MaPP Challenge '19 – To Aleph-Zero And Beyond

Mathematical Puzzle Programs

Version 2020/10/12

MaPP Challenge '19 – To Aleph-Zero And Beyond

Game Resources

Reference Sheet

Letter	Decimal	Binary	Morse	Braille	ROT13
A	1	00001	.-		N
B	2	00010	-...		O
C	3	00011	-.-.		P
D	4	00100	-..		Q
E	5	00101	.		R
F	6	00110	..-.		S
G	7	00111	--.		T
H	8	01000	....		U
I	9	01001	..		V
J	10	01010	.---		W
K	11	01011	-.-		X
L	12	01100	.-..		Y
M	13	01101	--		Z

Letter	Decimal	Binary	Morse	Braille	ROT13
N	14	01110	-.		A
O	15	01111	---		B
P	16	10000	.--.		C
Q	17	10001	--.-		D
R	18	10010	.-.		E
S	19	10011	...		F
T	20	10100	-		G
U	21	10101	..-		H
V	22	10110	...-		I
W	23	10111	.--		J
X	24	11000	-..-		K
Y	25	11001	-.--		L
Z	26	11010	--..		M

Some famous numbers and formulas

$\sqrt{2} \approx$ 1. 41421 35623 73095 04880 16887 24209 69807 85696 71875 37694 80731 76679 73799 07324 78462 10703 88503 87534 32764 15727

$e \approx$ 2. 71828 18284 59045 23536 02874 71352 66249 77572 47093 69995 95749 66967 62772 40766 30353 54759 45713 82178 52516 64274

$\pi \approx$ 3. 14159 26535 89793 23846 26433 83279 50288 41971 69399 37510 58209 74944 59230 78164 06286 20899 86280 34825 34211 70679

