%
36	**75.00%**	3	2.8%	0.0%	0.0%	0.0%	5.6%	2.8%	2.8%	2.8%
36	22.22%	4	**13.9%**	0.0%	**13.9%**	**8.3%**	2.8%	8.3%	0.0%	0.0%
36	**83.33%**	5	2.8%	0.0%	2.8%	2.8%	0.0%	2.8%	2.8%	**27.8%**
36	**69.44%**	6	0.0%	0.0%	2.8%	2.8%	5.6%	2.8%	0.0%	2.8%
36	50.00%	7	0.0%	0.0%	2.8%	**5.6%**	0.0%	**41.7%**	0.0%	2.8%
36	**69.44%**	8	0.0%	0.0%	2.8%	5.6%	0.0%	0.0%	2.8%	**25.0%**
36	11.11%	10	**2.8%**	0.0%	**13.9%**	**13.9%**	0.0%	13.9%	0.0%	2.8%
36	30.56%	11	11.1%	0.0%	0.0%	5.6%	2.8%	0.0%	0.0%	5.6%
36	22.22%	12	5.6%	0.0%	**13.9%**	5.6%	0.0%	**11.1%**	0.0%	2.8%
36	**44.44%**	13	**38.9%**	13.9%	5.6%	0.0%	0.0%	2.8%	0.0%	0.0%
36	41.67%	14	2.8%	0.0%	**22.2%**	5.6%	0.0%	8.3%	2.8%	0.0%
36	38.89%	15	**2.8%**	0.0%	**27.8%**	**11.1%**	0.0%	0.0%	2.8%	2.8%
36	38.89%	16	**11.1%**	0.0%	**16.7%**	**22.2%**	0.0%	2.8%	0.0%	0.0%
36	**61.11%**	17	2.8%	2.8%	**8.3%**	**52.8%**	0.0%	0.0%	2.8%	5.6%
36	**88.89%**	18	2.8%	0.0%	0.0%	0.0%	2.8%	0.0%	2.8%	**55.6%**
36	**55.56%**	19	2.8%	0.0%	16.7%	0.0%	0.0%	2.8%	0.0%	0.0%
36	52.78%	20	8.3%	0.0%	0.0%	13.9%	0.0%	0.0%	0.0%	0.0%
36	61.11%	23	**50.0%**	0.0%	0.0%	0.0%	0.0%	5.6%	0.0%	0.0%
36	**77.78%**	24	0.0%	0.0%	0.0%	0.0%	2.8%	0.0%	2.8%	2.8%
36	**38.89%**	25	5.6%	0.0%	0.0%	2.8%	11.1%	0.0%	2.8%	0.0%
36	**50.00%**	26	13.9%	0.0%	5.6%	2.8%	0.0%	0.0%	0.0%	0.0%
36	**77.78%**	27	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.6%
36	**69.44%**	28	**38.9%**	**5.6%**	0.0%	0.0%	0.0%	2.8%	0.0%	2.8%
36	58.33%	29	5.6%	0.0%	0.0%	5.6%	0.0%	0.0%	0.0%	**0.0%**
36	44.44%	30	2.8%	0.0%	0.0%	**8.3%**	0.0%	2.8%	0.0%	0.0%
36	47.22%	31	0.0%	2.8%	0.0%	0.0%	**11.1%**	2.8%	**8.3%**	0.0%
36	**55.56%**	32	2.8%	0.0%	0.0%	2.8%	0.0%	0.0%	**38.9%**	0.0%
36	**66.67%**	33	0.0%	2.8%	0.0%	0.0%	2.8%	0.0%	0.0%	0.0%
36	**50.00%**	34	0.0%	0.0%	**19.4%**	30.6%	2.8%	0.0%	2.8%	2.8%
36	52.78%	35	0.0%	0.0%	0.0%	5.6%	0.0%	0.0%	0.0%	2.8%
36	22.22%	36	8.3%	2.8%	13.9%	5.6%	2.8%	**2.8%**	5.6%	2.8%
36	22.22%	37	**2.8%**	0.0%	5.6%	0.0%	0.0%	**5.6%**	0.0%	2.8%
32	18.75%	38	**6.3%**	0.0%	**3.1%**	**15.6%**	0.0%	**15.6%**	0.0%	3.1%
30	16.67%	39	**6.7%**	0.0%	6.7%	**10.0%**	10.0%	3.3%	0.0%	6.7%
30	43.33%	40	**16.7%**	0.0%	13.3%	**0.0%**	6.7%	**10.0%**	0.0%	10.0%
28	28.57%	41	**25.0%**	0.0%	**14.3%**	**14.3%**	0.0%	3.6%	0.0%	0.0%
27	22.22%	42	**14.8%**	0.0%	11.1%	**18.5%**	11.1%	3.7%	0.0%	0.0%
17	41.18%	43	**0.0%**	11.8%	5.9%	**35.3%**	17.6%	0.0%	0.0%	0.0%
14	42.86%	44	**14.3%**	0.0%	21.4%	**21.4%**	0.0%	7.1%	0.0%	0.0%
14	28.57%	45	**0.0%**	0.0%	0.0%	**14.3%**	14.3%	0.0%	0.0%	7.1%
10	10.00%	46	**20.0%**	0.0%	0.0%	**10.0%**	10.0%	0.0%	0.0%	10.0%
10	20.00%	47	**10.0%**	0.0%	40.0%	**10.0%**	0.0%	0.0%	0.0%	10.0%
9	33.33%	48	**11.1%**	0.0%	11.1%	**22.2%**	0.0%	0.0%	0.0%	0.0%
9	22.22%	49	**0.0%**	0.0%	0.0%	**22.2%**	0.0%	0.0%	0.0%	**0.0%**
9	55.56%	50	**11.1%**	0.0%	22.2%	**33.3%**	0.0%	11.1%	0.0%	0.0%
9	66.67%	51	**33.3%**	0.0%	0.0%	**33.3%**	0.0%	**0.0%**	0.0%	**11.1%**
9	11.11%	52	**11.1%**	0.0%	11.1%	**11.1%**	0.0%	0.0%	0.0%	0.0%
9	33.33%	53	11.1%	0.0%	22.2%	**0.0%**	11.1%	0.0%	0.0%	0.0%

34	32.35%	63	**2.9%**	0.0%	**14.7%**	**17.6%**	0.0%	0.0%	5.9%	2.9%
36	36.11%	64	**22.2%**	2.8%	0.0%	5.6%	0.0%	11.1%	0.0%	2.8%
36	**63.89%**	65	2.8%	0.0%	0.0%	0.0%	**58.3%**	0.0%	0.0%	5.6%
36	63.89%	66	5.6%	0.0%	0.0%	13.9%	0.0%	0.0%	0.0%	0.0%
35	11.43%	67	**8.6%**	0.0%	2.9%	**8.6%**	0.0%	0.0%	2.9%	5.7%
35	**71.43%**	68	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**31.4%**
35	31.43%	69	**8.6%**	0.0%	5.7%	2.9%	2.9%	**0.0%**	2.9%	0.0%
35	31.43%	70	**2.9%**	0.0%	14.3%	**17.1%**	0.0%	0.0%	0.0%	5.7%
35	**82.86%**	71	**65.7%**	0.0%	2.9%	5.7%	0.0%	0.0%	0.0%	5.7%
35	**71.43%**	72	0.0%	2.9%	0.0%	5.7%	5.7%	2.9%	0.0%	0.0%
35	25.71%	73	**5.7%**	2.9%	**5.7%**	**20.0%**	2.9%	8.6%	0.0%	0.0%
35	**65.71%**	74	5.7%	0.0%	0.0%	17.1%	2.9%	0.0%	0.0%	**17.1%**
35	**80.00%**	75	11.4%	0.0%	0.0%	5.7%	0.0%	0.0%	0.0%	8.6%
35	34.29%	76	5.7%	0.0%	0.0%	0.0%	0.0%	**14.3%**	0.0%	5.7%
35	**42.86%**	77	2.9%	0.0%	**40.0%**	2.9%	5.7%	2.9%	2.9%	0.0%
35	17.14%	78	**2.9%**	0.0%	2.9%	**8.6%**	0.0%	8.6%	0.0%	14.3%
35	22.86%	79	**14.3%**	2.9%	14.3%	**8.6%**	2.9%	2.9%	0.0%	2.9%
35	45.71%	80	2.9%	0.0%	0.0%	5.7%	2.9%	2.9%	0.0%	0.0%
35	**57.14%**	81	5.7%	0.0%	0.0%	2.9%	0.0%	2.9%	0.0%	5.7%
35	25.71%	82	**14.3%**	0.0%	5.7%	**17.1%**	0.0%	2.9%	0.0%	0.0%
35	48.57%	83	**17.1%**	2.9%	2.9%	**2.9%**	2.9%	2.9%	0.0%	**5.7%**
35	**57.14%**	84	5.7%	0.0%	0.0%	5.7%	**5.7%**	2.9%	0.0%	2.9%
35	**37.14%**	85	5.7%	0.0%	**28.6%**	8.6%	0.0%	5.7%	2.9%	2.9%
35	28.57%	86	**5.7%**	0.0%	0.0%	**5.7%**	0.0%	2.9%	0.0%	14.3%
35	20.00%	87	5.7%	0.0%	8.6%	17.1%	**5.7%**	**8.6%**	0.0%	2.9%
35	**54.29%**	88	14.3%	0.0%	5.7%	5.7%	2.9%	**25.7%**	0.0%	2.9%
35	25.71%	89	2.9%	0.0%	**2.9%**	**20.0%**	2.9%	0.0%	**8.6%**	0.0%
35	22.86%	90	**2.9%**	0.0%	**14.3%**	**20.0%**	2.9%	0.0%	0.0%	0.0%
2472										
2521										

