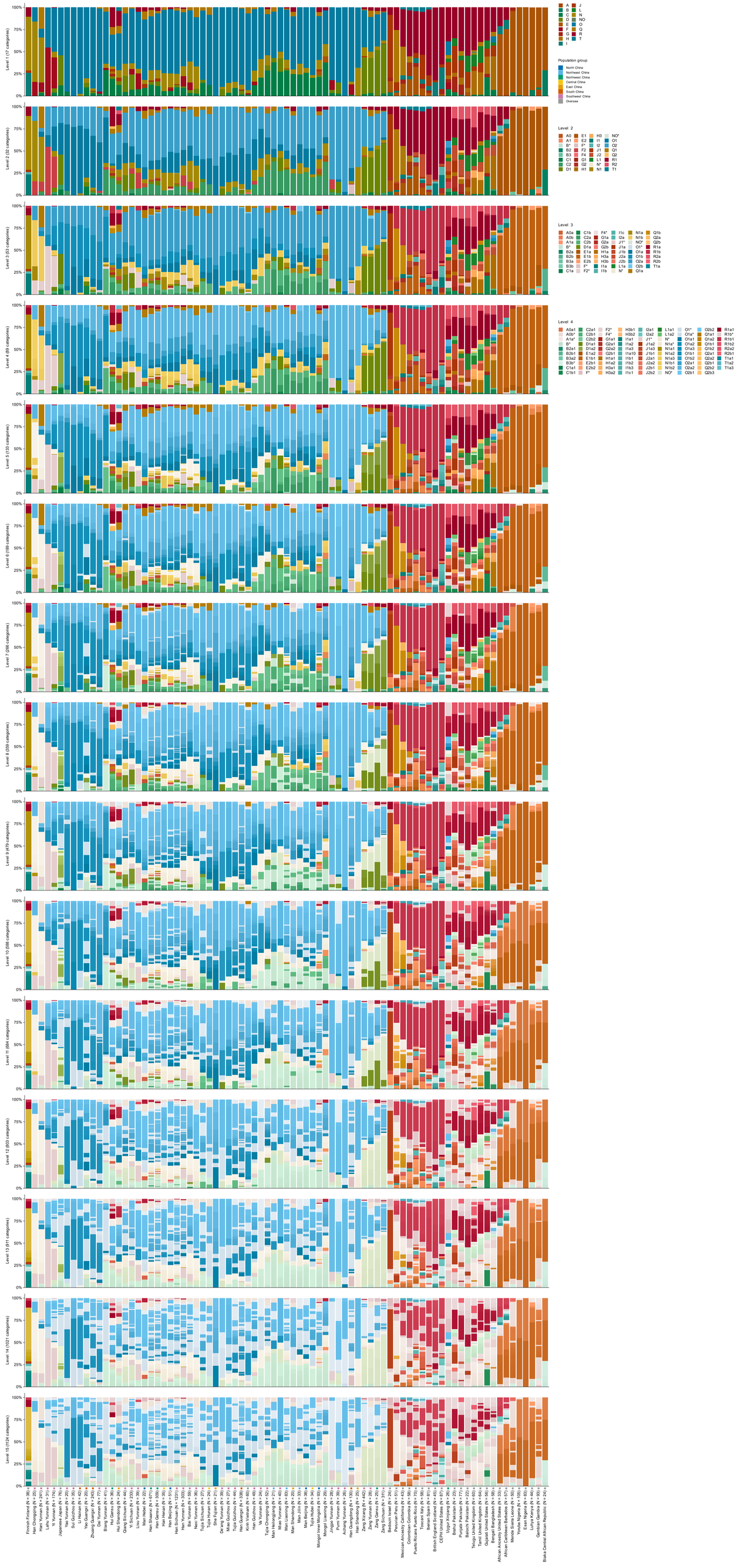
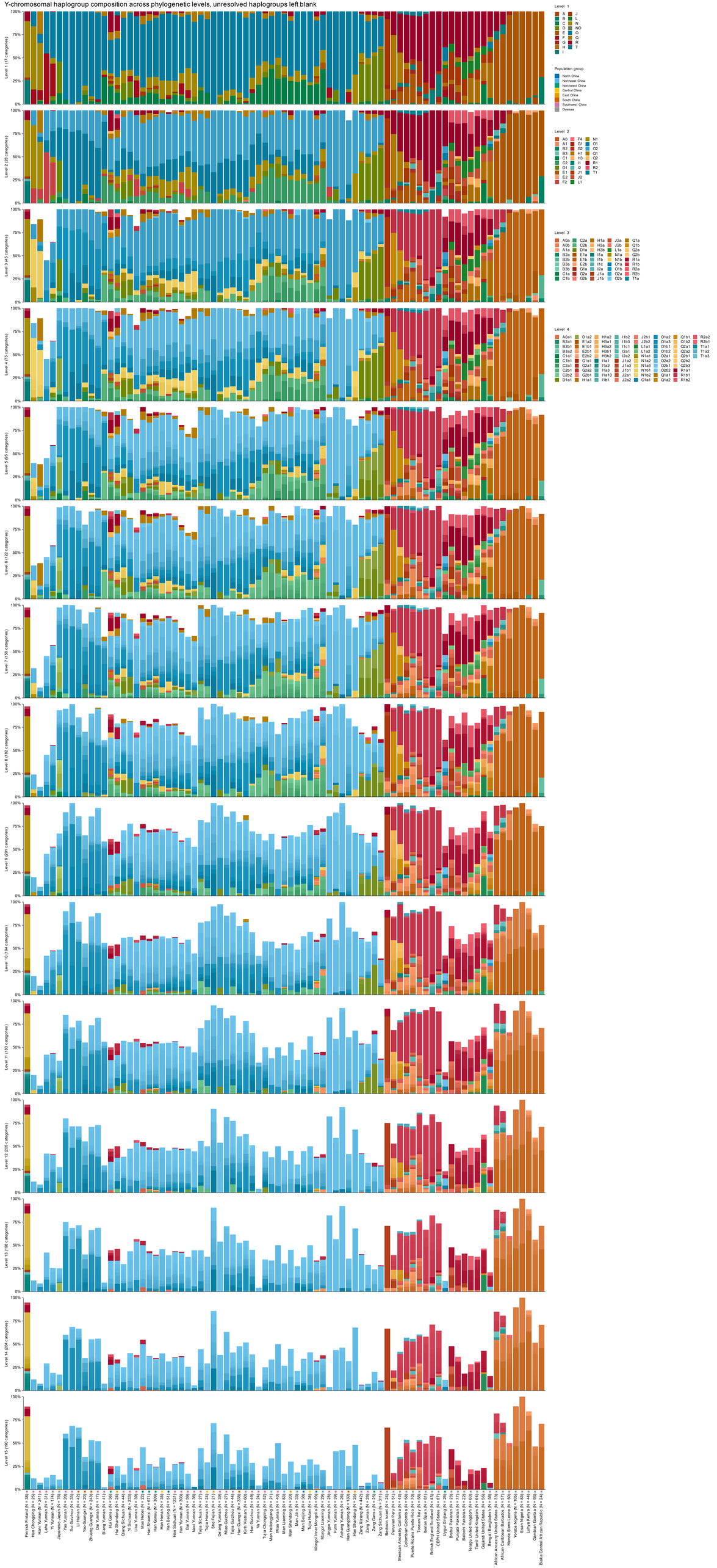
Y-chromosomal haplogroup composition across phylogenetic levels



Y-chromosomal haplogroup composition across phylogenetic levels, unresolved haplogroups left blank



Level 5 (133 categories)

A0a1*
A0b*
A1a*
B*
B2a1a
B2b1*
B2b1a
B2b2*
B3b*
C1a1a
C1b1a
C2a1*
C2a1a
C2a1b
C2b1*
C2b1a
C2b1b
C2b2*
C2b2a
G1a1a
G1a1b
G1a2a
G1a2b
E1a2a
E1a2b
E1b1a
E1b1b
E2b1a
E2b2a
E2b2b
F1*
F2*
F4*
G1a1*
G1a1a
G2a1a
G2a2a
G2a2b
G2b1a
H1a1a
H1a1b
H1a2a
H1a2b
H3a1a
H3a1b
H3a1c
H3a2a
H3a2b
H3b1a
H3b1b
H3b2a
I1a1b
I1a2a
I1a2b
I1a3a
I1a3b
I1a1b2*
I1b1a
I1b2*
I1b3*
I1c1a
I2a1a
I2a1b
I2a2b
J1*
J1a2a
J1a2b
J1a3*
J1b1a
J2a1*
J2a1a
J2a2*
J2a2a
J2b1b
J2b2a
J2b2b
L1a1*
L1a1a
L1a1b
L1a2*
L1a2a
N*
N1a*
N1a1a
N1a2a
N1a2b
N1a3*
N1b1*
N1b1a
N1b1b
N1b2*
N1b2a
N1b2b
NO*
O1*
O1a*
O1a1a
O1a1b
O1a2a
O1a3*
O1a3a
O1b1*
O1b1a
O1b2a
O2a1a
O2a1b
O2a2a
O2a2b
O2b1a
O2b1b
O2b2*
G1a1a
G1a2a
G1b1a
G1b1b
G1b2a
G2a1a
G2a1c
G2a2*
G2b1a
G2b2a
G2b3a
R1a1a
R1b*
R1b1a
R1b1b
R1b2b
R2a2b
R2b1*
R2b1a
T1a1a
T1a2b
T1a3b

Level 6 (189 categories)

A0a1*
A0b*
A1a*
B*
B2a1a1
B2b1*
B2b1a1
B2a2*
B3b*
C1a1a1
C1b1a1
C1b1a2
C2a1*
C2a1a*
C2a1a1
C2a1a2
C2a1a3
C2a1a4
C2a1b*
C2b1*
C2b1a1
C2b1a2
C2b1b1
C2b1b2
C2b2*
D1a1*
D1a1a1
D1a1b1
D1a2a1
D1a2a3
D1a2b1
D1a2b2
E1a2a1
E1a2a2
E1a2b*
E1a2b1
E1b1a1
E1b1b1
E2b1a1
E2b1a2
E2b2a*
E2b2b*
F1*
F2*
F4*
G1a1*
G1a1a2
G2a1a1
G2a1a2
G2a2b1
G2a2b2
G2b1a*
H1a1a1
H1a1a4
H1a1b1
H1a1b2
H1a2a2
H1a2a3
H1a2b*
H1a2b1
H3a1a*
H3a1b*
H3a1c*
H3a2a1
H3a2a2
H3a2b1
H3a2b2
H3b1a*
H3b1b*
H3b2a*
I1a1b1
I1a2a1
I1a2a2
I1a2b1
I1a2b2
I1a3a1
I1a3a2
I1a3b1
I1b1*
I1b2*
I1b3*
I1c1a1
I2a1a1
I2a1a2
I2a1b1
I2a1b2
I2a2b1
J1*
J1a2a1
J1a2b1
J1a3*
J1b1a1
J2a1*
J2a1a1
J2a1a2
J2a2*
J2a2a1
J2b1b1
J2b2a1
J2b2a2
J2b2b1
L1a1*
L1a1a1
L1a1a2
L1a1b1
L1a1b3
L1a1b5
L1a2*
L1a2a1
L1a2a2
N*
N1a*
N1a1a1
N1a1a3
N1a2a*
N1a2a1
N1a2b1
N1a2b3
N1a3*
N1b1*
N1b1a1
N1b1a2
N1b1b*
N1b1b1
N1b2*
N1b2a*
N1b2a1
N1b2b*
NO*
O1*
O1a*
O1a1a1
O1a1a2
O1a1b1
O1a2a1
O1a2a2
O1a2a3
O1a2b*
O1b1*
O1b1a*
O1b1a1
O1b1a2
O1b2a1
O2a1a*
O2a1a1
O2a1b1
O2a1b2
O2a2a1
O2a2a2
O2a2b1
O2a2b2
O2b1a*
O2b1a1
O2b1b*
O2b2*
G1a1a*
G1a1a1
G1a1a2
G1a2a2
G1b1a1
G1b1a2
G1b1a3
G1b1b1
G1b2a1
G1b2a2
G2a1a4
G2a1c1
G2a2*
G2b1a1
G2b2a*
G2b2a1
G2b3a*
R1a1a1
R1b*
R1b1a1
R1b1a2
R1b1b2
R1b2b*
R1b2b1
R1b2b2
R2a2b1
R2b1*
R2b1a1
T1a1a*
T1a1a1
T1a2b1
T1a3b2

Level 7 (266 categories)