k	l	m	n	p	q	r	s	t	v	w	y			a
2.8%	8.3%	2.8%	2.8%	0.0%	0.0%	**5.6%**	0.0%	**11.1%**	0.0%	**8.3%**	**5.6%**	1	38.89%	
2.8%	**5.6%**	0.0%	0.0%	**2.8%**	0.0%	2.8%	5.6%	0.0%	5.6%	**8.3%**	**41.7%**	1	41.67%	
0.0%	11.1%	0.0%	0.0%	0.0%	0.0%	2.8%	0.0%	0.0%	0.0%	**11.1%**	**58.3%**	1	**58.33%**	
11.1%	8.3%	0.0%	2.8%	0.0%	**8.3%**	5.6%	8.3%	0.0%	2.8%	2.8%	2.8%	1	8.33%	13.89%
2.8%	**19.4%**	0.0%	0.0%	0.0%	0.0%	2.8%	0.0%	**2.8%**	**30.6%**	0.0%	0.0%	1	27.78%	
0.0%	**58.3%**	5.6%	2.8%	0.0%	2.8%	2.8%	0.0%	5.6%	5.6%	0.0%	0.0%	1	**58.33%**	
11.1%	2.8%	0.0%	**11.1%**	2.8%	5.6%	5.6%	2.8%	2.8%	2.8%	0.0%	0.0%	1	41.67%	
5.6%	**13.9%**	2.8%	2.8%	0.0%	2.8%	2.8%	2.8%	0.0%	**30.6%**	0.0%	0.0%	1	30.56%	
0.0%	5.6%	0.0%	5.6%	**2.8%**	5.6%	16.7%	**2.8%**	**8.3%**	2.8%	0.0%	2.8%	1	2.78%	
5.6%	8.3%	0.0%	2.8%	**16.7%**	2.8%	**25.0%**	5.6%	0.0%	8.3%	0.0%	0.0%	1	5.56%	11.11%
5.6%	5.6%	0.0%	**22.2%**	2.8%	0.0%	2.8%	**2.8%**	**19.4%**	0.0%	0.0%	0.0%	1	22.22%	5.56%
0.0%	2.8%	0.0%	2.8%	2.8%	2.8%	2.8%	8.3%	16.7%	0.0%	0.0%	0.0%	1	**38.89%**	38.89%
2.8%	0.0%	0.0%	0.0%	0.0%	8.3%	2.8%	**27.8%**	**13.9%**	0.0%	2.8%	0.0%	1	27.78%	
2.8%	8.3%	8.3%	8.3%	2.8%	0.0%	11.1%	**0.0%**	5.6%	5.6%	0.0%	0.0%	1	11.11%	
8.3%	0.0%	0.0%	**11.1%**	5.6%	**2.8%**	2.8%	**13.9%**	0.0%	0.0%	0.0%	2.8%	1	16.67%	11.11%
11.1%	0.0%	0.0%	2.8%	0.0%	5.6%	0.0%	2.8%	0.0%	0.0%	0.0%	2.8%	1	52.78%	
2.8%	19.4%	0.0%	0.0%	0.0%	0.0%	0.0%	2.8%	0.0%	**11.1%**	0.0%	0.0%	1	55.56%	
36.1%	0.0%	0.0%	2.8%	0.0%	0.0%	**19.4%**	5.6%	5.6%	8.3%	0.0%	0.0%	1	**36.11%**	
30.6%	2.8%	0.0%	0.0%	0.0%	13.9%	**22.2%**	**5.6%**	2.8%	0.0%	0.0%	0.0%	1	30.56%	8.33%
5.6%	2.8%	0.0%	5.6%	0.0%	**5.6%**	8.3%	**5.6%**	8.3%	2.8%	0.0%	0.0%	1	50.00%	50.00%
0.0%	5.6%	0.0%	2.8%	0.0%	0.0%	5.6%	2.8%	0.0%	0.0%	0.0%	**75.0%**	1	**75.00%**	
8.3%	22.2%	0.0%	0.0%	0.0%	0.0%	**27.8%**	8.3%	0.0%	0.0%	2.8%	**8.3%**	1	27.78%	5.56%
33.3%	11.1%	5.6%	8.3%	0.0%	**0.0%**	**16.7%**	2.8%	0.0%	0.0%	0.0%	0.0%	1	33.33%	13.89%
0.0%	**66.7%**	2.8%	0.0%	0.0%	5.6%	8.3%	2.8%	2.8%	5.6%	0.0%	0.0%	1	66.67%	
2.8%	19.4%	0.0%	8.3%	0.0%	5.6%	0.0%	2.8%	5.6%	**5.6%**	0.0%	0.0%	1	38.89%	38.89%
11.1%	**36.1%**	**2.8%**	0.0%	11.1%	0.0%	**2.8%**	5.6%	0.0%	16.7%	2.8%	0.0%	1	36.11%	5.56%
33.3%	**16.7%**	0.0%	5.6%	0.0%	8.3%	**11.1%**	8.3%	0.0%	0.0%	2.8%	0.0%	1	33.33%	
2.8%	**19.4%**	0.0%	5.6%	0.0%	2.8%	0.0%	0.0%	0.0%	**8.3%**	**0.0%**	**36.1%**	1	36.11%	
16.7%	2.8%	0.0%	13.9%	8.3%	0.0%	0.0%	2.8%	0.0%	0.0%	0.0%	11.1%	1	**38.89%**	
2.8%	11.1%	0.0%	0.0%	**66.7%**	2.8%	2.8%	8.3%	0.0%	0.0%	0.0%	0.0%	1	**66.67%**	
2.8%	5.6%	0.0%	2.8%	0.0%	2.8%	5.6%	13.9%	0.0%	2.8%	0.0%	5.6%	1	**19.44%**	
27.8%	2.8%	0.0%	2.8%	0.0%	5.6%	**25.0%**	11.1%	11.1%	**5.6%**	0.0%	0.0%	1	27.78%	
5.6%	0.0%	0.0%	**22.2%**	2.8%	0.0%	8.3%	11.1%	0.0%	2.8%	0.0%	2.8%	1	22.22%	8.33%
2.8%	11.1%	5.6%	2.8%	**22.2%**	**0.0%**	11.1%	**19.4%**	5.6%	0.0%	0.0%	2.8%	1	22.22%	
6.3%	12.5%	0.0%	**3.1%**	3.1%	9.4%	0.0%	**9.4%**	6.3%	0.0%	0.0%	6.3%	1	3.13%	6.25%
3.3%	0.0%	3.3%	**6.7%**	**20.0%**	3.3%	0.0%	**13.3%**	6.7%	0.0%	0.0%	0.0%	1	6.67%	6.67%
0.0%	3.3%	3.3%	3.3%	**0.0%**	3.3%	3.3%	**6.7%**	6.7%	3.3%	0.0%	10.0%	1	0.00%	16.67%
7.1%	0.0%	3.6%	3.6%	3.6%	0.0%	3.6%	**7.1%**	0.0%	10.7%	0.0%	3.6%	1	14.29%	25.00%
7.4%	3.7%	0.0%	0.0%	3.7%	3.7%	14.8%	**3.7%**	3.7%	0.0%	0.0%	0.0%	1	14.81%	14.81%
0.0%	5.9%	0.0%	0.0%	0.0%	**5.9%**	11.8%	**0.0%**	0.0%	5.9%	0.0%	0.0%	1	35.29%	
0.0%	0.0%	0.0%	0.0%	0.0%	**7.1%**	0.0%	**0.0%**	7.1%	0.0%	14.3%	7.1%	1	21.43%	14.29%
14.3%	**14.3%**	**0.0%**	0.0%	0.0%	0.0%	**14.3%**	7.1%	**14.3%**	0.0%	0.0%	0.0%	1	0.00%	
10.0%	**0.0%**	0.0%	**10.0%**	0.0%	**0.0%**	10.0%	0.0%	20.0%	**0.0%**	0.0%	0.0%	1	10.00%	20.00%
10.0%	0.0%	10.0%	10.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1	10.00%	10.00%
0.0%	**0.0%**	**0.0%**	**0.0%**	0.0%	22.2%	11.1%	11.1%	0.0%	**11.1%**	0.0%	0.0%	1	22.22%	11.11%
11.1%	0.0%	**0.0%**	11.1%	0.0%	22.2%	0.0%	**33.3%**	0.0%	0.0%	0.0%	0.0%	1	22.22%	
0.0%	**11.1%**	0.0%	**0.0%**	0.0%	**0.0%**	0.0%	**0.0%**	**11.1%**	**0.0%**	0.0%	0.0%	1	33.33%	11.11%
0.0%	11.1%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	11.1%	0.0%	0.0%	1	33.33%	33.33%
0.0%	11.1%	0.0%	0.0%	11.1%	0.0%	0.0%	**22.2%**	0.0%	11.1%	11.1%	0.0%	1	0.00%	11.11%
0.0%	**0.0%**	0.0%	0.0%	0.0%	11.1%	11.1%	**33.3%**	0.0%	0.0%	0.0%	0.0%	1	33.33%	11.11%

11.8%	0.0%	2.9%	2.9%	0.0%	**17.6%**	**11.8%**	2.9%	5.9%	0.0%	0.0%	0.0%	1	11.76%	
33.3%	**2.8%**	0.0%	5.6%	2.8%	0.0%	**2.8%**	0.0%	2.8%	5.6%	0.0%	0.0%	1	33.33%	22.22%
5.6%	8.3%	0.0%	2.8%	0.0%	5.6%	2.8%	2.8%	0.0%	0.0%	0.0%	5.6%	1	**58.33%**	
38.9%	2.8%	5.6%	0.0%	2.8%	**2.8%**	**25.0%**	0.0%	0.0%	2.8%	0.0%	0.0%	1	38.89%	5.56%
14.3%	**20.0%**	2.9%	2.9%	0.0%	**11.4%**	**2.9%**	8.6%	2.9%	2.9%	0.0%	2.9%	1	8.57%	8.57%
5.7%	**17.1%**	0.0%	0.0%	0.0%	2.9%	5.7%	8.6%	2.9%	**22.9%**	0.0%	2.9%	1	31.43%	
0.0%	11.4%	0.0%	**31.4%**	0.0%	**0.0%**	17.1%	**14.3%**	0.0%	2.9%	0.0%	0.0%	1	31.43%	8.57%
17.1%	11.4%	0.0%	0.0%	2.9%	**8.6%**	2.9%	5.7%	2.9%	2.9%	0.0%	5.7%	1	17.14%	
0.0%	8.6%	0.0%	0.0%	0.0%	2.9%	2.9%	0.0%	0.0%	2.9%	2.9%	0.0%	1	**65.71%**	65.71%
2.9%	2.9%	0.0%	2.9%	2.9%	0.0%	2.9%	2.9%	0.0%	0.0%	11.4%	**54.3%**	1	54.29%	
2.9%	0.0%	2.9%	0.0%	2.9%	20.0%	5.7%	**5.7%**	2.9%	0.0%	0.0%	11.4%	1	20.00%	5.71%
0.0%	**14.3%**	0.0%	2.9%	0.0%	0.0%	2.9%	0.0%	**2.9%**	**28.6%**	0.0%	5.7%	1	28.57%	5.71%
2.9%	**51.4%**	0.0%	2.9%	0.0%	2.9%	2.9%	2.9%	0.0%	8.6%	0.0%	0.0%	1	**51.43%**	11.43%
5.7%	11.4%	0.0%	0.0%	0.0%	11.4%	2.9%	**31.4%**	**2.9%**	8.6%	0.0%	0.0%	1	31.43%	5.71%
2.9%	5.7%	0.0%	**5.7%**	0.0%	8.6%	8.6%	5.7%	0.0%	2.9%	0.0%	2.9%	1	**40.00%**	
17.1%	5.7%	0.0%	0.0%	**17.1%**	5.7%	5.7%	**2.9%**	5.7%	0.0%	2.9%	0.0%	1	17.14%	
8.6%	2.9%	0.0%	2.9%	5.7%	**2.9%**	0.0%	11.4%	**2.9%**	**5.7%**	0.0%	8.6%	1	8.57%	14.29%
31.4%	2.9%	0.0%	5.7%	5.7%	5.7%	14.3%	**5.7%**	5.7%	2.9%	0.0%	5.7%	1	31.43%	
25.7%	2.9%	0.0%	2.9%	0.0%	2.9%	**31.4%**	11.4%	2.9%	0.0%	0.0%	2.9%	1	**31.43%**	5.71%
2.9%	2.9%	2.9%	0.0%	11.4%	0.0%	**20.0%**	**8.6%**	5.7%	5.7%	0.0%	0.0%	1	14.29%	14.29%
8.6%	**11.4%**	5.7%	2.9%	0.0%	**2.9%**	**5.7%**	2.9%	0.0%	**11.4%**	8.6%	2.9%	1	5.71%	17.14%
2.9%	0.0%	0.0%	2.9%	0.0%	2.9%	2.9%	8.6%	2.9%	2.9%	2.9%	**48.6%**	1	**48.57%**	5.71%
0.0%	5.7%	0.0%	20.0%	0.0%	0.0%	2.9%	5.7%	8.6%	2.9%	0.0%	0.0%	1	**28.57%**	5.71%
20.0%	**5.7%**	2.9%	5.7%	2.9%	**2.9%**	**8.6%**	**5.7%**	0.0%	8.6%	5.7%	2.9%	1	2.86%	5.71%
5.7%	**8.6%**	0.0%	0.0%	0.0%	8.6%	0.0%	5.7%	5.7%	2.9%	2.9%	**11.4%**	1	11.43%	5.71%
2.9%	**8.6%**	2.9%	2.9%	2.9%	5.7%	**5.7%**	0.0%	8.6%	2.9%	0.0%	0.0%	1	25.71%	14.29%
8.6%	8.6%	2.9%	2.9%	2.9%	5.7%	**8.6%**	**2.9%**	8.6%	2.9%	0.0%	8.6%	1	20.00%	
5.7%	**11.4%**	0.0%	11.4%	**5.7%**	0.0%	5.7%	**5.7%**	2.9%	8.6%	0.0%	2.9%	1	2.86%	

c	d	e	f	g	h	I	k	l	m	n	p	q	r
	38.89%							8.33%					5.56%
13.89%			5.56%					5.56%					
			5.56%					11.11%					
	13.89%	8.33%		8.33%			11.11%	8.33%				8.33%	5.56%
						27.78%		19.44%					
			5.56%					58.33%	5.56%				
		5.56%		41.67%			11.11%			11.11%		5.56%	5.56%
		5.56%				25.00%	5.56%	13.89%					
	13.89%	13.89%		13.89%				5.56%		5.56%		5.56%	16.67%
		5.56%				5.56%	5.56%	8.33%			16.67%		25.00%
	13.89%	5.56%		11.11%			5.56%	5.56%		22.22%			
13.89%	5.56%												
	22.22%	5.56%		8.33%								8.33%	
	27.78%	11.11%						8.33%	8.33%	8.33%			11.11%
	16.67%	22.22%					8.33%			11.11%	5.56%		
	8.33%	52.78%				5.56%	11.11%					5.56%	
						55.56%		19.44%					
	16.67%						36.11%						19.44%
		13.89%					30.56%					13.89%	22.22%
				5.56%			5.56%			5.56%		5.56%	8.33%
								5.56%					5.56%
			11.11%				8.33%	22.22%					27.78%
	5.56%						33.33%	11.11%	5.56%	8.33%			16.67%
						5.56%		66.67%				5.56%	8.33%
5.56%								19.44%		8.33%		5.56%	
		5.56%					11.11%	36.11%			11.11%		
		8.33%					33.33%	16.67%		5.56%		8.33%	11.11%
			11.11%		8.33%			19.44%		5.56%			
					38.89%		16.67%			13.89%	8.33%		
								11.11%			66.67%		
	19.44%	30.56%						5.56%					5.56%
		5.56%					27.78%					5.56%	25.00%
	13.89%	5.56%			5.56%		5.56%			22.22%			8.33%
	5.56%			5.56%				11.11%	5.56%		22.22%		11.11%
		15.63%		15.63%			6.25%	12.50%				9.38%	
	6.67%	10.00%	10.00%			6.67%				6.67%	20.00%		
	13.33%		6.67%	10.00%		10.00%							
	14.29%	14.29%					7.14%						
	11.11%	18.52%	11.11%				7.41%						14.81%
11.76%	5.88%	35.29%	17.65%					5.88%				5.88%	11.76%
	21.43%	21.43%		7.14%								7.14%	
		14.29%	14.29%			7.14%	14.29%	14.29%					14.29%
		10.00%	10.00%			10.00%	10.00%			10.00%			10.00%
	40.00%	10.00%				10.00%	10.00%		10.00%	10.00%			
	11.11%	22.22%										22.22%	11.11%
		22.22%					11.11%			11.11%		22.22%	
	22.22%	33.33%		11.11%				11.11%					
		33.33%				11.11%		11.11%					
	11.11%	11.11%						11.11%			11.11%		
	22.22%		11.11%									11.11%	11.11%

14.71%	17.65%			5.88%		11.76%				17.65%	11.76%
	5.56%		11.11%			33.33%			5.56%		
		58.33%			5.56%	5.56%	8.33%			5.56%	
	13.89%					38.89%		5.56%			25.00%
	8.57%				5.71%	14.29%	20.00%			11.43%	
					31.43%	5.71%	17.14%				5.71%
5.71%							11.43%		31.43%		17.14%
14.29%	17.14%				5.71%	17.14%	11.43%			8.57%	
	5.71%				5.71%		8.57%				
	5.71%	5.71%									
5.71%	20.00%		8.57%							20.00%	5.71%
	17.14%				17.14%		14.29%				
	5.71%				8.57%		51.43%				
			14.29%		5.71%	5.71%	11.43%			11.43%	
40.00%		5.71%					5.71%		5.71%	8.57%	8.57%
	8.57%		8.57%		14.29%	17.14%	5.71%			17.14%	5.71%	5.71%
14.29%	8.57%					8.57%				5.71%	
	5.71%					31.43%			5.71%	5.71%	5.71%	14.29%
					5.71%	25.71%					31.43%
5.71%	17.14%									11.43%		20.00%
					5.71%	8.57%	11.43%	5.71%			5.71%
	5.71%	5.71%									
28.57%	8.57%		5.71%				5.71%		20.00%		
	5.71%				14.29%	20.00%	5.71%		5.71%		8.57%
8.57%	17.14%	5.71%	8.57%			5.71%	8.57%			8.57%	
5.71%	5.71%		25.71%				8.57%			5.71%	5.71%
	20.00%			8.57%		8.57%	8.57%			5.71%	8.57%
14.29%	20.00%					5.71%	11.43%		11.43%	5.71%		5.71%

s	t	v	w	y
	11.11%		8.33%	5.56%
5.56%		5.56%	8.33%	41.67%
			11.11%	58.33%
8.33%				
		30.56%		
	5.56%	5.56%		
		30.56%		
	8.33%			
5.56%		8.33%		
	19.44%			
8.33%	16.67%			
27.78%	13.89%			
	5.56%	5.56%		
13.89%				
		11.11%		
5.56%	5.56%	8.33%		
5.56%				
5.56%	8.33%			
				75.00%
8.33%				8.33%
		5.56%		
	5.56%	5.56%		
5.56%		16.67%		
8.33%				
		8.33%		36.11%
				11.11%
8.33%				
13.89%				5.56%
11.11%	11.11%	5.56%		
11.11%				
19.44%	5.56%			
9.38%	6.25%			6.25%
13.33%	6.67%			
6.67%	6.67%			10.00%
7.14%		10.71%		
		5.88%		
	7.14%		14.29%	7.14%
7.14%	14.29%			
	20.00%			
11.11%		11.11%		
33.33%				
	11.11%			
		11.11%		
22.22%		11.11%	11.11%	
33.33%				

	5.88%			
		5.56%		
				5.56%
8.57%				
8.57%		22.86%		
14.29%				
5.71%				5.71%
			11.43%	54.29%
5.71%				11.43%
		28.57%		5.71%
		8.57%		
31.43%		8.57%		
5.71%				
	5.71%			
11.43%		5.71%		8.57%
5.71%	5.71%			5.71%
11.43%				
8.57%	5.71%	5.71%		
		11.43%	8.57%	
8.57%				48.57%
5.71%	8.57%			
5.71%		8.57%	5.71%	
5.71%	5.71%			11.43%
	8.57%			
	8.57%			8.57%
5.71%		8.57%		

Anopheles gamagCP3837	II	cartplsnsk tkqteakpkm gkdfykilgv sknasddeik kayrklalky**hpd**knkapqa ee
Anopheles gamagCP13646	I	pysnifcrst hahshtmvfe tkfydilgva psctpdelkk ayrklalky**h pd**knpnegek fkqi
Caenorhabditi auxilin	III	eeiqirdwtq gkernirall gslhnvlweg adrwnqpsmg dlltpdqikk hyrkaclvvh pd
Caenorhabditi DNJ-30	III	lksteqqdaa ltseqqierl lkpgstylnl npyevlqidl dtdieaakkk ykklsllvhp dknpd
Caenorhabditi Y44A6C.2	III	lqilsiqgns wqnywdpsdv leglnaelwn qternqhyfl naehrknfkk iadhfypdqe d
Danio rerio tropomodu	III	tdaemcdiaa ilgmytlmsn kqyydalntt gkiantegin svvkpdvyky**ype**eppndtn ve
Dictyostelium auxilin	III	pivsekikmw gekggrknnl rvllstlhev lwiesgwekv tygslvtpiq vkkvyrkaii vv

erfkevaea yevlsdkkkr diydqygeeg lkggaggmpg aggqsgqfqy nfhgdprat
ismayev lsdpekkaiy deggeaaikq gagggggfh spmdifhmff nggfsgrkn
dkltgsphl slakmaftel ndayskyqnd paa
ddrera dkafdivkka ikqmedpiel nrckdcyteg karlaivmse kkrklrkd
dgfgaelehg vdlseafdfl kndgtrvsvr fdelilqvfv wpnekpsrkr kaqeqgsiak
eetlryiqk ndnrlqevnl nnipdipipt lkeifeamkr nthvlclsia gtrsndpva
vhpdkvhng tmeqkmiaqr ifetlrdqfe vfkvdlep