A0a1*
A0b*
A1a*
B*
B2a1a1a
B2b1*
B2b1a1c
B3a2*
B3b*
C1a1a1a
C1a1a1b
C1b1a1a
C1b1a1b
C1b1a2b
C2a1*
C2a1a*
C2a1a1b
C2a1a2a
C2a1a2b
C2a1a3a
C2a1a4b
C2a1b*
C2b1*
C2b1a1*
C2b1a1a
C2b1a2a
C2b1a2b
C2b1b1*
C2b1b1a
C2b1b1b
C2b1b1c
C2b1b1d
C2b1b1g
C2b1b1i
C2b1b1j
C2b1b2*
C2b2*
D1a1*
D1a1a1a
D1a1a1b
D1a1b1a
D1a2a1b
D1a2a1c
D1a2a3a
D1a2a3b
D1a2b1a
D1a2b1b
D1a2b1c
D1a2c1a
D1a2c1b
D1a2c1c
D1a2c2a
D1a2c2b
D1a2b*
D1a2b1*
D1a2b1a
D1a2b1b
D1b1a1a
D1b1a1b
D1b1b1a
D1b1b1b
D2b1a1a
D2b1a1c
D2b1a1d
D2b1a2*
D2b2a*
D2b2b*
F*
F2*
F4*
G1a1*
G1a1a2*
G1a1a2a
G1a1a2b
G2a1a2a
G2a2a1a
G2a2a1b
G2a2b1a
G2a2b1b
G2a2b2b
G2b1a*
H1a1a1b
H1a1a1c
H1a1a4a
H1a1a4b
H1a1b1a
H1a1b1b
H1a1b2*
H1a2a2*
H1a2a3*
H1a2b*
H1a2b1a
H1a2b1b
H3a1a*
H3a1b*
H3a1c*
H3a2a1a
H3a2a1b
H3a2a2a
H3a2a2b
H3a2b1*
H3a2b2*
H3b1a*
H3b1b*
H3b3a
H1a1b1a
H1a1b1b
H1a2a1a
H1a2a1b
H1a2b1a
H1a2b1*
H1a3a1a
H1a3b2a
H1a3b3a
H1a10*
H1b1a1*
H1b2*
H1b3*
I1c1a1a
Q1a1a1a
Q1a1a1b
Q1a1a2b
Q1a1b1*
Q1a1b2a
Q1a1b2b
Q1a1b3a
Q1a1b3b
Q1a1b3c
J1*
J1a2a1a
J1a2a1b
J1a2b1b
J1a3*
J1b1a1a
J1b1a1b
J1b1b1a
J1b1b1b
J2a1*
J2a1a1a
J2a1a1b
J2a1a2b
J2a2*
J2a2a1a
J2b1b1*
J2b2a1a
J2b2a2a
J2b2a2b
J2b2b1*
L1a1*
L1a1a1*
L1a1a2a
L1a1a2b
L1a1b1a
L1a1b1b
L1a1b2a
L1a1b2b
L1a1b3a
L1a1b3b
L1a1b3c
L1a2*
L1a2a1a
L1a2a1b
L1a2a2*
N*
N1a*
N1a1a1a
N1a1a2*
N1a2a
N1a2a1*
N1a2a1a
N1a2a1b
N1a2b1b
N1a2b2*
N1a3*
N1b1*
N1b1a1*
N1b1a1a
N1b1a1b
N1b1a2*
N1b1a2a
N1b1a2b
N1b1b*
N1b1b1*
N1b2*
N1b2a*
N1b2a1a
N1b2a1b
N1b2b*
N0*
O1*
O1a*
O1a1a1a
O1a1a1b
O1a1a2a
O1a1a2b
O1a1a2c
O1a1b*
O1a1b1a
O1a2a*
O1a2a2*
O1a2b*
O1a3a*
O1b1*
O1b1a*
O1b1a1a
O1b1a1b
O1b1a2a
O1b1a2b
O1b1a2c
O1b2a1a
O1b2a1b
O2a1a*
O2a1a1a
O2a1a1b
O2a1b1a
O2a1b1b
O2a1b2*
O2a1b2a
O2a2a1a
O2a2a1b
O2a2a2*
O2a2a3a
O2a2b1*
O2a2b1a
O2a2b2a
O2a2b2b
O2b1a*
O2b1a1a
O2b1b*
O2b2*
Q1a1a*
Q1a1a1*
Q1a1a1a
Q1a1a1b
Q1a1a2*
Q1a2a2a
Q1a2a2b
Q1b1a1a
Q1b1a2a
Q1b1a3a
Q1b1a3b
Q1b1b1*
Q1b2a1a
Q1b2a2*
Q2a1a4*
Q2a1c1b
Q2a2*
Q2b1a1*
Q2b2a*
Q2b2a1a
Q2b3a*
R1a1a1a
R1a1a1b
R1b1*
R1b1a1a
R1b1a1b
R1b1a2*
R1b1a2a
R1b1a2b
R1b1b2a
R1b2b*
R1b2b1*
R1b2b2*
R2a2b1*
R2a2b1b
R2b1*
R2b1a1*
T1a1a*
T1a1a1b
T1a2b1a
T1a3b2a

Level 8 (359 categories)

A0a1*	J2a1*
A0b*	J2a1a1a2
A1a*	J2a1a1b1
B*	J2a1a1b2
B2a1a1a1	J2a1a2b2
B2b1*	J2a2*
B2b1a1c1	J2a2a1a1
B3a2*	J2b1b1*
B3b*	J2b2a1a*
C1a1a1a1	J2b2a1a1
C1a1a1b*	J2b2a2a*
C1a1a1b1	J2b2a2a1
C1a1a1b2	J2b2a2b1
C1b1a1a1	J2b2a2b2
C1b1a1a2	J2b2b1*
C1b1a1b2	L1a1*
C1b1a2b*	L1a1a1*
C2a1*	L1a1a2b*
C2a1a*	L1a1a3*
C2a1a1b1	L1a1b1a*
C2a1a2a1	L1a1b1b*
C2a1a2a2	L1a1b2a1
C2a1a3a1	L1a1b2a2
C2a1a3a*	L1a1b2b*
C2a1a3a2	L1a1b3a1
C2a1a3a3	L1a1b3a2
C2a1a3a4	L1a1b3b*
C2a1a3b*	L1a1b3c1
C2a1b*	L1a2*
C2b1*	L1a2a1a*
C2b1a1*	L1a2a1a1
C2b1a1a1	L1a2a1b*
C2b1a1a2	L1a2a1b1
C2b1a2a1	L1a2a1b2
C2b1a2a2	L1a2a2*
C2b1a2b*	N*
C2b1a2b1	N1a*
C2b1a2b2	N1a1a1a1
C2b1b1*	N1a1a2*
C2b1b1a1	N1a2a*
C2b1b1b*	N1a2a1*
C2b1b1b1	N1a2a1a1
C2b1b1b2	N1a2a1a2
C2b1b1b3	N1a2a1b*
C2b1b1b4	N1a2b1b1
C2b1b1b5	N1a2b3*
C2b1b1c*	N1b*
C2b1b1d*	N1b1*
C2b1b1e1	N1b1a1*
C2b1b1g*	N1b1a1a*
C2b1b1g1	N1b1a1b*
C2b1b1g2	N1b1a2*
C2b1b1f*	N1b1a2a*
C2b1b1f2	N1b1a2b*
C2b1b2*	N1b1a2b1
C2b2*	N1b1b*
D1a1*	N1b1b1*
D1a1a1a1	N1b2*
D1a1a1b1	N1b2a*
D1a1a1b2	N1b2a1a*
D1a1b1a*	N1b2a1b*
D1a1b1a1	N1b2b*
D1a1b1a3	NO*
D1a2a1b*	O1*
D1a2a1b2	O1a*
D1a2a1b3	O1a1a1a1
D1a2a3a1	O1a1a1a3
D1a2a3a2	O1a1a1b*
D1a2a3a3	O1a1a1b1
D1a2a3b*	O1a1a2a1
D1a2b1a2	O1a1a2a2
D1a2b1b1	O1a1a2a3
D1a2b1b2	O1a1a2b1
D1a2b2*	O1a1a2b2
D1a2a1a1	O1a1a2c*
D1a2a1a2	O1a1b*
D1a2a1b1	O1a1b1a1
D1a2a1b2	O1a1b1a2
D1a2a1c*	O1a1b*
D1a2a2a*	O1a2a2*
D1a2a2b*	O1a3*
D1a2b*	O1a3a*
D1a2b1*	O1b1*
D1a2b1a1	O1b1a*
D1a2b1a2	O1b1a1a1
D1a2b1b*	O1b1a1a2
D1a1a1a1	O1b1a1b*
D1b1a1a1	O1b1a1b1
D1b1b1a1	O1b1a2a*
D1b1b1a2	O1b1a2b1
D1b1b1b1	O1b1a2b2
D1b1b1b2	O1b1a2c*
D2b1a1c*	O1b2a1a*
D2b1a1d*	O1b2a1a1
D2b1a2*	O1b2a1a2
D2b2a*	O1b2a1a3
D2b2b*	O1b2a1b*
E*	O2a1a*
F2*	O2a1a1a1
F4*	O2a1a1a2
G1a1*	O2a1a1b1
G1a1a2*	O2a1a1b2
G1a1a2a1	O2a1b1a1
G1a1a2b*	O2a1b1a2
G2a1a1*	O2a1b2*
G2a1a2a1	O2a1b1b1
G2a2a1a2	O2a1b1b2
G2a2a1a3	O2a1b2*
G2a2a1b1	O2a1b2a1
G2a2b1a1	O2a1b2a2
G2a2b2a1	O2a2a1a1
G2a2b2a4	O2a2a1a2
G2a2b2b2	O2a2a1b*
G2b1a*	O2a2a2*
H1a1a1b*	O2a2a2a1
H1a1a1c*	O2a2a2a2
H1a1a4a*	O2a2b1*
H1a1a4a1	O2a2b1a1
H1a1a4a2	O2a2b1a2
H1a1a4b*	O2a2b2a1
H1a1a4b1	O2a2b2a2
H1a1a4b2	O2a2b2b*
H1a1a4b3	O2a2b2b1
H1a1a4b4	O2b1a*
H1a1a4b6	O2b1a1*
H1a1a4b7	O2b1a1a*
H1a1b1a*	O2b1a1a1
H1a1b1a1	O2b1b1*
H1a1b1b1	O2b2*
H1a1b2*	Q1a1a*
H1a2a2*	Q1a1a1*
H1a2a3*	Q1a1a1a*
H1a2b*	Q1a1a1a1
H1a2b1a1	Q1a1a1b1
H1a2b1a2	Q1a1a2*
H1a2b1b1	Q1a2a2a1
H1a2b1b2	Q1a2a2b*
H3a1a*	Q1a2b2b1
H3a1b*	Q1b1a1a1
H3a1c*	Q1b1a2a1
H3a2a1a1	Q1b1a3a*
H3a2a1b*	Q1b1a3a1
H3a2a2a*	Q1b1a3b*
H3a2a2b*	Q1b1a3b2
H3a2b1*	Q1b1b3*
H3a2b2*	Q1b1b1*
H3b1a*	Q1b2a1a1
H3b1b*	Q1b2a2*
H3b2a*	Q2a1a4*
H1a1b1a2	Q2a1c1b1
H1a1b1a4	Q2a2*
H1a1b1b1	Q2b1a1*
H2a2a1a1	Q2b2a*
H2a2a2a2	Q2b2a1a*
H2a2a3	Q2b3a*
H2a2b1a*	R1a1a1a1
H2a2b2*	R1a1a1b1
H2a3a1a*	R1a1a1b2
H2a3a2a2	R1b*
H2a3b3a*	R1b1a1a1
H1a1b*	R1b1a1b1
J1b1a1*	R1b1a2*
J1b2*	R1b1a2a1
J1b3*	R1b2b1b1
J1a1a1a1	R1b1b2b2
Q1a1a1a1	R1b2b*
Q1a1a1b1	R1b2b1*
Q1a1a2b1	R1b2b2*
Q1b1b1a1	R2a2b*
Q1b1b1a2	R2a2b1b1
Q1b1b2a2	R2a2b1b2
Q2b1c1c2	R2b1*
J1*	R2b1a1*
J1a2a1a2	T1a1a*
J1a2a1b1	T1a1a1b2
J1a2b1b2	T1a2b1a*
J1a2*	T1a2b1a1
J1b1a1a*	T1a3b2a1
J1b1a1b*	

Level 9 (479 categories)