If done correctly, all values in last table should equal zero

Total

	a	c	d	e	f	g	h	I	k	l	m	n	p	q	r	s	t	v	w
1	22	14	349	51	16	7	6	7	44	15	14	64	0	3	13	64	31	5	3
2	56	15	14	12	61	4	29	6	7	85	1	1	71	7	6	14	6	18	22
3	15	3	4	1	34	6	11	4	2	66	2	0	3	3	5	5	8	1	17
4	65	2	88	210	14	42	12	4	91	52	0	17	3	47	25	40	24	7	2
5	12	2	13	10	10	25	2	237	9	109	4	2	6	7	8	5	52	233	0
6	1	3	4	2	9	15	0	11	6	652	9	1	3	1	2	6	4	16	1
7	1	4	17	63	3	496	10	1	29	4	1	47	21	21	5	13	8	3	1
8	6	12	2	7	2	3	3	99	9	139	11	5	10	8	23	4	2	403	0
9	53	1	82	70	3	20	16	6	50	10	3	29	101	37	50	173	40	4	1
10	45	2	10	41	14	7	7	7	175	15	2	5	124	25	172	30	17	24	9
11	9	0	122	35	3	92	12	4	34	24	5	134	6	11	16	104	113	4	18
12	536	28	18	2	1	24	2	19	0	14	3	2	5	2	3	53	14	21	0
13	12	0	120	17	2	17	3	1	16	1	0	53	7	8	4	293	196	1	1
14	62	1	129	120	17	20	4	19	56	45	7	14	70	81	12	37	24	28	0
15	97	0	139	178	1	23	2	6	69	4	2	30	14	50	33	68	19	16	0
16	34	1	174	364	1	1	2	6	25	17	5	5	1	63	9	4	29	9	0
17	3	0	1	0	2	0	2	504	5	123	20	0	1	0	4	2	2	85	0
18	6	0	8	11	1	7	6	8	519	8	2	11	0	12	127	9	14	6	0
19	61	3	14	14	1	1	3	4	430	7	0	9	1	31	97	48	27	3	0
20	518	6	3	15	1	8	9	5	17	4	0	13	0	40	37	55	16	7	0
21	0	1	1	0	93	1	24	5	0	7	0	1	0	1	2	2	1	1	9
22	2	0	0	1	12	0	35	4	115	37	0	2	1	10	481	4	1	2	3
23	28	0	14	32	2	2	2	9	392	13	2	19	1	45	148	14	18	10	0
24	50	7	0	1	4	0	1	17	64	503	32	0	0	26	20	1	7	18	3
25	487	26	0	0	0	2	0	13	1	13	22	3	1	16	2	91	10	66	0
26	9	0	1	3	7	1	0	47	165	291	80	5	6	13	77	21	1	30	2
27	13	1	4	74	1	1	4	15	317	83	20	6	1	116	58	12	8	22	1
28	8	20	0	1	50	1	72	5	2	93	0	37	1	1	3	4	11	60	86
29	1	0	0	1	0	0	738	0	6	1	0	5	3	0	0	1	0	0	0
30	0	1	0	0	1	0	0	0	1	4	0	0	747	1	1	3	0	0	0
31	0	0	730	11	1	0	1	1	1	2	0	1	0	1	2	5	0	1	0
32	21	0	1	3	2	0	6	21	423	25	6	16	1	10	136	13	20	53	2
33	26	18	8	8	30	67	44	7	6	27	1	403	6	8	17	33	16	19	2
34	43	3	20	7	0	85	17	7	145	14	13	14	222	44	35	40	28	20	0
35	70	4	181	82	9	154	18	5	16	17	2	74	8	17	6	57	24	3	0
36	64	2	147	70	3	32	12	7	36	6	4	127	133	16	11	52	19	6	0
37	58	0	54	67	3	131	7	7	90	12	1	20	109	25	36	47	16	12	0
38	185	7	53	139	3	15	4	5	65	34	4	22	8	19	13	38	15	18	0
39	197	2	28	159	8	9	4	9	39	20	11	8	28	20	24	38	26	12	0
40	124	3	11	135	2	8	8	8	32	9	4	10	9	27	5	33	15	20	0
41	26	1	9	74	0	5	1	3	37	6	2	9	3	33	20	16	10	7	2
42	46	1	6	36	5	3	1	7	21	14	11	3	1	8	13	7	17	2	2
43	17	0	8	40	3	8	2	5	15	12	7	17	0	10	4	8	3	9	0
44	28	0	15	23	1	4	1	3	13	1	1	7	0	4	4	5	6	4	0
45	15	2	1	24	1	1	1	4	1	9	10	7	2	5	4	3	5	6	3
46	18	0	1	7	1	1	0	3	3	1	4	3	2	3	2	5	0	1	2
47	3	0	2	8	0	1	0	0	6	3	0	3	0	3	0	5	7	3	0
48	5	0	1	2	0	2	0	2	3	0	0	1	0	0	0	4	0	1	1

49	5	0	1	2	0	0	0	1	2	1	0	1	1	0	0	6	0	0	1
50	1	0	1	2	1	0	0	1	4	2	1	0	0	1	1	4	1	1	0
51	0	0	2	5	0	0	1	1	1	1	0	0	0	0	1	2	0	5	0
52	0	0	0	2	0	1	0	1	2	1	0	1	1	0	2	2	3	1	0
53	0	0	1	5	0	0	1	1	1	1	0	0	0	1	0	2	0	0	0
54	2	0	1	3	0	0	0	0	0	2	0	0	0	0	0	0	0	1	1
55	0	1	0	2	0	0	2	0	0	1	0	0	0	0	1	0	0	1	0
56	2	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	1	1	0
57	1	0	0	0	0	1	0	1	1	0	0	0	0	0	1	1	1	0	0
58	1	0	1	0	0	0	0	0	0	2	1	0	0	0	0	1	0	0	0
59	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0
60	0	0	1	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
62	71	0	87	302	3	22	9	9	65	12	11	10	2	45	54	18	22	12	1
63	76	1	12	21	10	6	9	18	342	42	21	11	2	32	96	14	20	12	2
64	17	2	3	0	629	0	2	6	4	16	27	2	1	3	2	16	9	4	0
65	34	1	10	18	0	3	12	41	371	18	30	12	2	97	55	16	15	23	0
66	53	12	31	282	7	3	5	20	78	56	9	6	3	89	52	14	12	23	1
67	24	6	2	2	2	2	0	347	5	161	7	1	0	1	4	7	6	180	0
68	98	7	11	12	2	56	12	8	44	16	3	176	1	101	23	128	42	15	1
69	78	2	28	295	14	5	8	6	85	11	5	53	4	73	34	16	25	11	0
70	663	0	2	6	0	3	0	8	1	21	2	3	2	2	3	18	8	11	1
71	3	3	2	6	36	1	34	8	32	11	5	9	1	6	10	3	3	5	46
72	54	8	86	357	2	11	6	0	30	6	4	24	3	60	23	46	26	1	0
73	36	10	8	19	13	2	3	133	16	50	13	6	2	5	19	5	69	338	0
74	9	1	1	6	17	1	1	35	5	630	6	4	0	1	2	4	0	26	0
75	16	23	1	26	1	40	6	16	82	28	10	13	0	18	26	373	62	7	0
76	8	0	487	22	5	7	3	1	26	14	3	81	0	20	18	31	13	8	0
77	68	3	53	111	2	21	6	13	52	13	2	13	247	31	16	52	23	15	1
78	37	6	57	187	8	20	8	17	84	23	4	36	10	95	26	32	45	45	0
79	28	2	5	20	17	17	2	6	407	28	9	14	9	29	59	43	29	8	1
80	7	8	5	11	8	7	3	7	78	12	3	12	8	7	526	13	7	8	4
81	185	1	27	79	7	10	0	9	107	22	4	24	16	37	109	51	18	13	2
82	90	3	15	58	9	7	23	114	41	67	19	31	2	71	51	31	17	36	13
83	10	3	7	10	55	8	6	6	7	11	6	8	5	8	6	18	7	7	8
84	14	0	513	28	6	12	6	7	3	28	4	26	10	7	10	6	7	4	0
85	26	3	29	42	4	12	8	20	74	53	19	31	7	153	97	53	30	15	4
86	28	7	18	25	88	65	19	12	31	39	9	1	2	28	26	32	32	34	11
87	16	2	21	26	12	355	5	18	9	69	5	7	10	16	67	16	9	11	6
88	30	6	47	121	17	17	89	17	63	27	15	22	19	30	49	58	26	12	2
89	99	1	75	118	15	23	12	10	27	49	4	33	34	31	27	50	29	31	3
	a	c	d	e	f	g	h	I	k	l	m	n	p	q	r	s	t	v	w
	5048	318	4260	4463	1428	2090	1445	2095	5790	4196	589	1936	2144	2038	3273	2772	1549	2225	302

I

y			a	c	d	e	f	g	h	I	k	l	m	n	p	q	r	s	t	v	w
15	743	1	0	3	100	6	0	4	0	0	23	0	0	3	0	1	4	7	5	0	0
309	744	2	0	0	0	0	24	0	1	0	0	16	0	0	2	2	0	0	0	0	0
555	745	3	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
1	746	4	10	0	33	82	0	3	0	0	7	0	0	0	0	12	0	6	4	0	0
1	747	5	2	0	1	4	1	0	0	59	0	6	0	0	0	0	3	2	20	59	0
1	747	6	0	0	0	0	0	0	0	0	0	157	0	0	0	0	0	0	0	0	0
0	748	7	0	0	1	9	0	141	0	0	0	0	0	6	0	0	0	0	0	0	0
2	750	8	0	0	0	0	0	0	0	18	0	16	0	0	0	0	0	0	0	124	0
2	751	9	12	0	15	8	0	4	1	0	9	1	0	4	23	5	3	65	8	0	0
21	752	10	4	0	0	0	1	0	0	0	79	1	0	0	17	1	50	3	0	3	0
6	752	11	2	0	34	3	0	24	1	0	2	0	0	43	0	0	0	28	22	0	0
5	752	12	151	2	0	1	0	0	0	1	0	0	0	0	0	0	0	4	0	0	0
0	752	13	3	0	20	5	0	1	0	1	1	0	0	8	0	1	0	79	40	0	0
6	752	14	13	0	21	46	1	5	0	0	14	2	0	1	18	28	1	2	3	4	0
3	754	15	14	0	43	39	0	1	2	0	27	0	0	8	1	6	7	8	1	2	0
3	753	16	2	0	47	98	0	1	0	0	1	0	0	0	0	3	0	0	6	0	0
1	755	17	0	0	0	0	0	0	0	111	0	44	0	0	0	0	0	0	0	3	0
0	755	18	0	0	0	0	0	0	0	0	150	0	2	0	0	0	7	0	0	0	0
1	755	19	5	0	0	0	0	0	0	0	115	0	0	2	0	2	18	15	2	0	0
0	754	20	146	0	0	0	0	0	0	0	0	0	0	0	0	1	1	9	1	0	0
605	754	21	0	0	0	0	24	0	1	0	0	0	0	0	0	0	0	0	1	0	0
44	754	22	0	0	0	0	2	0	2	0	19	2	0	0	0	0	123	0	1	0	0
3	754	23	0	0	2	3	0	1	0	0	102	1	0	1	0	12	34	2	0	0	0
1	755	24	19	3	0	0	0	0	0	1	5	123	5	0	0	2	1	0	0	0	0
3	756	25	137	0	0	0	0	1	0	0	0	0	0	0	0	0	0	14	2	5	0
0	759	26	3	0	0	0	0	0	0	21	45	24	37	0	0	0	23	3	0	3	0
2	759	27	1	0	1	19	0	0	0	1	11	1	1	0	0	23	0	1	0	0	0
304	759	28	0	0	0	0	7	0	9	0	0	11	0	19	0	0	0	0	0	0	6
3	759	29	0	0	0	0	0	0	159	0	0	0	0	0	0	0	0	0	0	0	0
0	759	30	0	0	0	0	0	0	0	0	0	0	0	0	159	0	0	0	0	0	0
2	759	31	0	0	159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	759	32	3	0	0	0	0	0	0	14	61	4	2	0	0	0	43	0	10	22	0
12	758	33	1	2	0	1	1	18	6	0	0	0	0	114	1	1	0	9	4	0	0
1	758	34	5	0	6	1	0	22	0	0	43	0	0	2	58	13	2	4	2	1	0
3	750	35	7	0	51	28	0	50	1	1	1	0	0	13	0	1	0	5	1	0	0
3	750	36	14	1	46	20	0	1	2	0	4	0	1	20	42	2	0	5	1	0	0
10	705	37	12	0	21	15	0	30	1	0	28	0	0	4	16	4	1	4	3	1	0
6	653	38	54	1	9	33	0	1	0	0	8	0	0	4	0	2	1	8	4	0	0
1	643	39	62	2	6	26	0	1	0	1	3	1	0	0	0	7	0	8	5	1	0
3	466	40	11	0	0	47	0	5	1	0	5	0	0	0	0	2	0	0	2	1	0
5	269	41	1	0	0	3	0	0	0	0	1	0	0	0	0	3	0	0	0	1	0
2	206	42	1	0	0	0	0	0	0	0	4	0	0	1	0	0	0	0	0	0	0
4	172	43	0	0	1	1	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0
1	121	44	1	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0
0	104	45	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	59	46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	44	47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	22	48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