A0a1*	J2a2*
A0b*	J2a2a1a1a
A1a*	J2b1b1*
B*	J2b2a1a*
B2a1a1a1a	J2b2a1a1a
B2b1*	J2b2a2a*
B2b1a1c1*	J2b2a2a1*
B3a2*	J2b2a3b1a
B3b*	J2b2a3b2*
C1a1a1a1a	J2b2a3b2a
C1a1a1a1b	J2b2a3b2b
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C1b1a1a1a	L1a1a2a*
C1b1a1a1b	L1a1a2b*
C1b1a1a2a	L1a1b1a*
C1b1a1a2b	L1a1b1b*
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C2a1a1b*	L1a1b2a2*
C2a1*	L1a1b3b*
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C2a1a3a2a	L1a2a1a1a
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C2a1a4a*	L1a2a1b1*
C2a1a4*	L1a2a1b2*
C2b1*	L1a2a2*
C2b1a*	N*
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C2b1a1a1a	N1a1a1a1a
C2b1a1a1b	N1a1a1a2
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C2b1a2a1a	N1a2a1a1*
C2b1a2a1b	N1a2a1a2*
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C2b1a2b1*	N1b1a1*
C2b1a2b2*	N1b1a1a*
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C2b1b1*	N1b1a2*
C2b1b1a1b	N1b1a2a*
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C2b1b1g*	O1*
C2b1b1g1*	O1a*
C2b1b1g2*	O1a1a1a1*
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C2b1b1i1	O1a1a1a2*
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C2b2*	O1a1a1b*
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O1a2b1s3*	O2a2b3z3*
O1a2b1t*	O2a2b4*
O1a2b1t1*	O2a2b4a*
O1a2b1t1a	O2a2b4a1*
O1a2b1t1b	O2a2b4a1a
O1a2b1t2*	O2a2b4a1b
O1a2b1t2a	O2a2b4a2*
O1a2b1t2b	O2a2b4a2a
O1a2b1t3*	O2a2b4a2b
O1a2b1u*	O2a2b4a3*
O1a2b1u1*	O2a2b4b*
O1a2b1u1a	O2a2b4b1*
O1a2b1u1b	O2a2b4b1a
O1a2b1u2*	O2a2b4b1b
O1a2b1u2a	O2a2b4b2*
O1a2b1u2b	O2a2b4b2a
O1a2b1u3*	O2a2b4b2b
O1a2b2*	O2a2b4b3*
O1a2a1a1a	O2a2b4c*
O1a2a1a1b	O2a2b4c1*
O1a2a1a2a	O2a2b4c1a
O1a2a1a2b	O2a2b4c1b
O1a2a1b*	O2a2b4c2*
O1a2a1b1a	O2a2b4c2a
O1a2a1b1b	O2a2b4c2b
O1a2a1b2*	O2a2b4c3*
O1a2a1b2a	O2a2b4d*
O1a2a1b2b	O2a2b4d1*
O1a2a1b3*	O2a2b4d1a
O1a2a1c*	O2a2b4d1b
O1a2a2*	O2a2b4d2*
O1a2a2a*	O2a2b4d2a
O1a2a2a1*	O2a2b4d2b
O1a2a2a1a	O2a2b4d3*
O1a2a2a1b	O2a2b4e*
O1a2a2a2*	O2a2b4e1*
O1a2a2a2a	O2a2b4e1a
O1a2a2a2b	O2a2b4e1b
O1a2a2a3*	O2a2b4e2*
O1a2b1*	O2a2b4e2a
O1a2b1a*	O2a2b4e2b
O1a2b1a1*	O2a2b4e3*
O1a2b1a1a	O2a2b4f*
O1a2b1a1b	O2a2b4f1*
O1a2b1a2*	O2a2b4f1a
O1a2b1a2a	O2a2b4f1b
O1a2b1a2b	O2a2b4f2*
O1a2b1a3*	O2a2b4f2a
O1a2b1b*	O2a2b4f2b
O1a2b1b1*	O2a2b4f3*
O1a2b1b1a	O2a2b4g*
O1a2b1b1b	O2a2b4g1*
O1a2b1b2*	O2a2b4g1a
O1a2b1b2a	O2a2b4g1b
O1a2b1b2b	O2a2b4g2*
O1a2b1b3*	O2a2b4g2a
O1a2b1c*	O2a2b4g2b
O1a2b1d*	O2a2b4g3*
O1a2b1d1*	O2a2b4h*
O1a2b1d1a	O2a2b4h1*
O1a2b1d1b	O2a2b4h1a
O1a2b1d2*	O2a2b4h1b
O1a2b1d2a	O2a2b4h2*
O1a2b1d2b	O2a2b4h2a
O1a2b1d3*	O2a2b4h2b
O1a2b1e*	O2a2b4h3*
O1a2b1e1*	O2a2b4i*
O1a2b1e1a	O2a2b4i1*
O1a2b1e1b	O2a2b4i1a
O1a2b1e2*	O2a2b4i1b
O1a2b1e2a	O2a2b4i2*
O1a2b1e2b	O2a2b4i2a
O1a2b1e3*	O2a2b4i2b
O1a2b1f*	O2a2b4i3*
O1a2b1f1*	O2a2b4j*
O1a2b1f1a	O2a2b4j1*
O1a2b1f1b	O2a2b4j1a
O1a2b1f2*	O2a2b4j1b
O1a2b1f2a	O2a2b4j2*
O1a2b1f2b	O2a2b4j2a
O1a2b1f3*	O2a2b4j2b
O1a2b1g*	O2a2b4j3*
O1a2b1g1*	O2a2b4k*
O1a2b1g1a	O2a2b4k1*
O1a2b1g1b	O2a2b4k1a
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O1a2b1g2a	O2a2b4k2*
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O1a2b1g3*	O2a2b4k2b
O1a2b1h*	O2a2b4k3*
O1a2b1h1*	O2a2b4l*
O1a2b1h1a	O2a2b4l1*
O1a2b1h1b	O2a2b4l1a
O1a2b1h2*	O2a2b4l1b
O1a2b1h2a	O2a2b4l2*
O1a2b1h2b	O2a2b4l2a
O1a2b1h3*	O2a2b4l2b
O1a2b1i*	O2a2b4l3*
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O1a2b1i1a	O2a2b4m1*
O1a2b1i1b	O2a2b4m1a
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O1a2b1j*	O2a2b4m3*
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O1a2b1j3*	O2a2b4n2b
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O1a2b1k1*	O2a2b4o*
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O1a2b1k1b	O2a2b4o1a
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O1a2b1k2a	O2a2b4o2*
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O1a2b1l1a	O2a2b4p1*
O1a2b1l1b	O2a2b4p1a
O1a2b1l2*	O2a2b4p1b
O1a2b1l2a	O2a2b4p2*
O1a2b1l2b	O2a2b4p2a
O1a2b1l3*	O2a2b4p2b
O1a2b1m*	O2a2b4p3*
O1a2b1m1*	O2a2b4q*
O1a2b1m1a	O2a2b4q1*
O1a2b1m1b	O2a2b4q1a
O1a2b1m2*	O2a2b4q1b
O1a2b1m2a	O2a2b4q2*
O1a2b1m2b	O2a2b4q2a
O1a2b1m3*	O2a2b4q2b
O1a2b1n*	O2a2b4q3*
O1a2b1n1*	O2a2b4r*
O1a2b1n1a	O2a2b4r1*
O1a2b1n1b	O2a2b4r1a
O1a2b1n2*	O2a2b4r1b
O1a2b1n2a	O2a2b4r2*
O1a2b1n2b	O2a2b4r2a
O1a2b1n3*	O2a2b4r2b
O1a2b1o*	O2a2b4r3*
O1a2b1o1*	O2a2b4s*
O1a2b1o1a	O2a2b4s1*
O1a2b1o1b	O2a2b4s1a
O1a2b1o2*	O2a2b4s1b
O1a2b1o2a	O2a2b4s2*
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O1a2b1o3*	O2a2b4s2b
O1a2b1p*	O2a2b4s3*
O1a2b1p1*	O2a2b4t*
O1a2b1p1a	O2a2b4t1*
O1a2b1p1b	O2a2b4t1a
O1a2b1p2*	O2a2b4t1b
O1a2b1p2a	O2a2b4t2*
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O1a2b1p3*	O2a2b4t2b
O1a2b1q*	O2a2b4t3*
O1a2b1q1*	O2a2b4u*
O1a2b1q1a	O2a2b4u1*
O1a2b1q1b	O2a2b4u1a
O1a2b1q2*	O2a2b4u1b
O1a2b1q2a	O2a2b4u2*
O1a2b1q2b	O2a2b4u2a
O1a2b1q3*	O2a2b4u2b
O1a2b1r*	O2a2b4u3*
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O1a2b1r1a	O2a2b4v1*
O1a2b1r1b	O2a2b4v1a
O1a2b1r2*	O2a2b4v1b
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O1a2b1r2b	O2a2b4v2a
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O1a2b1s*	O2a2b4v3*
O1a2b1s1*	O2a2b4w*
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O1a2b1s1b	O2a2b4w1a
O1a2b1s2*	O2a2b4w1b
O1a2b1s2a	O2a2b4w2*
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O1a2b1t1a	O2a2b4x1*
O1a2b1t1b	O2a2b4x1a
O1a2b1t2*	O2a2b4x1b
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O1a2b1t2b	O2a2b4x2a
O1a2b1t3*	O2a2b4x2b
O1a2b1u*	O2a2b4x3*
O1a2b1u1*	O2a2b4y*
O1a2b1u1a	O2a2b4y1*
O1a2b1u1b	O2a2b4y1a
O1a2b1u2*	O2a2b4y1b
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O1a2b1u3*	O2a2b4y2b
O1a2b2*	O2a2b4y3*
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O1a2a1a1b	O2a2b4z1*
O1a2a1a2a	O2a2b4z1a
O1a2a1a2b	O2a2b4z1b
O1a2a1b*	O2a2b4z2*
O1a2a1b1a	O2a2b4z2a
O1a2a1b1b	O2a2b4z2b
O1a2a1b2*	O2a2b4z3*
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O1a2a1b2b	O2a2b5a*
O1a2a1b3*	O2a2b5a1*
O1a2a1c*	O2a2b5a1a
O1a2a2*	O2a2b5a1b
O1a2a2a*	O2a2b5a2*
O1a2a2a1*	O2a2b5a2a
O1a2a2a1a	O2a2b5a2b
O1a2a2a1b	O2a2b5a3*
O1a2a2a2*	O2a2b5b*
O1a2a2a2a	O2a2b5b1*
O1a2a2a2b	O2a2b5b1a
O1a2a2a3*	O2a2b5b1b
O1a2a2b*	O2a2b5b2*
O1a2b1*	O2a2b5b2a
O1a2b1a*	O2a2b5b2b
O1a2b1a1*	O2a2b5b3*
O1a2b1a1a	O2a2b5c*
O1a2b1a1b	O2a2b5d*
O1a2b1a2*	O2a2b5d1*
O1a2b1a2a	O2a2b5d1a
O1a2b1a2b	O2a2b5d1b
O1a2b1a3*	O2a2b5d2*
O1a2b1b*	O2a2b5d2a
O1a2b1b1*	O2a2b5d2b
O1a2b1b1a	O2a2b5d3*
O1a2b1b1b	O2a2b5e*
O1a2b1b2*	O2a2b5e1*
O1a2b1b2a	O2a2b5e1a
O1a2b1b2b	O2a2b5e1b
O1a2b1b3*	O2a2b5e2*
O1a2b1c*	O2a2b5e2a
O1a2b1d*	O2a2b5e2b
O1a2b1d1*	O2a2b5e3*
O1a2b1d1a	O2a2b5f*
O1a2b1d1b	O2a2b5f1*
O1a2b1d2*	O2a2b5f1a
O1a2b1d2a	O2a2b5f1b
O1a2b1d2b	O2a2b5f2*
O1a2b1d3*	O2a2b5f2a
O1a2b1e*	O2a2b5f2b
O1a2b1e1*	O2a2b5f3*
O1a2b1e1a	O2a2b5g*
O1a2b1e1b	O2a2b5g1*
O1a2b1e2*	O2a2b5g1a
O1a2b1e2a	O2a2b5g1b
O1a2b1e2b	O2a2b5g2*
O1a2b1e3*	O2a2b5g2a
O1a2b1f*	O2a2b5g2b
O1a2b1f1*	O2a2b5g3*
O1a2b1f1a	O2a2b5h*
O1a2b1f1b	O2a2b5h1*
O1a2b1f2*	O2a2b5h1a
O1a2b1f2a	O2a2b5h1b
O1a2b1f2b	O2a2b5h2*
O1a2b1f3*	O2a2b5h2a
O1a2b1g*	O2a2b5h2b
O1a2b1g1*	O2a2b5h3*
O1a2b1g1a	O2a2b5i*
O1a2b1g1b	O2a2b5i1*
O1a2b1g2*	O2a2b5i1a
O1a2b1g2a	O2a2b5i1b
O1a2b1g2b	O2a2b5i2*
O1a2b1g3*	O2a2b5i2a
O1a2b1h*	O2a2b5i2b
O1a2b1h1*	O2a2b5i3*
O1a2b1h1a	O2a2b5j*
O1a2b1h1b	O2a2b5j1*
O1a2b1h2*	O2a2b5j1a
O1a2b1h2a	O2a2b5j1b
O1a2b1h2b	O2a2b5j2*
O1a2b1h3*	O2a2b5j2a
O1a2b1i*	O2a2b5j2b
O1a2b1i1*	O2a2b5j3*
O1a2b1i1a	O2a2b5k*
O1a2b1i1b	O2a2b5k1*
O1a2b1i2*	O2a2b5k1a
O1a2b1i2a	O2a2b5k1b
O1a2b1i2b	O2a2b5k2*
O1a2b1i3*	O2a2b5k2a
O1a2b1j*	O2a2b5k2b
O1a2b1j1*	O2a2b5k3*
O1a2b1j1a	O2a2b5l*
O1a2b1j1b	O2a2b5l1*
O1a2b1j2*	O2a2b5l1a
O1a2b1j2a	O2a2b5l1b
O1a2b1j2b	O2a2b5l2*
O1a2b1j3*	O2a2b5l2a
O1a2b1k*	O2a2b5l2b
O1a2b1k1*	O2a2b5l3*
O1a2b1k1a	O2a2b5m*
O1a2b1k1b	O2a2b5m1*
O1a2b1k2*	O2a2b5m1a
O1a2b1k2a	O2a2b5m1b
O1a2b1k2b	O2a2b5m2*
O1a2b1k3*	O2a2b5m2a
O1a2b1l*	O2a2b5m2b
O1a2b1l1*	O2a2b5m3*
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O1a2b1l1b	O2a2b5n1*
O1a2b1l2*	O2a2b5n1a
O1a2b1l2a	O2a2b5n1b
O1a2b1l2b	O2a2b5n2*
O1a2b1l3*	O2a2b5n2a
O1a2b1m*	O2a2b5n2b
O1a2b1m1*	O2a2b5n3*
O1a2b1m1a	O2a2b5o*
O1a2b1m1b	O2a2b5o1*
O1a2b1m2*	O2a2b5o1a
O1a2b1m2a	O2a2b5o1b
O1a2b1m2b	O2a2b5o2*
O1a2b1m3*	O2a2b5o2a
O1a2b1n*	O2a2b5o2b
O1a2b1n1*	O2a2b5o3*
O1a2b1n1a	O2a2b5p*
O1a2b1n1b	O2a2b5p1*
O1a2b1n2*	O2a2b5p1a
O1a2b1n2a	O2a2b5p1b
O1a2b1n2b	O2a2b5p2*
O1a2b1n3*	O2a2b5p2a
O1a2b1o*	O2a2b5p2b
O1a2b1o1*	O2a2b5p3*
O1a2b1o1a	O2a2b5q*
O1a2b1o1b	O2a2b5q1*
O1a2b1o2*	O2a2b5q1a
O1a2b1o2a	O2a2b5q1b
O1a2b1o2b	O2a2b5q2*
O1a2b1o3*	O2a2b5q2a
O1a2b1p*	O2a2b5q2b
O1a2b1p1*	O2a2b5q3*
O1a2b1p1a	O2a2b5r*
O1a2b1p