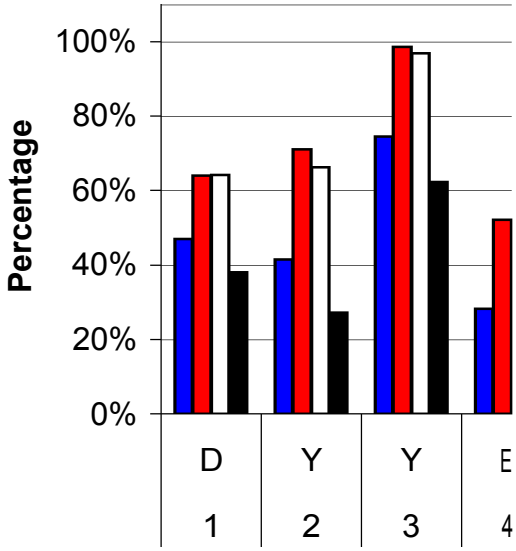
0	21	49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	21	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	19	51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	17	52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	13	53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	10	54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	8	55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	7	56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	7	57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	6	58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	6	59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	3	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	1	61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	758	62	11	0	15	94	0	3	1	3	7	0	0	2	0	4	11	1	5	2	0	
11	758	63	1	0	1	0	0	0	1	1	127	3	3	2	0	2	14	3	1	0	0	
15	758	64	0	0	0	0	154	0	0	0	0	0	2	0	0	0	0	0	0	0	0	
0	758	65	3	0	0	0	0	0	1	3	137	0	0	1	0	8	3	3	0	0	0	
2	758	66	3	0	2	124	0	1	0	0	9	3	0	1	0	13	1	1	0	1	0	
1	758	67	11	2	0	0	1	0	0	81	0	22	0	0	0	0	0	0	0	42	0	
1	757	68	23	1	0	0	0	7	0	0	17	0	0	31	0	20	2	48	10	0	0	
4	757	69	10	0	1	90	5	1	2	0	9	0	2	4	0	27	3	0	1	4	0	
1	755	70	156	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	
530	754	71	0	0	0	0	3	0	5	0	3	0	1	1	0	0	0	0	0	0	0	
7	754	72	5	0	18	125	0	1	1	0	0	0	0	4	0	3	0	2	0	0	0	
4	751	73	3	1	0	0	0	0	0	25	0	1	1	0	0	0	0	0	15	113	0	
1	750	74	0	0	0	0	0	0	0	0	0	159	0	0	0	0	0	0	0	0	0	
2	750	75	4	1	0	0	0	6	0	4	18	0	0	4	0	0	1	109	12	0	0	
1	748	76	0	0	146	1	0	0	0	0	0	0	0	11	0	0	0	1	0	0	0	
4	746	77	11	0	21	24	0	3	0	0	6	0	0	1	72	0	0	15	6	0	0	
6	746	78	2	0	10	62	0	0	0	0	14	0	0	7	0	50	3	2	5	4	0	
9	742	79	0	0	0	0	0	0	0	0	150	1	0	0	0	2	3	1	2	0	0	
5	739	80	0	0	0	0	0	0	0	0	20	0	0	0	0	0	139	0	0	0	0	
1	722	81	67	0	5	32	0	1	0	0	17	0	0	0	0	11	16	8	2	0	0	
6	704	82	36	0	0	11	1	0	8	31	2	22	9	4	0	18	6	5	1	5	0	
506	702	83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	
4	695	84	0	0	159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
13	693	85	9	0	0	8	0	0	0	0	9	5	4	1	0	78	39	0	6	0	0	
184	691	86	2	0	0	0	49	13	4	1	0	7	1	0	0	0	1	0	6	0	0	
9	689	87	0	0	0	0	0	153	0	0	1	1	0	0	0	1	3	0	0	0	0	
20	687	88	5	0	6	42	0	0	69	0	8	1	3	1	3	5	4	7	3	0	0	
15	686	89	68	0	32	17	0	1	0	0	3	4	0	3	5	10	2	1	8	5	0	
y	51278		a	c	d	e	f	g	h	I	k	l	m	n	p	q	r	s	t	v	w	
3317	51278		1126	19	1033	1132	274	504	279	378	1427	639	73	334	418	389	573	499	231	410	6	

Position	Amino acid	All	I	II	III
1	D	47%	64%	64%	38%
2	Y	42%	71%	66%	27%
3	Y	74%	99%	97%	62%
4	E	28%	52%	29%	20%
5	I*	32%	38%	39%	28%
6	L	87%	100%	98%	81%
7	G	66%	90%	78%	57%
8	V	54%	78%	72%	42%
9	S	23%	41%	24%	17%
10	K*	23%	50%	39%	19%

Position	Amino acid	All	I	II	III
11	N	18%	27%	22%	15%
12	A	71%	95%	89%	60%
13	S	39%	50%	46%	34%
14	D*	17%	29%	24%	17%
15	E*	24%	27%	26%	23%
16	E	48%	62%	53%	43%
17	I	67%	70%	85%	62%
18	K	69%	94%	89%	57%
19	K	57%	72%	79%	48%
20	A	69%	92%	80%	59%
21	Y	80%	84%	87%	78%
22	R	64%	78%	78%	57%
23	K	52%	65%	63%	46%
24	L	67%	77%	72%	62%
25	A	64%	86%	92%	52%
26	L*	38%	28%	44%	45%
27	K	42%	70%	54%	31%
28	Y	40%	67%	47%	30%

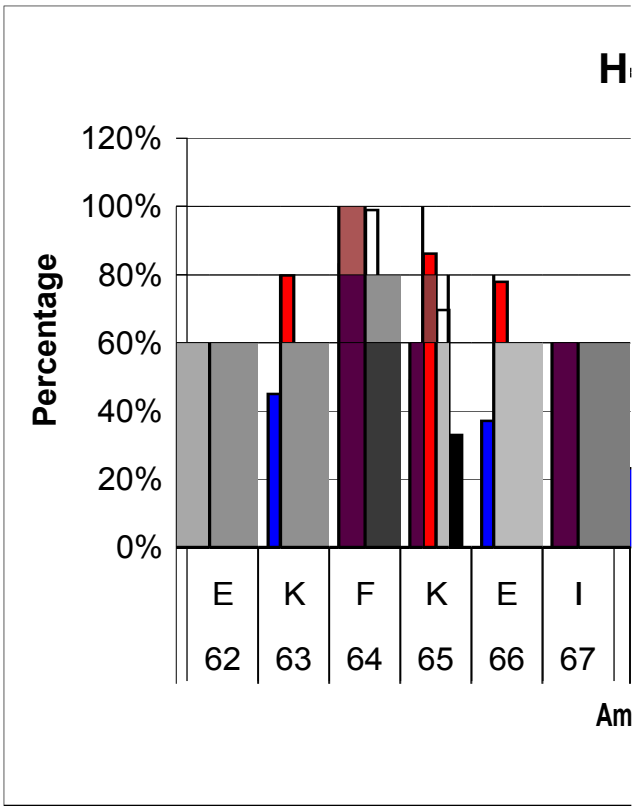
Position	Amino acid	All	I	II	III
29	H	97%	100%	100%	96%
30	P	98%	100%	100%	98%
31	D	96%	100%	100%	94%
32	K	56%	38%	71%	58%
33	N	53%	72%	84%	41%
34	P	29%	36%	43%	24%
35	D	24%	32%	25%	21%
36	D*	20%	29%	32%	15%
37	G*	19%	21%	29%	18%
38	A	28%	43%	33%	23%
39	A*	31%	50%	44%	24%
40	E*	29%	64%	46%	26%