Level 10 (588 categories)

	A0a1*		H1a1a4b2b2		G1b1*
	A0b*		H1a1a4b2c1		G1b1a*
	A1a*		H1a1a4b2c2		G1b1a1a1
	B*		H1a1a4b2c3		G1b1a1a1
	B2a1a1a1a*		H1a1a4b2d*		G1b1a1a1a2
	B2a1a1a1a1		H1a1a4b3a1		G1b1a1a1b*
	B2a1a1a1a2		H1a1a4b3a2		G1b1a1a1b1
	B2b1*		H1a1a4b3b*		G1b1a1a1b2
	B2b1a1c1*		H1a1a4b3b1		G1b1a1a2*
	B3a2*		H1a1a4b4a*		G1b1a1b*
	B3b*		H1a1a4b4b*		G1b1a1b1a*
	C1a1a1a1a*		H1a1a4d*		G1b1a1b1a1
	C1a1a1a1b*		H1a1a4b7*		G1b1a1b1b*
	C1a1a1b*		H1a1b1a*		G1b1a1b1b1
	C1a1a1b1*		H1a1b1a1a*		G1b1a2a*
	C1a1a1b2*		H1a1b1a1b*		G1b1a2a1*
	C1b1a1a1		H1a1b1b1*		G1b1a2a1a
	C1b1a1a1a		H1a1b2*		G1b1a2a1b*
	C1b1a1a1b*		H1a1b2a*		G1b1a2a1b1
	C1b1a1b1		H1a2a2*		G1b1a2a1b2
	C1b1a1b2		H1a2a2a*		G1b1a2a2*
	C1b1a2a2*		H1a2b*		G1b1a2b*
	C1b1a2b*		H1a2b1a1*		G1b2a1*
	C1b1a2b1		H1a2b1a2*		G1b2a1a1
	C2a1*		H1a2b1b1*		G1b2a1a1a
	C2a1a*		H1a2b1b2*		G1b2a1a1b*
	C2a1a1b1a*		H3a1a*		G1b2a1a1c*
	C2a1a1a1		H3a1b*		G1b2a1a2a*
	C2a1a1b1a2		H3a1c*		G1b2a1a2a1
	C2a1a1a1b		H3a2a1a1a*		G1b2a1a2b*
	C2a1a1b1a4		H3a2a1b*		G1b2a1a3a*
	C2a1a1b1b*		H3a2a2a*		G1b2a1b*
	C2a1a2a1a1		H3a2a2b*		G2a1a*
	C2a1a2a2a2		H3a2b1*		G2a1a1a1a*
	C2a1a2a2b*		H3a2b2*		G2a1a1a1a1
	C2a1a3*		H3b1a*		G2a1a1a1a2
	C2a1a3a*		H3b1b*		G2a1a1a1b1
	C2a1a3a1		H3b2a*		G2a1a1a1b2
	C2a1a3a1a1		H1a1b1a2a1		G2a1a1a2*
	C2a1a3a2a*		H1a1b1a4a1		G2a1a1a2a1
	C2a1a3a2a1		H1a1b1a4a2		G2a1a1a2a2
	C2a1a3a6*		H1a1b1b1a1		G2a1a1b1a*
	C2a1a3a6a*		H2a2a1a1a1		G2a1a1b1a1
	C2a1a4a*		H2a2a1a1a2		G2a1a1b1a2
	C2a1b*		H2a2a1a1a4		G2a1a1b1a3
	C2b1*		H2a2a1a5		G2a1a1b1b*
	C2b1a1*		H2a2a1a5i		G2a1a1b2*
	C2b1a1a1*		H2a2a1a1i2		G2a1b1a1a1
	C2b1a1a1a		H2a2a2a2*		G2a1b1a1b*
	C2b1a1a1a1		H2a2a2a2a1		G2a1b1a1b1
	C2b1a1a1a2		H2a2a2a2a2		G2a1b1a1b2
	C2b1a1a2*		H2a2b1a*		G2a1b1a2b*
	C2b1a2a1*		H2a2b2*		G2a1b1a3b1
	C2b1a2a1a*		H3a1a*		G2a1b1a3b2
	C2b1a2a1a1		H3a3b2a2*		G2a1b1b*
	C2b1a2a1a2		H3a3b3a*		G2a1b1b1*
	C2b1a2a1b*		H4b1b*		G2a1b1b2*
	C2b1a2a2*		H5b1a1*		G2a1b2*
	C2b1a2a2a*		H5b2*		G2a1b2a1*
	C2b1a2a2a1		H5b2a1*		G2a1b2a1a
	C2b1a2b*		H5b2a2*		G2a1b2a1b*
	C2b1a2b1*		H5b2a3*		G2a1b2a1b1
	C2b1a2b1a*		H5b2a4*		G2a1b2a1b2
	C2b1a2b1a1		H5b2b*		G2a1b2a2*
	C2b1a2b1a2		H5b3a*		G2a1b2b*
	C2b1a2b1b*		H5b3b*		G2a1b2b1*
	C2b1a2b2*		H1a1a1a*		G2a1b2b2*
	C2b1a2b2a*		H1a1a1a1		G2a1b2b2a*
	C2b1a2b2a1		H1a1a1a2		G2a2a1a1a*
	C2b1a2b2a2		H1a1a1b1		G2a2a1a1a1
	C2b1a2b2b*		H1a1a2b1a1		G2a2a1a1b*
	C2b1b1*		H1a1a2b1a2		G2a2a1a1b1
	C2b1b1a1b*		H1a1b1a1		G2a2a1a1b2
	C2b1b1b*		H1a1b1a2		G2a2a1a2*
	C2b1b1b1*		H1a1b2a2c2		G2a2a1a2a3
	C2b1b1b2*		H2a2b1c2*		G2a2a1b*
	C2b1b1b2a1		J1*		G2a2a2*
	C2b1b1b2a2		J1a2a1a2c1		G2a2a2a1*
	C2b1b1b3*		J1a2a1a2d2		G2a2a2a1a1
	C2b1b1b4*		J1a2a1b1a1		G2a2a2a2
	C2b1b1b5*		J1a2b1b1*		G2a2a2b*
	C2b1b1b6*		J1a2b1b2*		G2a2b1*
	C2b1b1b7*		J1a2b1b3a*		G2a2b1a1*
	C2b1b1b8*		J1a2b1b3b*		G2a2b1a1a
	C2b1b1b9*		J1a2b1c*		G2a2b1a1b*
	C2b1b2*		J1a2b2*		G2a2b1a1b1
	C2b1b2a1*		J1a2b2a1a*		G2a2b1a1b2
	C2b1b2a1a1		J1a2b2a1b*		G2a2b1a2*
	C2b1b2a1a2		J1a2b2a2*		G2a2b1a2a1
	C2b1b2a1b*		J1a2b2a2a*		G2a2b1a2a2
	C2b1b2a1b1		J1a2b2a2b*		G2a2b1b*
	C2b1b2a1b2		J1a2b2a2b1		G2a2b1b1*
	C2b1b2a2*		J1a2b2a2b2		G2a2b1b2*
	C2b2*		J2a1a1b1*		G2a2b2*
	G1a1*		J2a1a1b1a*		G2a2b2a1*
	G1a1a1a1		J2a1a1b1a1		G2a2b2a1a
	G1a1a1a1a*		J2a1a1b1a2		G2a2b2a1b*
	G1a1a1a1a1		J2a1a1b1b*		G2a2b2a1b1
	G1a1a1a1a2		J2a1a1b1b1		G2a2b2a1b2
	G1a1a1a1b*		J2a1b1*		G2a2b2a2*
	G1a1a1a1b1		J2a1b1a*		G2a2b2a2a*
	G1a1a1a1b2		J2a1b1b*		G2a2b2a2a1
	G1a1a1a2*		J2a1b1b1		G2a2b2a2a2
	G1a1a1a2a*		J2a1b1b2		G2a2b2a2b*
	G1a1a1a2a1		J2a1b1b3*		G2a2b2a2b1
	G1a1a1a2a2		J2a1b1b4*		G2a2b2a2b2
	G1a1a1a2b*		J2a1b1b5*		G2a2b2b*
	G1a1a1a2b1		J2a1b1b6*		G2a2b2b1*
	G1a1a1a2b2		J2a1b1b7*		G2a2b2b1a*
	G1a1a1b*		J2a1b1b8*		G2a2b2b1a1
	G1a1a1b1*		J2a1b1b9*		G2a2b2b1a2
	G1a1a1b1a*		J2a1b1b10*		G2a2b2b1b*
	G1a1a1b1a1		J2a1b1b11*		G2a2b2b1b1
	G1a1a1b1a2		J2a1b1b12*		G2a2b2b1b2
	G1a1a1b1b*		J2a1b1b13*		G2a2b2b2*
	G1a1a1b1b1		J2a1b1b14*		G2a2b2b2a*
	G1a1a1b1b2		J2a1b1b15*		G2a2b2b2a1
	G1a1a1b2*		J2a1b1b16*		G2a2b2b2a2
	G1a1a1b2a*		J2a1b1b17*		G2a2b2b2b*
	G1a1a1b2a1		J2a1b1b18*		G2a2b2b2b1
	G1a1a1b2a2		J2a1b1b19*		G2a2b2b2b2
	G1a1a1b2b*		J2a1b1b20*		G2b1a*
	G1a1a1b2b1		J2a1b1b21*		G2b1a1*
	G1a1a1b2b2		J2a1b1b22*		G2b1a1a*
	G1a1a2*		J2a1b1b23*		G2b1a1a1
	G1a1a2a*		J2a1b1b24*		G2b1a1a2
	G1a1a2a1		J2a1b1b25*		G2b1a1b*
	G1a1a2a2		J2a1b1b26*		G2b1a1b1
	G1a1a2b*		J2a1b1b27*		G2b1a1b2
	G1a1a2b1		J2a1b1b28*		G2b1a2*
	G1a1a2b2		J2a1b1b29*		G2b1a2a*
	G1b1a*		J2a1b1b30*		G2b1a2a1
	G1b1a1*		J2a1b1b31*		G2b1a2a2
	G1b1a1a*		J2a1b1b32*		G2b1a2b*
	G1b1a1a1		J2a1b1b33*		G2b1a2b1
	G1b1a1a2		J2a1b1b34*		G2b1a2b2
	G1b1a1b*		J2a1b1b35*		G2b1b*
	G1b1a1b1		J2a1b1b36*		G2b1b1*
	G1b1a1b2		J2a1b1b37*		G2b1b1a*
	G1b1a2*		J2a1b1b38*		G2b1b1a1
	G1b1a2a*		J2a1b1b39*		G2b1b1a2
	G1b1a2a1		J2a1b1b40*		G2b1b1b*
	G1b1a2a2		J2a1b1b41*		G2b1b1b1
	G1b1a2b*		J2a1b1b42*		G2b1b1b2
	G1b1a2b1		J2a1b1b43*		G2b1b2*
	G1b1a2b2		J2a1b1b44*		G2b1b2a*
	G1b1b*		J2a1b1b45*		G2b1b2a1
	G1b1b1*		J2a1b1b46*		G2b1b2a2
	G1b1b1a*		J2a1b1b47*		G2b1b2b*
	G1b1b1a1		J2a1b1b48*		G2b1b2b1
	G1b1b1a2		J2a1b1b49*		G2b1b2b2
	G1b1b1b*		J2a1b1b50*		G2b2*
	G1b1b1b1		N1b1a2b1a1		R1a1a1a1b1
	G1b1b1b2		N1b1b*		R1a1a1b1a1
	G1b1b2a1		N1b1b1*		R1a1a1b1a2
	G1b1b2b2		N1b2*		R1a1a1b1a3
	G2b1a1c*		N1b2a*		R1a1a1b1a4
	G2b1a1a*		N1b2a1a*		R1a1a1b2*
	G2b1a2*		N1b2a1b*		R1a1a1b2a1
	G2b2a*		N1b2b*		R1a1a1b2a2
	G2b2b*		N2*		R1a1a1b2a3
	F1*		N2a*		R1a1a1b2a4
	F2*		O1a*		R1a1a1b2b*
	F4*		O1a1a1a1*		R1a1a1b2b1
	G1a1*		O1a1a1a1a*		R1b1*
	G1a1a2*		O1a1a1a1a1		R1b1a1a*
	G1a1a2a1*		O1a1a1a1a2		R1b1a1a1b*
	G1a1a2b*		O1a1a1a2*		R1b1a1b1
	G2a1a2a*		O1a1a1a3a*		R1b1a1b1a1
	G2a1a2a1a*		O1a1a1b*		R1b1a1b1a2
	G2a2a1a2a1		O1a1a1b1*		R1b1a1b1b*
	G2a2a1a2*		O1a1a1b1a1		R1b1a1b1b3
	G2a2b1b1*		O1a1a1b1b*		R1b1a2*
	G2a2b1a1*		O1a1a1b1b1		R1b1a2a1a
	G2a2b1a1b1		O1a1a2a1*		R1b1a2a1c*
	G2a2b2c1*		O1a1a2a1a*		R1b1a2b1*
	G2a2b2a1a1		O1a1a2a1a1		R1b1b2a2b1
	G2a2b2a4a*		O1a1a2a1a2		R1b2b*
	G2a2b2a4a2		O1a1a2a1a3		R1b2b1*
	G2a2b2b2a*		O1a1a2a1b1		R1b2b2*
	G2b1a*		O1a1a2a2*		R2a2b1*
	H1a1a1b*		O1a1a2a2a1		R2a2b1b1*
	H1a1a1c*		O1a1a2a3*		R2a2b1b2a1
	H1a1a4a*		O1a1a2b1*		R2a2b1b2b2
	H1a1a4a1*		O1a1a2b2*		R2a2b1b2b3
	H1a1a4a2*		O1a1a2b2a*		R2a2b1b2c*
	H1a1a4b*		O1a1a2c*		R2a2b1b2c1
	H1a1a4b1a*		O1a1b*		R2b1*
	H1a1a4b1b*		O1a1b1a1a*		R2b1a1*
	H1a1a4b2*		O1a1b1a2*		T1a1a*
	H1a1a4b2a*		O1a2a*		T1a1a1b2b2
	H1a1a4b2a1		O1a2b*		T1a2b1a*
	H1a1a4b2a2		O1a3*		T1a2b1a1*
	H1a1a4b2b1		O1a3a*		T1a2b2a1*

Level 11 (684 categories)

A0a1*	H1a1a4b33b*	O1b1a1b1b*
A0b*	H1a1a4b38/1a	O1b1a1b1b/a
A1a*	H1a1a4b38/1b	O1b1a2a*
B*	H1a1a4b38/1c	O1b1a2a1*
B2a1a1a1*	H1a1a4b44a*	O1b1a2a1a*
B2a1a1a1a1*	H1a1a4b46*	O1b1a2b1*
B2a1a1a1a2*	H1a1a4b6*	O1b1a2b1a*
B2a1a1a1a2a	H1a1a4b7*	O1b1a2b2*
B2b1*	H1a1b1a*	O1b1a2c*
B2b1a1c1*	H1a1b1a1a*	O1b2a1a*
B3a2*	H1a1b1a1b*	O1b2a1a1*
B3b*	H1a1b1b1*	O1b2a1a1*
C1a1a1a1a*	H1a1b2*	O1b2a1a1*
C1a1a1a1b*	H1a2a2*	O1b2a1a1*
C1a1a1b1*	H1a2a3*	O1b2a1a2a*
C1a1a1b2*	H1a2b*	O1b2a1a2a1*
C1b1a1a1a*	H1a2b1a1*	O1b2a1a2a1a
C1b1a1a1a1b	H1a2b1a2*	O1b2a1a2a1b
C1b1a1a1a1b	H1a2b1b1*	O1b2a1a2b*
C1b1a1a1b*	H1a2b1b1a*	O1b2a1a2c*
C1b1a1a1b/a	H3a1a*	O1b2a1b*
C1b1a1a2a1b	H3a1b*	O2a1a*
C1b1a1a2a2*	H3a1c*	O2a1a1a*
C1b1a1a2b*	H3a2a1a1a*	O2a1a1a1a
C1b1a1b2*	H3a2a1a1*	O2a1a1a1b
C1b1a2b*	H3a2a2a*	O2a1a1a1a2*
C2a1*	H3a2a2b*	O2a1a1b1*
C2a1a*	H3a2b1*	O2a1a1b1a
C2a1a1b1a*	H3a2b2*	O2a1a1b2*
C2a1a1b1a1*	H3b1a*	O2a1a1b2a
C2a1a1b1a2a	H3b1b*	O2a1a1a2*
C2a1a1b1a3a	H3b2a*	O2a1a1a2a1*
C2a1a1b1a4*	H1a1b1a2a1*	O2a1a1a2a2*
C2a1a1b1b*	H1a1b1a4a1a	O2a1a1b1a*
C2a1a2a1a1*	H1a1b1a4a2a	O2a1a1b1a1*
C2a1a2a2a2*	H1a1b1a4a2b	O2a1a1b1a1a
C2a1a2a2b*	H1a1b1b1a1a	O2a1a1b1a1b
C2a1a3*	H1a2a1a1a1a	O2a1a1b1a2a
C2a1a3a*	H1a2a1a1a1b	O2a1a1b1a2b
C2a1a3a1*	H1a2a1a1a2a	O2a1a1b1a3*
C2a1a3a1a1*	H1a2a1a1a2b	O2a1a1b2*
C2a1a3a2a*	H1a2a1a1a4a	O2a1a1b2*
C2a1a3a2a1*	H1a2a1a1a4a	O2b1b1a1a
C2a1a3a6*	H1a2a1a1b1a	O2b1b1a1b
C2a1a3a4a1*	H1a2a1a1b2a	O2b1b1a2*
C2a1a3a2a*	H1a2a1a1b2b	O2b1b1a2a
C2a1a3b*	H1a2a1a1b3	O2b1b1b2*
C2a1a3b1*	H1a2a1a2a*	O2b1b2*
C2b1a1a1a*	H1a2a1a2a1	O2b1b2a1*
C2b1a1a1a1*	H1a1a1a1a*	O2b1b2a1a*
C2b1a1a1a2*	Q1a1a1a1*	O2b1b2a1b*
C2b1a2a1a*	Q1a1a1a1a	O2b1b2a2*
C2b1a2a1a1*	Q1a1a1a1a1	O2b1b2a2a
C2b1a2a2a*	Q1a1a1a1a2c	O2b1b2a2b
C2b1a2a2a1	Q1a1a1b1a*	O2b1b2a3*
C2b1a2a2a1a*	Q1a1a1b1a1	O2b1b2a3a
C2b1a2a2a1b	Q1a1a1b1a2	O2b1b2a3b
C2b1a2a2a2*	Q1a1a1b2*	O2b1b3*
C2b1a2a2b*	Q1a1a1b2a1	O2b1b3a*
C2b1a2a3*	Q1a1a1b2a2	O2b1b3a1*
C2b1a2a3a*	Q1a1a1b2a2a	O2b1b3a2*
C2b1a2a3a1*	Q1a1a1b2a2b	O2b1b3a2a
C2b1a2a3a2*	Q1a1a1b2a3	O2b1b3a2b
C2b1a2a3b*	Q1a1a1b2a4	O2b1b3a3*
C2b1a2a4*	Q1a1a1b2a4a	O2b1b3a3a
C2b1a2a4a*	Q1a1a1b2a4b	O2b1b3a3b
C2b1a2a4a1	Q1a1a1b2a4c	O2b1b3a4*
C2b1a2a4a2	Q1a1a1b2a5	O2b1b3a4a
C2b1a2a4b*	Q1a1a1b2a6	O2b1b3a4b
C2b1a2b*	Q1a1a1b2a7	O2b1b3a5*
C2b1a2b1*	Z1*	O2b2a1a*
C2b1a2b2*	J1a2a1a2a1a	O2b2a1a1*
C2b1a2b2a*	J1a2a1a2d2b	O2b2a1a1a
C2b1a2b2b*	J1a2b1b1a1*	O2b2a1a2*
C2b1b1*	J1a2b1b2*	O2b2a1a2a*
C2b1b1a1a*	J1a2b1b2a*	O2b2a1a2a1
C2b1b1b*	J1a2b1b2c*	O2b2a1b*
C2b1b1b1*	J1a2*	O2b2a2*
C2b1b1b2*	J1b1a1a*	O2b2a2a*
C2b1b1b2a1*	J1b1a1a1*	O2b2a2a1*
C2b1b1b2a1b	J2a1*	O2b2a2a1a
C2b1b1b2a2	J2a1a1a2a1a	O2b2a2a2*
C2b1b1b3*	J2a1a1a2a2b	O2b2b1*
C2b1b1b4*	J2a1a1a2b1b	O2b2b1a1*
C2b1b1b5*	J2a1a1a2b2a	O2b2b1a1a
C2b1c*	J2a1a1b1a*	O2b2b1a1b
C2b1c1*	J2a1a1b1a1	O2b2b1a2*
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C2b1c1a1a*	J2a1a1b1a1b	O2b2b1a2b
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C2b1c1a2a*	J2a1a1b1a2b	O2b2b1a3b
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C2b1c1b*	J2a1a1b1a6	O2b2b1a6a
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C2b1c1b1a2	J2a1a1b1a7a	O2b2b1a7b
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C2b1c1b2*	J2a1a1b1a8b	O2b2b1a9*
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C2b1c1b2a4	J2a1a1b1a10a	O2b2b1a10b
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C2b1c1b33a1	J2a1a1b1a82a	O2b2b1a82b
C2b1c1b33a2	J2a1a1b1a82b	O2b2b1a83*
C2b1c1b33a3	J2a1a1b1a83	O2b2b1a83a
C2b1c1b33a4	J2a1a1b1a83a	O2b2b1a83b
C2b1c1b33b*	J2a1a1b1a83b	O2b2b1a84*
C2b1c1b34*	J2a1a1b1a84	O2b2b1a84a
C2b1c1b34a	J2a1a1b1a84a	O2b2b1a84b
C2b1c1b34a1	J2a1a1b1a84b	O2b2b1a85*
C2b1c1b34a2	J2a1a1b1a85	O2b2b1a85a
C2b1c1b34a3	J2a1a1b1a85a	O2b2b1a85b
C2b1c1b34a4	J2a1a1b1a85b	O2b2b1a86*
C2b1c1b34b*	J2a1a1b1a86	O2b2b1a86a
C2b1c1b35*	J2a1a1b1a86a	O2b2b1a86b
C2b1c1b35a	J2a1a1b1a86b	O2b2b1a87*
C2b1c1b35a1	J2a1a1b1a87	O2b2b1a87a
C2b1c1b35a2	J2a1a1b1a87a	O2b2b1a87b
C2b1c1b35a3	J2a1a1b1a87b	O2b2b1a88*
C2b1c1b35a4	J2a1a1b1a88	O2b2b1a88a
C2b1c1b35b*	J2a1a1b1a88a	O2b2b1a88b
C2b1c1b36*	J2a1a1b1a88b	O2b2b1a89*
C2b1c1b36a	J2a1a1b1a89	O2b2b1a89a
C2b1c1b36a1	J2a1a1b1a89a	O2b2b1a89b
C2b1c1b36a2	J2a1a1b1a89b	O2b2b1a90*
C2b1c1b36a3	J2a1a1b1a90	O2b2b1a90a
C2b1c1b36a4	J2a1a1b1a90a	O2b2b1a90b
C2b1c1b36b*	J2a1a1b1a90b	O2b2b1a91*
C2b1c1b37*	J2a1a1b1a91	O2b2b1a91a
C2b1c1b37a	J2a1a1b1a91a	O2b2b1a91b
C2b1c1b37a1	J2a1a1b1a91b	O2b2b1a92*
C2b1c1b37a2	J2a1a1b1a92	O2b2b1a92a
C2b1c1b37a3	J2a1a1b1a92a	O2b2b1a92b
C2b1c1b37a4	J2a1a1b1a92b	O2b2b1a93*
C2b1c1b37b*	J2a1a1b1a93	O2b2b1a93a
C2b1c1b38*	J2a1a1b1a93a	O2b2b1a93b
C2b1c1b38a	J2a1a1b1a93b	O2b2b1a94*
C2b1c1b38a1	J2a1a1b1a94	O2b2b1a94a
C2b1c1b38a2	J2a1a1b1a94a	O2b2b1a94b
C2b1c1b38a3	J2a1a1b1a94b	O2b2b1a95*
C2b1c1b38a4	J2a1a1b1a95	O2b2b1a95a
C2b1c1b38b*	J2a1a1b1a95a	O2b2b1a95b
C2b1c1b39*	J2a1a1b1a95b	O2b2b1a96*
C2b1c1b39a	J2a1a1b1a96	O2b2b1a96a
C2b1c1b39a1	J2a1a1b1a96a	O2b2b1a96b
C2b1c1b39a2	J2a1a1b1a96b	O2b2b1a97*
C2b1c1b39a3	J2a1a1b1a97	O2b2b1a97a
C2b1c1b39a4	J2a1a1b1a97a	O2b2b1a97b
C2b1c1b39b*	J2a1a1b1a97b	O2b2b1a98*
C2b1c1b40*	J2a1a1b1a98	O2b2b1a98a
C2b1c1b40a	J2a1a1b1a98a	O2b2b1a98b
C2b1c1b40a1	J2a1a1b1a98b	O2b2b1a99*
C2b1c1b40a2	J2a1a1b1a99	O2b2b1a99a
C2b1c1b40a3	J2a1a1b1a99a	O2b2b1a99b
C2b1c1b40a4	J2a1a1b1a99b	O2b2b1a100*
C2b1c1b40b*	J2a1a1b1a100	O2b2b1a100a
C2b1c1b41*	J2a1a1b1a100a	O2b2b1a100b
C2b1c1b41a	J2a1a1b1a100b	O2b2b1a101*
C2b1c1b41a1	J2a1a1b1a101	O2b2b1a101a
C2b1c1b41a2	J2a1a1b1a101a	O2b2b1a101b
C2b1c1b41a3	J2a1a1b1a101b	O2b2b1a102*
C2b1c1b41a4	J2a1a1b1a102	O2b2b1a102a
C2b1c1b41b*	J2a1a1b1a102a	O2b2b1a102b
C2b1c1b42*	J2a1a1b1a102b	O2b2b1a103*
C2b1c1b42a	J2a1a1b1a103	O2b2b1a103a
C2b1c1b42a1	J2a1a1b1a103a	O2b2b1a103b
C2b1c1b42a2	J2a1a1b1a103b	O2b2b1a104*
C2b1c1b42a3	J2a1a1b1a104	O2b2b1a104a
C2b1c1b42a4	J2a1a1b1a104a	O2b2b1a104b
C2b1c1b42b*	J2a1a1b1a104b	O2b2b1a105*
C2b1c1b43*	J2a1a1b1a105	O2b2b1a105a
C2b1c1b43a	J2a1a1b1a105a	O2b2b1a105b
C2b1c1b43a1	J2a1a1b1a105b	O2b2b1a106*
C2b1c1b43a2	J2a1a1b1a106	O2b2b1a106a
C2b1c1b43a3	J2a1a1b1a106a	O2b2b1a106b
C2b1c1b43a4	J2a1a1b1a106b	O2b2b1a107*
C2b1c1b43b*	J2a1a1b1a107	O2b2b1a107a
C2b1c1b44*	J2a1a1b1a107a	O2b2b1a107b
C2b1c1b44a	J2a1a1b1a107b	O2b2b1a108*
C2b1c1b44a1	J2a1a1b1a108	O2b2b1a108a
C2b1c1b44a2	J2a1a1b1a108a	O2b2b1a108b
C2b1c1b44a3	J2a1a1b1a108b	O2b2b1a109*
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C2b1c1b44b*	J2a1a1b1a109a	O2b2b1a109b
C2b1c1b45*	J2a1a1b1a109b	O2b2b1a110*
C2b1c1b45a	J2a1a1b1a110	O2b2b1a110a
C2b1c1b45a1	J2a1a1b1a110a	O2b2b1a110b
C2b1c1b45a2	J2a1a1b1a110b	O2b2b1a111*
C2b1c1b45a3	J2a1a1b1a111	O2b2b1a111a
C2b1c1b45a4	J2a1a1b1a111a	O2b2b1a111b
C2b1c1b45b*	J2a1a1b1a111b	O2b2b1a112*
C2b1c1b46*	J2a1a1b1a112	O2b2b1a112a
C2b1c1b46a	J2a1a1b1a112a	O2b2b1a112b
C2b1c1b46a1	J2a1a1b1a112b	O2b2b1a113*
C2b1c1b46a2	J2a1a1b1a113	O2b2b1a113a
C2b1c1b46a3	J2a1a1b1a113a	O2b2b1a113b
C2b1c1b46a4	J2a1a1b1a113b	O2b2b1a114*
C2b1c1b46b*	J2a1a1b1a114	O2b2b1a114a
C2b1c1b47*	J2a1a1b1a114a	O2b2b1a114b
C2b1c1b47a	J2a1a1b1a114b	O2b2b1a115*
C2b1c1b47a1	J2a1a1b1a115	O2b2b1a115a
C2b1c1b47a2	J2a1a1b1a115a	O2b2b1a115b
C2b1c1b47a3	J2a1a1b1a115b	O2b2b1a116*
C2b1c1b47a4	J2a1a1b1a116	O2b2b1a116a
C2b1c1b47b*	J2a1a1b1a116a	O2b2b1a116b
C2b1c1b48*	J2a1a1b1a116b	O2b2b1a117*
C2b1c1b48a	J2a1a1b1a117	O2b2b1a117a
C2b1c1b48a1	J2a1a1b1a117a	O2b2b1a117b
C2b1c1b48a2	J2a1a1b1a117b	O2b2b1a118*
C2b1c1b48a3	J2a1a1b1a118	O2b2b1a118a
C2b1c1b48a4	J2a1a1b1a118a	O2b2b1a118b
C2b1c1b48b*	J2a1a1b1a118b	O2b2b1a119*
C2b1c1b49*	J2a1a1b1a119	O2b2b1a119a
C2b1c1b49a	J2a1a1b1a119a	O2b2b1a119b
C2b1c1b49a1	J2a1a1b1a119b	O2b2b1a120*
C2b1c1b49a2	J2a1a1b1a120	O2b2b1a120a
C2b1c1b49a3	J2a1a1b1a120a	O2b2b1a120b
C2b1c1b49a4	J2a1a1b1a120b	O2b2b1a121*
C2b1c1b49b*	J2a1a1b1a121	O2b2b1a121a
C2b1c1b50*	J2a1a1b1a121a	O2b2b1a121b
C2b1c1b50a	J2a1a1b1a121b	O2b2b1a122*
C2b1c1b50a1	J2a1a1b1a122	O2b2b1a122a
C2b1c1b50a2	J2a1a1b1a122a	O2b2b1a122b
C2b1c1b50a3	J2a1a1b1a122b	O2b2b1a123*
C2b1c1b50a4	J2a1a1b1a123	O2b2b1a123a
C2b1c1b50b*	J2a1a1b1a123a	O2b2b1a123b
C2b1c1b51*	J2a1a1b1a123b	O2b2b1a124*
C2b1c1b51a	J2a1a1b1a124	O2b2b1a124a
C2b1c1b51a1	J2a1a1b1a124a	O2b2b1a124b
C2b1c1b51a2	J2a1a1b1a124b	O2b2b1a125*
C2b1c1b51a