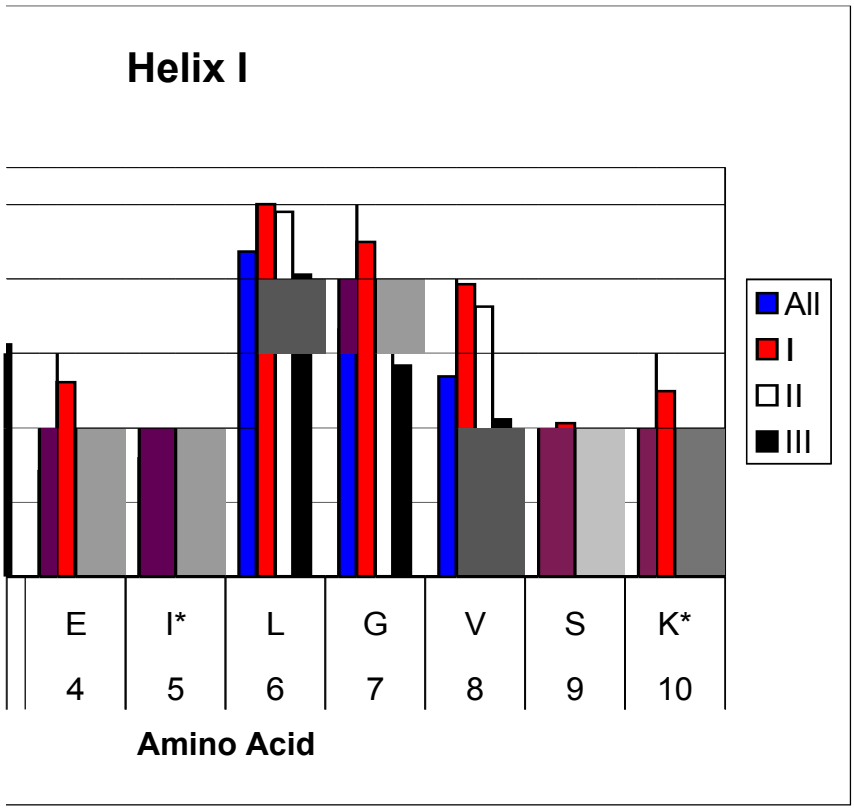
Position	Amino acid	All	I	II	III
62	E	40%	59%	43%	33%
63	K	45%	80%	60%	31%
64	F	83%	97%	99%	75%
65	K	49%	86%	70%	33%

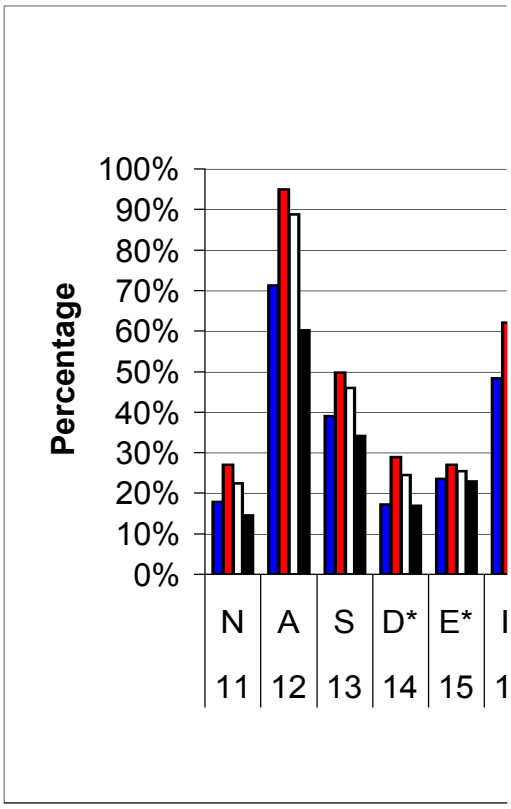


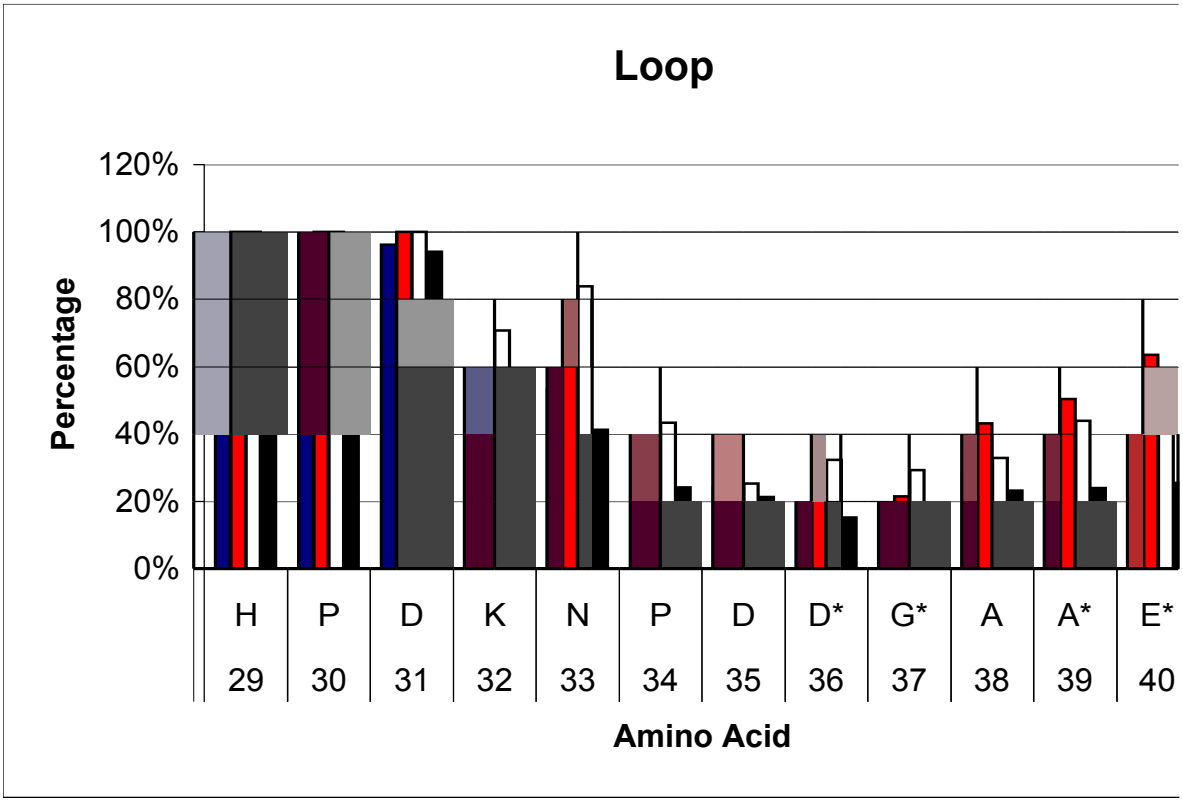
66	E	37%	78%	44%	23%
67	I	46%	51%	51%	43%
68	N*	23%	30%	28%	25%
69	E	39%	57%	64%	28%
70	A	88%	98%	100%	82%
71	Y	70%	92%	88%	60%
72	E	47%	79%	61%	35%
73	V	45%	71%	73%	31%
74	L	84%	100%	97%	76%
75	S	50%	69%	80%	38%

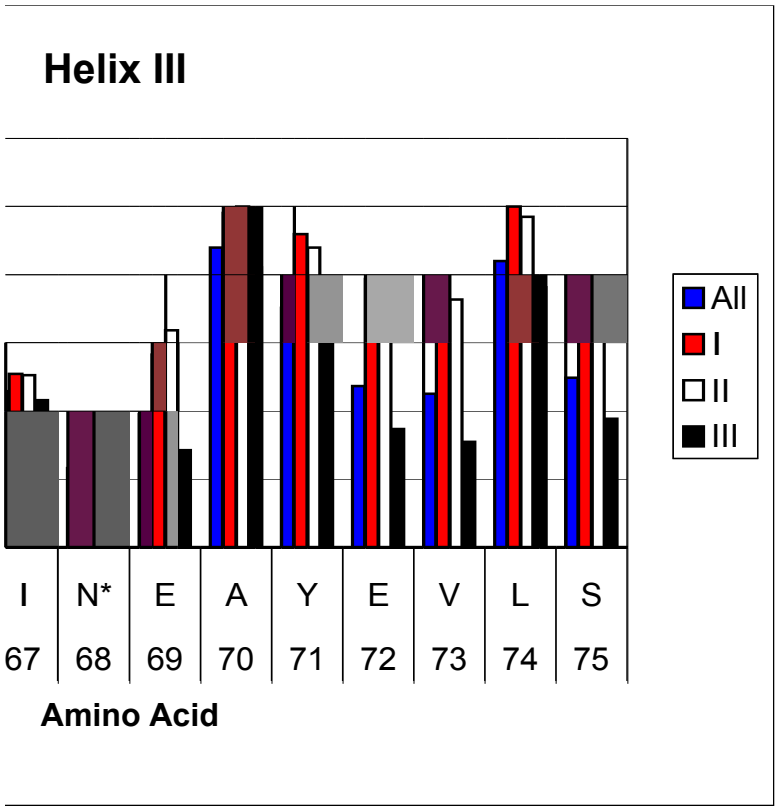
Position	Amino acid	All	I	II	III
76	D	65%	92%	92%	51%
77	P	33%	45%	41%	28%
78	E	25%	39%	30%	20%
79	K	55%	94%	73%	38%
80	R	71%	87%	90%	62%
81	A	26%	42%	29%	19%
82	I*	16%	23%	32%	12%
83	Y	72%	98%	90%	59%
84	D	74%	100%	95%	60%
85	Q*	22%	49%	35%	12%
86	Y	27%	47%	46%	15%
87	G	52%	96%	76%	30%
88	E*	18%	43%	36%	11%
89	A*	17%	43%	43%	14%