Level 12 (803 categories)

A0a1*	H1a1a4b3b1b*	O1b2a1a2a1a*
A0b*	H1a1a4b3b1c*	O1b2a1a2a1b*
A1a*	H1a1a4b4a*	O1b2a1a2a1b1
B*	H1a1a4b4b*	O1b2a1a2b*
B2a1a1a1a*	H1a1a4b6*	O1b2a1a3a*
B2a1a1a1a1*	H1a1a4b7*	O1b2a1b*
B2a1a1a1a2	H1a1b1a*	O2a1a*
B2a1a1a1a2a*	H1a1b1a1a*	O2a1a1a1a*
B2b1*	H1a1b1a1b*	O2a1a1a1a1a
B2b1a1c*	H1a1b1b1*	O2a1a1a1a2
B2a2*	H1a1b2*	O2a1a1a1a3
B3b*	H1a2a2*	O2a1a1a1b*
C1a1a1a1a*	H1a2a3*	O2a1a1a1b1
C1a1a1a1b*	H1a2b*	O2a1a1a1a2*
C1a1a1b*	H1a2b1a1*	O2a1a1a1b1*
C1a1a1b1*	H1a2b1a2*	O2a1a1a1b1a
C1a1a1b2*	H1a2b1b1*	O2a1a1a1b2*
C1b1a1a1a1a1	H1a2b1b2*	O2a1a1b2a*
C1b1a1a1a1a2	H3a1a*	O2a1a1b2a1
C1b1a1a1a1b*	H3a1b*	O2a1a1a2a*
C1b1a1a1b*	H3a1c*	O2a1a1a2a1*
C1b1a1a2a1a	H3a2a1a*	O2a1a1a2a2*
C1b1a1a2a1b	H3a2a1b*	O2a1a1b1a*
C1b1a1a2a2*	H3a2a2a*	O2a1a1b1a1
C1b1a1a2b*	H3a2a2b*	O2a1a1b1a2
C1b1a1b2*	H3a2b1*	O2a1a1b1a3*
C1b1a2b*	H3a2b2*	O2a1a1b1a3a1
C2a1*	H3b1a*	O2a1a1b1a2b1
C2a1a*	H3b1b*	O2a1a1b1a2b2
C2a1a1b1a*	H3b2a*	O2a1a1b1a3*
C2a1a1b1a1*	H1a1b1a2a1*	O2a1a1b1b*
C2a1a1b1a2a1	H1a1b1a4a1a1	O2a1a1b2*
C2a1a1b1a3a*	H1a1b1a4a2a1	O2a1b1a1a1
C2a1a1b1a4*	H1a1b1a4a2b1	O2a1b1a1a2
C2a1a1b1b*	H1a1b1b1a1a*	O2a1b1a1b1
C2a1a2a1a1*	H2a2a1a1a2	O2a1b1a1b2
C2a1a2a2a2*	H2a2a1a1b1	O2a1b1a2a*
C2a1a2a2b*	H2a2a1a1b1b	O2a1b1a2a1
C2a1a3*	H2a2a1a2a1	O2a1b1a2a2
C2a1a3a*	H2a2a1a2a2	O2a1b1a3a3
C2a1a3a1*	H2a2a1a3a1	O2a1b1a4a4
C2a1a3a1a1*	H2a2a1a4a1	O2a1b1a2a3
C2a1a3a2a*	H2a2a1a4a2	O2a1b1a2b*
C2a1a3a2b*	H2a2a1b1a1	O2a1b1a2b1
C2a1a3b*	H2a2a1b1a2	O2a1b1a2b2
C2a2a2a1*	H2a2a1b1a3	O2a1b1b1*
C2a2a3a*	H2a2a2a*	O2a1b1b2a*
C2a2a3a1*	H2a2a3a*	O2a1b2a*
C2b1a*	H2a3b1*	O2a1b2a1
C2b1a1*	H2a3b2*	O2a1b2a2
C2b1a1a1*	H2a3a1a*	O2a1b2a3
C2b1a1a1a1*	H2a3b2a1*	O2a1b2*
C2b1a1a1a1d	H3b3a*	O2a1b2a1*
C2b1a1a1a2*	H1a1b*	O2a1b2a1a
C2b1a1a1b*	H1a1a1*	O2a1b2a1b
C2b1a1a2*	H1b2*	O2a1b2a2
C2b1a2a1*	H1b3*	O2a1b2a2a
C2b1a2a1a	H1a1a1a*	O2a2a1a*
C2b1a2a1a1*	Q1a1a1a1*	O2a2a1a1a1*
C2b1a2a1a2*	Q1a1a1a1a1	O2a2a1a1a1a*
C2b1a2a1b*	Q1a1a1a1a6	O2a2a1a1a1b*
C2b1a2a2*	Q1a1a1a2a1	O2a2a1a1a1c1
C2b1a2a2a*	Q1a1b1a1a*	O2a2a1a1a1c*
C2b1a2a2b1*	Q1a1b1a1a1	O2a2a1a1b*
C2b1a2a2b1a2	Q1a1b1a1a2	O2a2a1a1b1a*
C2b1a2a2b1a3	Q1a1b1a1b1a1	O2a2a1a1b1a1
C2b1a2a2b1b*	Q1a1b1a1b2	O2a2a1a1b1a2
C2b1a2a2b1c*	Q1a1b2a2c2a1	O2a2a1a2a1a1
C2b1a2a2b2*	Q1a2b1c2*	O2a2a1a2a1b*
C2b1a2b*	J1*	O2a2a1a2a1b1
C2b1a2b1*	J1a2a1a2c1a1	O2a2a1a2a2*
C2b1a2b2*	J1a2a1a2c2b2	O2a2a1a2a3a*
C2b1a2b2a*	J1a2a1b1a1*	O2a2a1b*
C2b1a2b2b*	J1a2b1b2*	O2a2a2*
C2b1b1*	J1a2b1b2a*	O2a2a3a1*
C2b1b1a1a*	J1a2b1b2c1*	O2a2a3a1a1*
C2b1b1a1b*	J1a1a*	O2a2a3a1a2
C2b1b1b1*	J1b1a1a*	O2a2a3a1a3
C2b1b1b2*	J1b1a1b*	O2a2a3a2*
C2b1b1b2a1*	J2a1*	O2a2b1*
C2b1b1b2a1b*	J2a1a1a2a1a1	O3a1b1a1a*
C2b1b1b2a2*	J2a1a1a2a2a2	O3a1b1a1a1*
C2b1b1b3*	J2a1a1a2b1b3	O3a1b1a1a1
C2b1b1b4*	J2a1a1a2b1b4	O3a1b1a1a2
C2b1b1b5*	J2a1a1a2b2a1	O3a1b1a1a3
C2b1b1c*	J2a1a1a2b2a2	O3a1b1a1a4
C2b1b1d*	J2a1a1a2b2a3	O3a1b1a1a5
C2b1b1d1*	J2a1a1a1*	O3a1b1a1b*
C2b1b1d1a*	J2a1a1b1a*	O3a1b1a1b1
C2b1b1g*	J2a1a1b1a1*	O3a1b1a1b2
C2b1b1g1*	J2a1a1b2*	O3a1b1a1c*
C2b1b1g2*	J2a1a1b2a1*	O3a1b1a1c1
C2b1b1f*	J2a1a1b2a1a1	O3a1b1a1d*
C2b1b1f2	J2a1a1b2a1a2	O3a1b1a1e1
C2b1b2*	J2a1a1b2a1b1	O3a1b1a1e2
C2b2*	J2a1a2b2a2*	O3a1b1a1e*
O1a1*	J2a1a2b2a2a*	O3a1b1a1e1
O1a1a1a1a1b*	J2a1a2b2a2a2	O3a1b1a1e2
O1a1a1a1a1b1	J2a2*	O3a1b1a1g*
O1a1a1a1a1b2	J2a2a1a1a*	O3a1b1a1h*
O1a1a1a1b*	J2b1b1*	O3a1b1a1b*
O1a1a1a1b2*	J2b2a1a*	O3a1b1a2*
O1a1a1b1b*	J2b2a1a1a1	O3a1b1a2a*
O1a1a1b2*	J2b2a2a*	O3a1b1a2a1*
O1a1b1a1*	J2b2a2a1*	O3a1b1a2a1a1
O1a1b1a1a1*	J2b2a2a1a1c*	O3a1b1a2a1a2
O1a1b1a2*	J2b2a2b2*	O3a1b1a2a3
O1a1b1b1*	J2b2a2b2a*	O3a1b1a2a4
O1a1b1b2*	J2b2a2b2b*	O3a1b1a3*
O1a2a1b2a1a	J2b2a2b2b1a*	O3a1b1a3a1
O1a2a1b2a1a1	J2b2a2b2b1b	O3a1b1a3a2
O1a2a1b2a1b*	J2b2b1*	O3a1b1a3a3
O1a2a1b2a2*	L1a1*	O3a1b1a3a4*
O1a2a1b1a*	L1a1a1*	O3a1b1a3b1
O1a2a1b1b*	L1a1a2a*	O3a2b1a*
O1a2a3a1a*	L1a1a2b*	O3a2b2a1a*
O1a2a3a1a1a*	L1a1b1a*	O3a2b2a1a1*
O1a2a3a1a2a*	L1a1b1a1	O3a2b2a1a2
O1a2a3a2a*	L1a1b2a1	O3a2b2a1b1*
O1a2a3a2b*	L1a1b2a2	O3a2b2a1b1*
O1a2a3a3a2*	L1a1b2b*	O3a2b2a1b2*
O1a2a3b*	L1a1b3a1*	O3a2b2a1b2a*
O1a2b1a1a1*	L1a1b3a1a1*	O3a2b2a2a*
O1a2b1b1a1*	L1a1b3a1a1b*	O3a2b2a2a1*
O1a2b1b2a*	L1a1b3a1a2a	O3a2b2a2b*
O1a2b2*	L1a1b3a1a2a2	O3a2b2a2b1*
E1a2a1a1a1*	L1a1b3a1a3b*	O3a2b3*
E1a2a1a1a2	L1a1b3a1b	O3a2b3b1*
E1a2a1a1b*	L1a1b3a2a*	O3a2b3b1a*
E1a2a1a2a*	L1a1b3a2b*	O3a2b3b1a1*
E1a2a1a2a1	L1a1b3a2b1	O3b1a*
E1a2a1b1a*	L1a1b3b*	O3b1a1*
E1a2a1b1b*	L1a1b3c1*	O3b1a1a*
E1a2a1b2*	L1a2*	O3b1a1a1
E1a2a2a1*	L1a2a1a*	O3b1a1a1*
E1a2a2a1a*	L1a2a1a1a1*	O3b1a1a2
E1a2a2a1b*	L1a2a1a1a2*	O3b2*
E1a2b*	L1a2a1a1b*	O1a1a*
E1a2b1*	L1a2a1b*	O1a1a1*
E1a2b1a1*	L1a2a1b1*	O1a1a1a*
E1a2b1a1a1*	L1a2a1b2*	O1a1a1a1
E1a2b1a1a1a*	L1a2a2*	O1a1a1a1a*
E1a2b1a1a1c*	N*	O1a1a1a1a1*
E1a2b1a1a2*	N1a*	O1a1a1b1*
E1a2b1a2a*	N1a1a1a1a1	O1a1a2*
E1a2b1a2b*	N1a1a1a1a2	O1a2a2a1*
E1a2b1b*	N1a1a1a1a2a1	O1a2a2b*
E1b1a1a1a1	N1a1a1a1a2a2	O1a2a2b1a*
E1b1a1a1a2	N1a1a1a1a4*	O1b1a1a1*
E1b1a1a1a3	N1a1a1a1a4a*	O1b1a1a1a1
E1b1a1a1a1c1	N1a1a1a1a4a2	O1b1a1a1a1b1
E1b1a1a1a1c2	N1a1a2*	O1b1a1a1a1c1
E1b1a1a1a1c3	N1a2a*	O1b1a1a1a2a*
E1b1a1a1a1c4	N1a2a1*	O1b1a1a1a2b*
E1b1a1a1a2a1	N1a2a2a1*	O1b1a1a1b*
E1b1a1a1a2a2	N1a2a2a2*	O1b1a1a1g*
E1b1a1a1a2b*	N1a2a1b*	O1b1a1h1a1
E1b1a1a1a3*	N1a2b1b1*	O1b1a1h1a2
E1b1a1a1b*	N1a2b3*	O1b1a1h1b*
E1b1a1b1a1*	N1a3*	O1b1a1h2*
E1b1a1b1a1a*	N1b1*	O1b1a1a1a1
E1b1a1b1a1b*	N1b1a1*	O1b1a1a1a2
E1b1a1b1a2*	N1b1a1a*	O1b1a1a1b*
E1b1a1b1a3*	N1b1a1b*	O1b1a1a1c*
E1b1a1b1b*	N1b1a2*	O1b1a1a1c1
E1b1a1b2*	N1b2a*	O1b1a1a1c2
E1b1b1a1a1b1	N1b2a1a*	O1b1a1a1c3a*
E1b1b1a1a1c1	N1b2a1b1*	O1b1a1a1c*
E1b1b1a1a1c2	N1b2b*	O1b1a1a1c*
E1b1b1a1a2a1	NO*	O1b1a1a1c*
E1b1b1a1a2a2	O1*	O1b1a1a1e*
E1b1b1a1b1a*	O1a*	O1b1a1a1f*
E1b1b1a1b1a6	O1a1a1a1*	O1b1a1a1u*
E1b1b1a1b1a8	O1a1a1a1a*	O1b1a2a1b1*
E1b1b1a1b1a10	O1a1a1a1a1a*	O1b1a2a1b2*
E1b1b1a1b1a11	O1a1a1a1a1a1	O1b1a3a*
E1b1b1a1b1a12	O1a1a1a1a1a2	O1b1a3a1*
E1b1b1a1b2a3	O1a1a1a1a1b*	O1b1a3b*
E1b1b1a1b2a*	O1a1a1a1b1	O1b1a3b2*
E1b1b1a1b2a3	O1a1a1a1a2*	O1b1a3b3*
E1b1b1a1b2a4	O1a1a1a1a2a1	O1b1b1*
E1b1b1a1a*	O1a1a1a2*	O1b2a1a*
E1b1b1b1a1*	O1a1a1a3a*	O1b2a1a1a*
E1b1b1b1a1a1	O1a1a1b*	O1b2a2*
E1b1b1b1a1b2	O1a1a1b1*	O2a1a4*
E1b1b1b1a2*	O1a1a1b2*	O2a1a1b1*
E1b1b1b2a1	O1a1a1b3*	O2a2*
E1b1b1b2a1a1	O1a1b1a1*	O2a2a1a*
E1b1b1b2a1a2	O1a1b1a1a*	O2a2a1a1
E1b1b1b2a1a3	O1a1b1a1a1	O2b1a*
E1b1b1b2a1a4	O1a1b1a1a2	O2b2a*
E1b1b1b2a1a5	O1a1b1a1a3	O2b2a1*
E1b1b1b2a1a6	O1a1b1a1b*	O2b2a1a*
E1b1b1b2b2a1	O1a1b1a1b1	O2b2a1a1
E2b1a1a*	O1a1b1a1b2	O2b2a1a2
E2b1a1a1	O1a1b1a1b3	O2b2a1b*
E2b1a2*	O1a1b1a1b4	O2b2a1b1
E2b2a*	O1a1b1a2*	O2b2a1b2
E2b2b*	O1a1b1a2a1*	O2b2a1b3
E3*	O1a1b1a2a1a*	O2b2a1b4*
F2*	O1a1b1a2a1b	O2b2a1b4a1
F4*	O1a1b1b*	O2b2a1b4a2
G1a1*	O1a1b2*	O2b2a1b4a3
G1a1a2*	O1a1b2a*	O2b2a1b4a4
G1a1a2a1*	O1a1b2c*	O2b2a1b4a5
G1a1a2b*	O1a1c*	O2b2a1b4a6
G2a1a2a*	O1a1b1a1a*	O2b2a1b4a7
G2a1a2a1a*	O1a1b1a2*	O2b2a1b4a8
G2a2a1a1a1	O1a2a*	O2b2a1b4a9
G2a2a1a2a1b1	O1a2a2*	O2b2a1b4b*
G2a2a1a3*	O1a3*	O2b2a1b4b1
G2a2a1a4*	O1a3a*	O2b2a1b4b2
G2a2b1a1a1a3	O1b1*	O2b2a1b4b3
G2a2b1a1a1a4	O1b1a*	O2b2a1b4b4
G2a2b2*	O1b1a1*	O2b2a1b4c*
G2a2b2a1*	O1b1a1a1*	O2b2a1b5*
G2a2b2a1a1	O1b1a1a1a*	O2b2a1b5a*
G2a2b2a1a1b2	O1b1a1a1a1	O2b2a1b5a1
G2a2b2a1a1c3	O1b1a1a1b1	O2b2a1b5a2
G2a2b2a1a1c4	O1b1a1a1b2	O2b2a1b5a3
G2a2b2a1a1d*	O1b1a1a2	O2b2a1b5a4
G2a2b2a4a*	O1b1a1a2a*	O2b2a1b5a5
G2a2b2a4a2*	O1b1a1a2a1	O2b2a1b5a6
G2a2b2a4a2a1	O1b1a1a2a2	O2b2a1b5a7
G2a2b2a4a3*	O1b1a1b*	O2b2a1b5b*
G2a2b2a4a4*	O1b1a1b1	O2b2a1b5b1
G2a2b2a1a*	O1b1a1b2*	O2b2a1b5b2
G2b1a*	O1b1a1b3*	O2b2a1b5b3
H1a1a1b*	O1b1a1b1a*	O2b2a1b5b4
H1a1a1c*	O1b1a1b1a1	O2b2a1b5b4a1
H1a1a4a*	O1b1a1b1a2	O2b2a1b5b4a2
H1a1a4a1*	O1b1a1b1a3	O2b2a1b5c*
H1a1a4a2*	O1b1a1b1b*	O2b2a1b5c1
H1a1a4b*	O1b1a1b1b1	O2b2a1b5d*
H1a1a4b1a*	O1b1a1b1c*	O2b2a1b5d1
H1a1a4b1b*	O1b1a1a1b2*	O2b2b*
H1a1a4b2*	O1b1a1a2*	O2b2b1*
H1a1a4b2a*	O1b1a1a2a*	O2b2b1a*
H1a1a4b2a1	O1b1a1a2a1	O2b2b1a1
H1a1a4b2a2	O1b1a1a2a2	O2b2b1a2
H1a1a4b2a3	O1b1a1a2a3	O2b2b1a3
H1a1a4b2a4	O1b1a1a2b*	O2b2b1a4
H1a1a4b2a5	O1b1a1a2b1	O2b2b1a5
H1a1a4b2a6	O1b1a1a2b2	O2b2b1a6
H1a1a4b2a7	O1b1a1a2b3	O2b2b1a7
H1a1a4b2a8	O1b1a1a2b4	O2b2b1a8
H1a1a4b2a9	O1b1a1a2b5	O2b2b1a9
H1a1a4b2a10	O1b2a1a2a1*	
H1a1a4b3b1a*	O1b2a1a2a1a*	
H1a1a4b3b1a1	O1b2a1a2a1b*	
H1a1a4b3b1a2	O1b2a1a2a1b1	
H1a1a4b3b1a3	O1b2a1a2b*	
H1a1a4b3b1a4	O1b2a1a2b1	
H1a1a4b3b1a5	O1b2a1a2b2	
H1a1a4b3b1a6	O1b2a1a3*	
H1a1a4b3b1a7	O1b2a1a3a*	
H1a1a4b3b1a8	O1b2a1a3a1	
H1a1a4b3b1a9	O1b2a1a3a2	
H1a1a4b3b1a10	O1b2a1a3a1*	