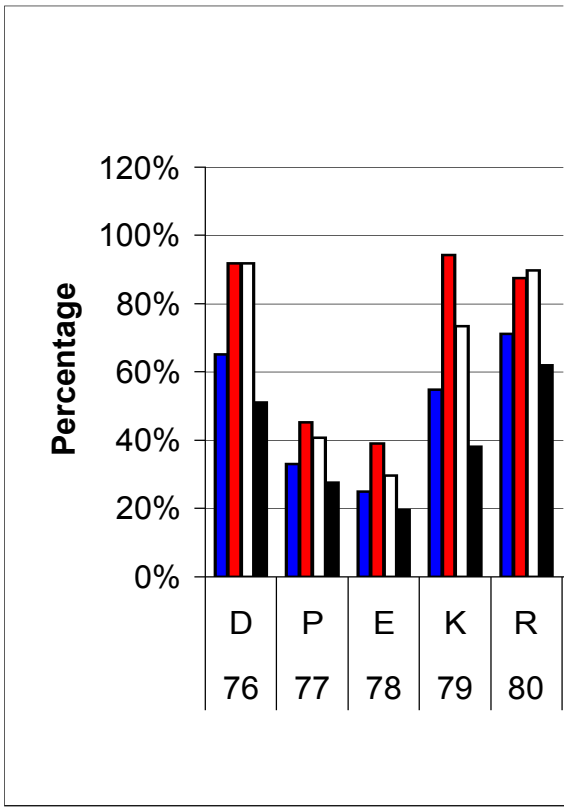


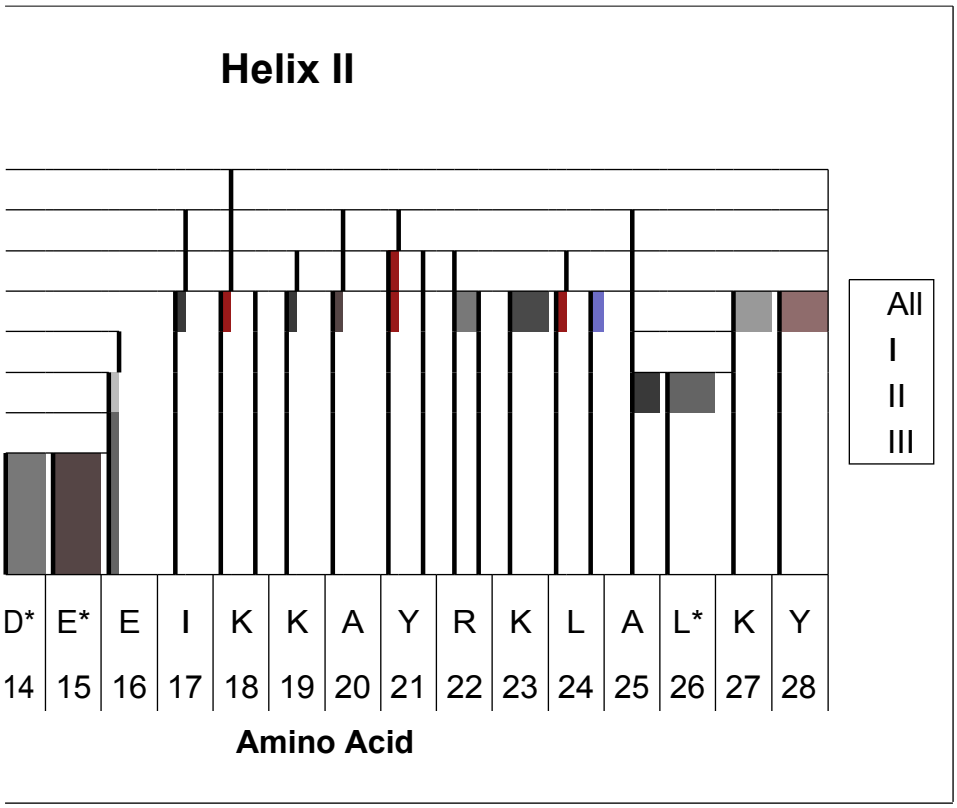

Helix I
All
I
II
III
E
I*
L
G
V
S
K*
4
5
6
7
8
9
10
Amino Acid

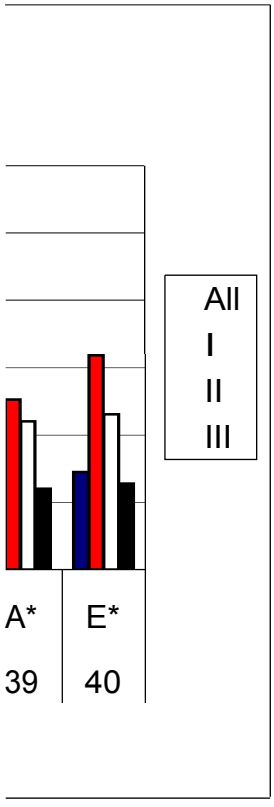

100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Percentage
N
A
S
D*
E*
I
11
12
13
14
15
1

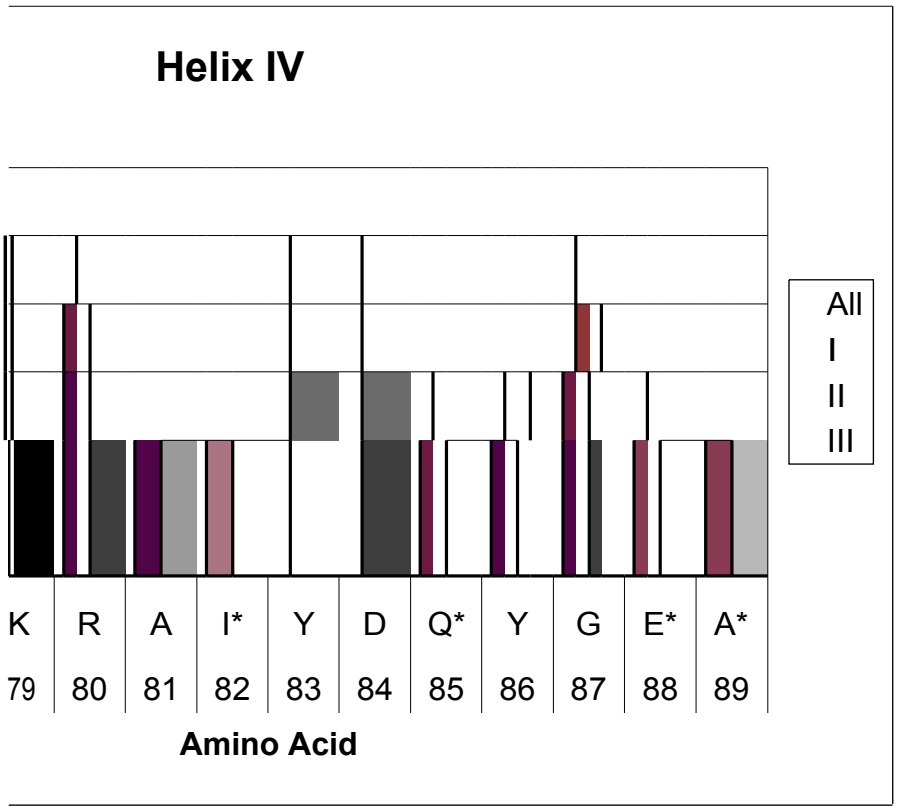

Loop
120%
100%
80%
60%
40%
20%
0%
Percentage
H
P
D
K
N
P
D
D*
G*
A
A*
E*
29
30
31
32
33
34
35
36
37
38
39
40
Amino Acid


Helix III
All
I
II
III
I N* E A Y E V L S
67 68 69 70 71 72 73 74 75
Amino Acid

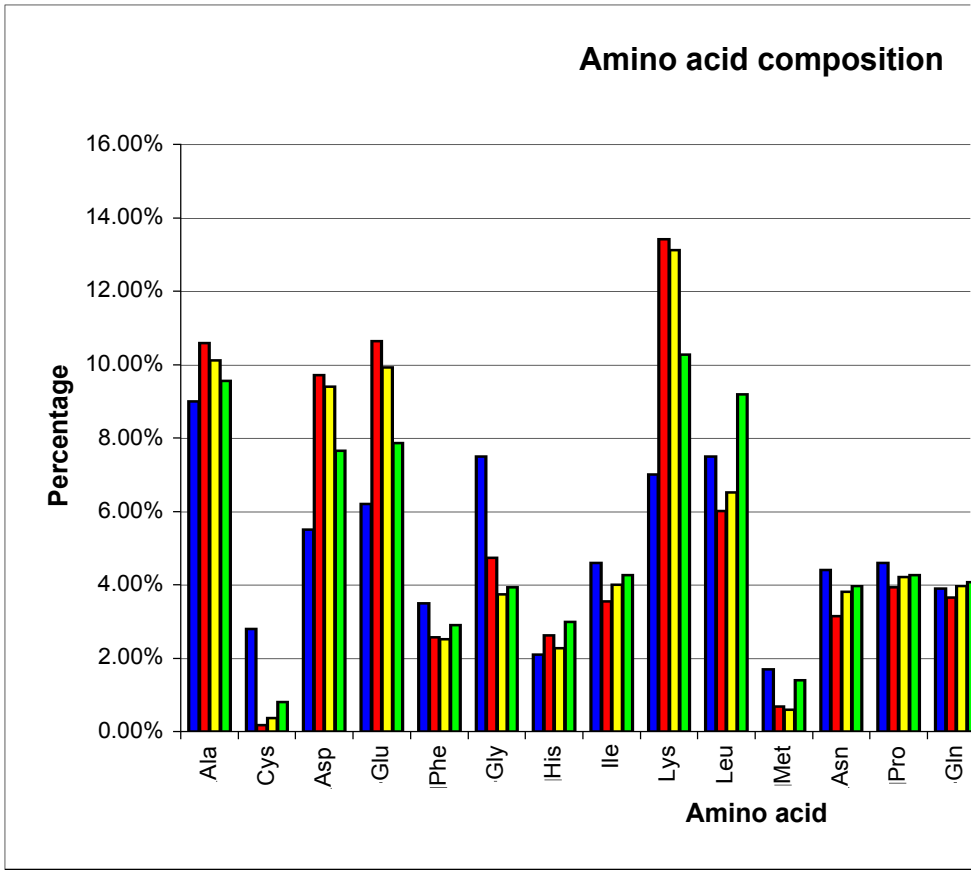

120%
100%
80%
60%
40%
20%
0%
Percentage
D P E K R
76 77 78 79 80


Helix II
All
I
II
III
D* E* E I K K A Y R K L A L* K Y
14 15 16 17 18 19 20 21 22 23 24 25 26 27 28
Amino Acid

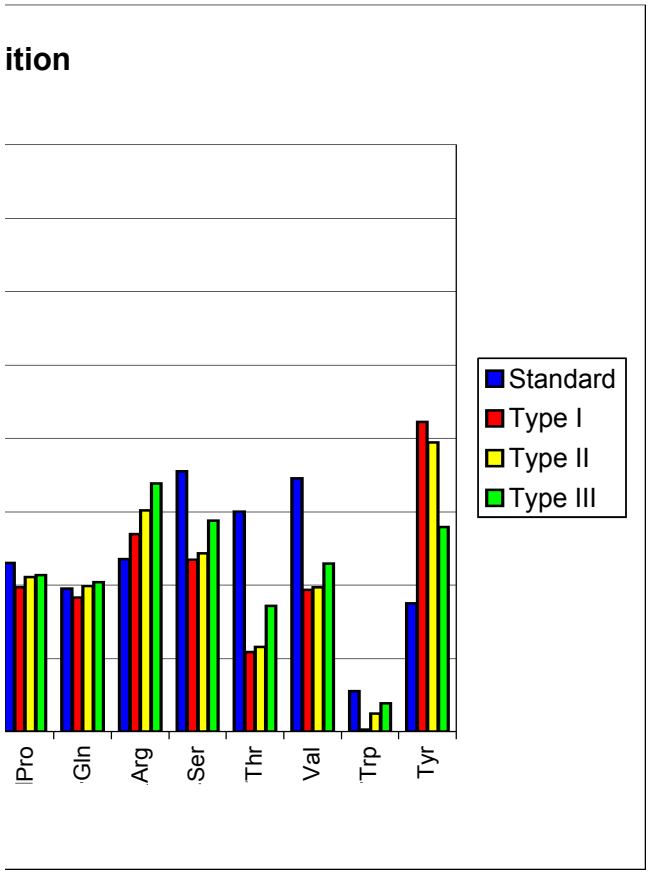

All
I
II
III
A* E*
39 40


Helix IV
All
I
II
III
K R A I* Y D Q* Y G E* A*
79 80 81 82 83 84 85 86 87 88 89
Amino Acid

Amino Acid	Ala	Cys	Asp	Glu	Phe	Gly	His	Ile	Lys	Leu	Met
Standard	9.00%	2.80%	5.50%	6.20%	3.50%	7.50%	2.10%	4.60%	7.00%	7.50%	1.70%
Type I	10.58%	0.18%	9.71%	10.64%	2.57%	4.74%	2.62%	3.55%	13.41%	6.00%	0.69%
Type II	10.11%	0.36%	9.39%	9.91%	2.51%	3.73%	2.27%	4.00%	13.13%	6.51%	0.60%
Type III	9.56%	0.81%	7.65%	7.86%	2.91%	3.94%	2.99%	4.27%	10.27%	9.20%	1.40%
Total	9.84%	0.62%	8.31%	8.70%	2.78%	4.08%	2.82%	4.09%	11.29%	8.18%	1.15%



Asn	Pro	Gln	Arg	Ser	Thr	Val	Trp	Tyr
4.40%	4.60%	3.90%	4.70%	7.10%	6.00%	6.90%	1.10%	3.50%
3.14%	3.93%	3.66%	5.38%	4.69%	2.17%	3.85%	0.06%	8.44%
3.81%	4.21%	3.97%	6.03%	4.85%	2.30%	3.93%	0.49%	7.88%
3.97%	4.25%	4.07%	6.77%	5.74%	3.43%	4.57%	0.77%	5.57%
3.78%	4.18%	3.97%	6.38%	5.41%	3.02%	4.34%	0.59%	6.47%



1 d s k n e
2 y l f p
3 y
4 e d k a q l
5 l v l t
6 l
7 g e n
8 v l I
9 s p d e a k q t
10 k r p a
11 n d s t g
12 a s
13 s t d n
14* d e q p a k s l
15 e d k a
16 e d q
17 i l v
18 k r
19 k r s
20 a s
21 y f
22 r k y
23 k r q
24 l k a
25 a s
26* l k m r I
27 k q e l r
28 y w l h f n
29 h
30 p
31 d
32 k r v
33 n g
34 p k g q
35* d g n e a s
36* d n p e a s
37* g p k e d a
38 a e k d s
39* a e k t
40* e a k s q
51 e d a k r
52 k
53 f
54 k q
55 e q k
56 i v l
57* s n a q g k
58 e q a k n
59 a
60 y h
61 e d a q s

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
d	y	y	e	I	l	g	v	s	k	n	a	s	d	e	e	i	k	k
s	l		d	v		e	l	p	r	d	s	t	e	d	d	l	r	r
k	f		k	l		n	I	d	p	s		d	q	k	q	v		s
n	p		a	t			e	a	t			n	p	a				
e			q			a		g		a								
			l			k				k								
						q				s								
						t				l								

36	37	38	39	40
d	g	a	a	e
n	p	e	e	a
p	k	k	k	k
e	e	d	t	s
a	d	s		q
s	a			

51	52	53	54	55	56	57	58	59	60	61	62	63
e	k	f	k	e	i	s	e	a	y	e	v	l
d		q	q	v	n	q		h	d	I		
a			k	l	a	a			a	t		
k					q	k			q			
r					g	n			s			
					k							

62 v l t
63 l
64 s k t
65 d n
66 p e a d s k
67 e q k t d n v
68 k r
69 r k
70 a k e r s q
71 i a q l k r e
72 y f
73 d q r k a l s
74* g r k a s l
75 y f g
76 g r l
77* e h k s d r
78* e a d s l q

20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
a	y	r	k	l	a	l	k	y	h	p	d	k	n	p	d
s	f	k	r	k	s	k	q	w				r	g	k	g
		y	q	a		m	e	l				v		g	n
						r	l	h						q	e
						l	r	f							a
								n							s

64	65	66	67	68	69	70	71	72	73	74	75	76	77	78
s	d	p	e	k	r	a	i	y	d	g	y	g	e	e
k	n	e	q	r	k	k	a	f		r	f	r	h	a
t		a	k			e	q			k	g	l	k	d
		d	t			r	l			a			s	s
		s	d			s	k			s			d	l
		k	n			q	r			l			r	q
			v				e							

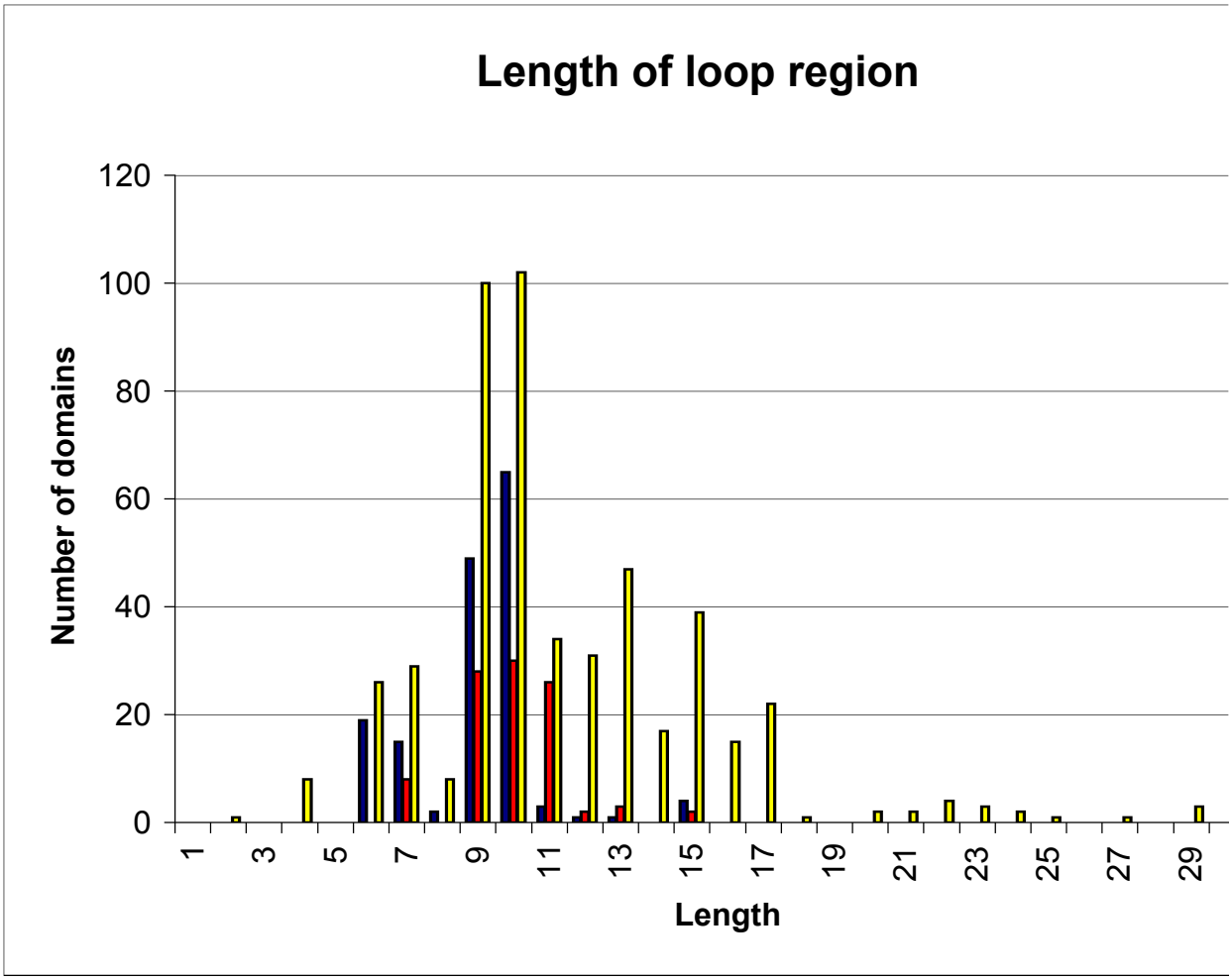
Loop region length
Measured from position 32 to position 61

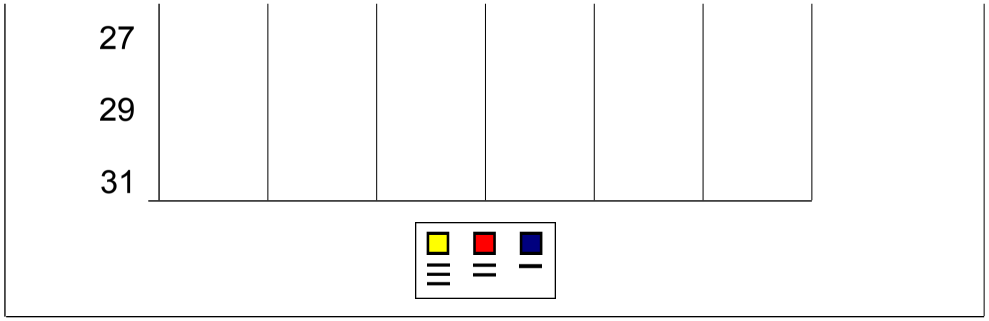
	Type I			Type II		
		159			99	
32	1	159	0	1	99	0
33	2	159	0	2	99	0
34	3	159	0	3	99	0
35	4	159	0	4	99	0
36	5	159	0	5	99	0
37	6	140	19	6	99	0
38	7	125	15	7	91	8
39	8	123	2	8	91	0
40	9	74	49	9	63	28
41	10	9	65	10	33	30
42	11	6	3	11	7	26
43	12	5	1	12	5	2
44	13	4	1	13	2	3
45	14	4	0	14	2	0
46	15	0	4	15	0	2
47						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						

Type III

	501	
1	501	0
2	500	1
3	500	0
4	492	8
5	492	0
6	466	26
7	437	29
8	429	8
9	329	100
10	227	102
11	193	34
12	162	31
13	115	47
14	98	17
15	59	39
16	44	15
17	22	22
18	21	1
19	21	0
20	19	2
21	17	2
22	13	4
23	10	3
24	8	2
25	7	1
26	7	0
27	6	1
28	6	0
29	3	3
30	1	2
31	0	1

Length	I	II	III
1	0	0	0
2	0	0	1
3	0	0	0
4	0	0	8
5	0	0	0
6	19	0	26
7	15	8	29
8	2	0	8
9	49	28	100
10	65	30	102
11	3	26	34
12	1	2	31
13	1	3	47
14	0	0	17
15	4	2	39
16	0	0	15
17	0	0	22
18	0	0	1
19	0	0	0
20	0	0	2
21	0	0	2
22	0	0	4
23	0	0	3
24	0	0	2
25	0	0	1
26	0	0	0
27	0	0	1
28	0	0	0
29	0	0	3
30	0	0	2
31	0	0	1


Length of loop region
Number of domains
120
100
80
60
40
20
0
1
3
5
7
9
11
13
15
17
19
21
23
25
27
29
Length


27
29
31