Level 13 (911 categories)

A0a1*	
A0b*	
A1a*	
B*	
B2a1a1a*	
B2a1a1a1*	
B2a1a1a2*	
B2a1a1a2a*	
B2b1*	
B2b1a1c*	
B2a2*	
B3b*	
C1a1a1a*	
C1a1a1a1b*	
C1a1a1b*	
C1a1a1b1*	
C1a1a1b2*	
C1b1a1a1a1a	
C1b1a1a1a1a1a	
C1b1a1a1a1a1b	
C1b1a1a1a1a2	
C1b1a1a1a2a*	
C1b1a1a1a2b*	
C1b1a1a1b*	
C1b1a1a2a1a*	
C1b1a1a2a1b*	
C1b1a1a2a2*	
C1b1a1a2a2a*	
C1b1a1a2b*	
C1b1a1a2b1*	
C1b1a1b1*	
C1b1a1b2*	
C1b1a2*	
C2a1*	
C2a1a1a*	
C2a1a1a1a*	
C2a1a1a1a1*	
C2a1a1a1a1a1	
C2a1a1a1a1a2	
C2a1a1a1a2*	
C2a1a1a1a2a*	
C2a1a1a1a2b*	
C2a1a1a1b*	
C2a1a1a1b1*	
C2a1a1a1b2*	
C2a1a1a2*	
C2a1a1a2a*	
C2a1a1a2a1*	
C2a1a1a2a1a*	
C2a1a1a2a1a1*	
C2a1a1a2a1a2*	
C2a1a1a2a1a2a*	
C2a1a1a2a1a2b*	
C2a1a1a2a1b*	
C2a1a1a2a2*	
C2a1a1a2a2a*	
C2a1a1a2a2b*	
C2a1a1a2b*	
C2a1a1a2b1*	
C2a1a1a2b2*	
C2a1a1a2b2a*	
C2a1a1a2b2a1*	
C2a1a1a2b2a2*	
C2a1a1a2b2a2a*	
C2a1a1a2b2a2b*	
C2a1a1a2b2a2b1*	
C2a1a1a2b2a2b2*	
C2a1a1a2b2a2b2a*	
C2a1a1a2b2a2b2b*	
C2a1a1a2b2a2b2b1*	
C2a1a1a2b2a2b2b2*	
C2a1a1a2b2a2b2b2a*	
C2a1a1a2b2a2b2b2b*	
C2a1a1a2b2a2b2b2b1*	
C2a1a1a2b2a2b2b2b2*	
C2a1a1a2b2a2b2b2b2a*	
C2a1a1a2b2a2b2b2b2b*	
C2a1a1a2b2a2b2b2b2b1*	
C2a1a1a2b2a2b2b2b2b2*	
C2a1a1a2b2a2b2b2b2b2a*	
C2a1a1a2b2a2b2b2b2b2b*	
C2a1a1a2b2a2b2b2b2b2b1*	
C2a1a1a2b2a2b2b2b2b2b2*	
C2a1a1a2b2a2b2b2b2b2b2a*	
C2a1a1a2b2a2b2b2b2b2b2b*	
C2a1a1a2b2a2b2b2b2b2b2b1*	
C2a1a1a2b2a2b2b2b2b2b2b2*	
C2a1a1a2b2a2b2b2b2b2b2b2a*	
C2a1a1a2b2a2b2b2b2b2b2b2b*	
C2a1a1a2b2a2b2b2b2b2b2b2b1*	
C2a1a1a2b2a2b2b2b2b2b2b2b2*	
C2a1a1a2b2a2b2b2b2b2b2b2b2a*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b1*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2a*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b1*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2a*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b1*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2a*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b1*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2a*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b1*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2a*	
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C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b1*	
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C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2a*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b1*	
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C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2a*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b1*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2a*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b1*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2a*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b1*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2a*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b1*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2a*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b1*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2a*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b1*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2a*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b1*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2a*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b1*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2a*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b1*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2a*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b1*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2a*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b1*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2a*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b1*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2a*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b1*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2a*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b1*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2a*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b1*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2a*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b1*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2a*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b1*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2a*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b1*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2a*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b1*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2a*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b1*	
C2a1a1a2b2a2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2b2*	
C2a1a1a2b2a2b

Level 14 (1021 categories)

A0a1*
A0b*
A1a*
B*
B2a1a1a1*
B2a1a1a1a1*
B2a1a1a1a2
B2a1a1a2a*
B2b1*
B2b1a1c*
B2b2*
B3b*
C1a1a1a1a*
C1a1a1a1b*
C1a1a1a1c*
C1a1a1b*
C1a1a1b1*
C1a1a1b2*
C1b1a1a1a1a1*
C1b1a1a1a1a2
C1b1a1a1a1a3
C1b1a1a1b*
C1b1a1a1c*
C1b1a2a1a*
C1b1a2a1b*
C1b1a2a2*
C1b1a2a3*
C1b1a2a4*
C1b1a2a5*
C1b1a2a6*
C1b1a2a7*
C1b1a2a8*
C1b1a2b1*
C1b1a2b2*
C1b1a2b3*
C1b1a2b4*
C1b1a2b5*
C1b1a2b6*
C1b1a2b7*
C1b1a2b8*
C1b1a2b9*
C1b1a2b10*
C1b1a2b11*
C1b1a2b12*
C1b1a2b13*
C1b1a2b14*
C1b1a2b15*
C1b1a2b16*
C1b1a2b17*
C1b1a2b18*
C1b1a2b19*
C1b1a2b20*
C1b1a2b21*
C1b1a2b22*
C1b1a2b23*
C1b1a2b24*
C1b1a2b25*
C1b1a2b26*
C1b1a2b27*
C1b1a2b28*
C1b1a2b29*
C1b1a2b30*
C1b1a2b31*
C1b1a2b32*
C1b1a2b33*
C1b1a2b34*
C1b1a2b35*
C1b1a2b36*
C1b1a2b37*
C1b1a2b38*
C1b1a2b39*
C1b1a2b40*

Level 15 (1124 categories)

A0a1*	E1b1b1a1c1b1a	J2b2a2b1a1c*	O2a2a1a1a1a3*
A0b*	E1b1b1a1a1c2*	J2b2a2b2*	O2a2a1a1a1b*
A1a*	E1b1b1a1a2b1b*	J2b2a2b2a*	O2a2a1a1a1c1*
B*	E1b1b1a1a2a2*	J2b2a2b2b*	O2a2a1a1a2*
B2a1a1a1a*	E1b1b1a1a8a*	J2b2a2b2b1a*	O2a2a1a1b1*
B2a1a1a1a1*	E1b1b1b1a8a1a	J2b2a2b2b1b1*	O2a2a1a1b1a*
B2a1a1a1a2*	E1b1b1a1a8b*	J2b2b1*	O2a2a1a1b2*
B2a1a1a2a4*	E1b1b1a1a9a*	L1a1*	O2a2a1a1b2a1*
B2b1*	E1b1b1a1b1a1a	L1a1a1*	O2a2a1a1b2a2*
B2b1a1c1*	E1b1b1a1b1a2*	L1a1a2*	O2a2a1a2*
B2a2*	E1b1b1a1a1b*	L1a2b*	O2a2a1a2a1*
B3b*	E1b1b1a1a2b*	L1a1b1a*	O2a2a1a2a2*
C1a1a1a1a*	E1b1b1a1a2a*	L1a1b1b*	O2a2a1a1a*
C1a1a1a1b*	E1b1b1a1b3a3a*	L1a1b2a1*	O2a2a1a2a*
C1a1a1b*	E1b1b1a1b2a4a*	L1a1b2a2*	O2a2a1a1a1*
C1a1a1b1*	E1b1b1a1b2a4b*	L1a1b3b*	O2a2a1a2a1*
C1a1a1b2*	E1b1b1a1b2a6b1*	O1a1a1a1a1*	O2a2a1a2b1*
C1b1a1a1a1a1*	E1b1b1a2a2*	O1a1a1a1a2*	O2a2b2b*
C1b1a1a1a1a2	E1b1b1b1a1*	O1a1a1a1b1*	O2a2b2b1*
C1b1a1a1a2a1	E1b1b1b1a2*	O1a1a1a1b2*	O2a2b2b1a*
C1b1a1a1a2a2*	E1b1b1b1a1b*	O1a1a1a2a1*	O2a2b2b1b*
C1b1a1a1b*	E1b1b1b1a1c1*	O1a1a1a2a2*	O2a2b2b2*
C1b1a1a2a1a*	E1b1b1b1a1c3b*	O1a1a1a2b*	O2a2b2b2a*
C1b1a1a2a2a*	E1b1b1b1a1c3c*	O1a1a1b1*	O2a2b2b2b*
C1b1a1a2b1a*	E1b1b1b1a1c4*	O1a1a1b2*	O2a2b2b2b1*
C1b1a1a2b2*	E1b1b1b1a1c5*	O1a1a1b2a1*	O2a2b2b2b1a*
C1b1a1b*	E1b1b1b1a1c6*	O1a1a1b2a2*	O2a2b2b2b1b*
C1b1a1b1*	E1b1b1b1a1c7*	O1a1b1*	O2a2b2b2b2*
C1b1a1b2*	E1b1b1b1a1c8*	O1a1b2*	O2a2b2b2b2a*
C1b1a2a1a*	E1b1b1b1a1c9*	O1a1b2a1*	O2a2b2b2b2b*
C1b1a2a2a*	E1b1b1b1a1c10*	O1a1b2a2*	O2a2b2b2b2b1*
C1b1a2b*	E1b1b1b1a1c11*	O1a1b2b*	O2a2b2b2b2b1a*
C1b1a2b1*	E1b1b1b1a1c12*	O1a1b2b1*	O2a2b2b2b2b1b*
C1b1a2b2*	E1b1b1b1a1c13*	O1a1b2b2*	O2a2b2b2b2b2*
C1b1b1*	E1b1b1b1a1c14*	O1a1b2b2a*	O2a2b2b2b2b2a*
C1b1b1a1*	E1b1b1b1a1c15*	O1a1b2b2b*	O2a2b2b2b2b2b*
C1b1b1a1a1*	E1b1b1b1a1c16*	O1a1b2b2b1*	O2a2b2b2b2b2b1*
C1b1b1a1a2*	E1b1b1b1a1c17*	O1a1b2b2b1a*	O2a2b2b2b2b2b1a*
C1b1b1a1b*	E1b1b1b1a1c18*	O1a1b2b2b1b*	O2a2b2b2b2b2b1b*
C1b1b1a2*	E1b1b1b1a1c19*	O1a1b2b2b2*	O2a2b2b2b2b2b2*
C1b1b1b1*	E1b1b1b1a1c20*	O1a1b2b2b2a*	O2a2b2b2b2b2b2a*
C1b1b1b2*	E1b1b1b1a1c21*	O1a1b2b2b2b*	O2a2b2b2b2b2b2b*
C1b1b2*	E1b1b1b2*	O1a1b3*	O2a2b2b2b2b2b2b1*
C1b1b2a1*	E1b1b1b2a1*	O1a1b3a1*	O2a2b2b2b2b2b2b1a*
C1b1b2a2*	E1b1b1b2a2*	O1a1b3a2*	O2a2b2b2b2b2b2b1b*
C1b1b2b*	E1b1b1b2b*	O1a1b3a3*	O2a2b2b2b2b2b2b2*
C1b1b2b1*	E1b1b1b2b1*	O1a1b3a4*	O2a2b2b2b2b2b2b2a*
C1b1b2b2*	E1b1b1b2b2*	O1a1b3a4a2*	O2a2b2b2b2b2b2b2b*
C1b1c*	E1b2a*	O1a1b3a4b*	O2a2b2b2b2b2b2b2b1*
C1b1c1*	E1b2b*	O1a1b3a4c*	O2a2b2b2b2b2b2b2b1a*
C1b1c1a1*	E1b2b1*	O1a1b3a4d*	O2a2b2b2b2b2b2b2b1b*
C1b1c1a2*	E1b2b1a*	O1a1b3a4e*	O2a2b2b2b2b2b2b2b2*
C1b1c1b*	E1b2b1a1*	O1a1b3a4f*	O2a2b2b2b2b2b2b2b2a*
C1b1c1b1*	E1b2b1a2*	O1a1b3a4g*	O2a2b2b2b2b2b2b2b2b*
C1b1c1b2*	E1b2b1b*	O1a1b3a4h*	O2a2b2b2b2b2b2b2b2b1*
C1b1c1b2a*	E1b2b1b1*	O1a1b3a5*	O2a2b2b2b2b2b2b2b2b1a*
C1b1c1b2b*	E1b2b1b2*	O1a1b3a6*	O2a2b2b2b2b2b2b2b2b1b*
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