Pythagorean Theorem

$$a^2 + b^2 = c^2$$

Quadratic Formula

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

Euler's Formula

$$e^{ix} = \cos(x) + i\sin(x)$$

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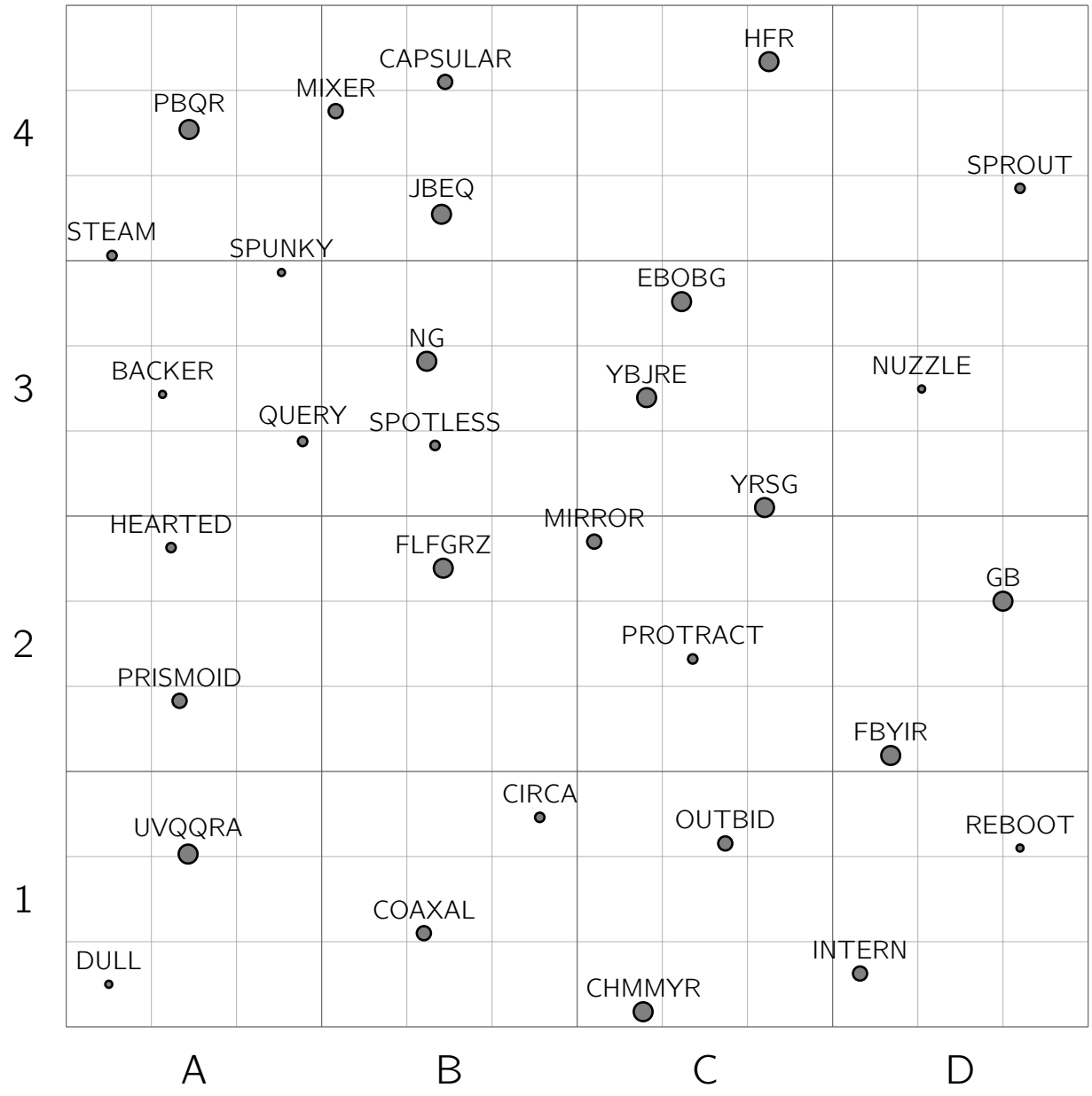
Where No One Has Gone Before

Galaxy Chart

The smallest gridlines below measure a distance of 1000 parsecs. Each dot represents a solar system, known simply as Systems in this part of the galaxy.



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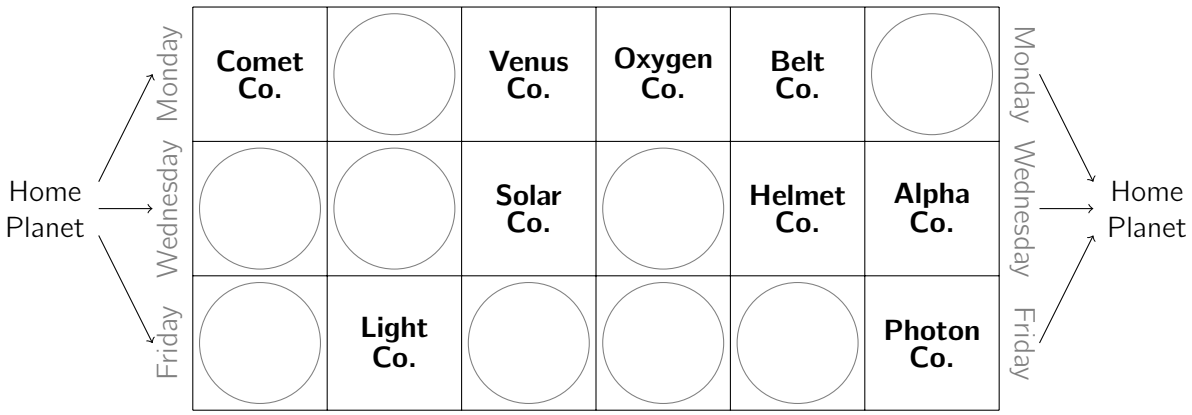
Good News Everyone

Delivery Schedule



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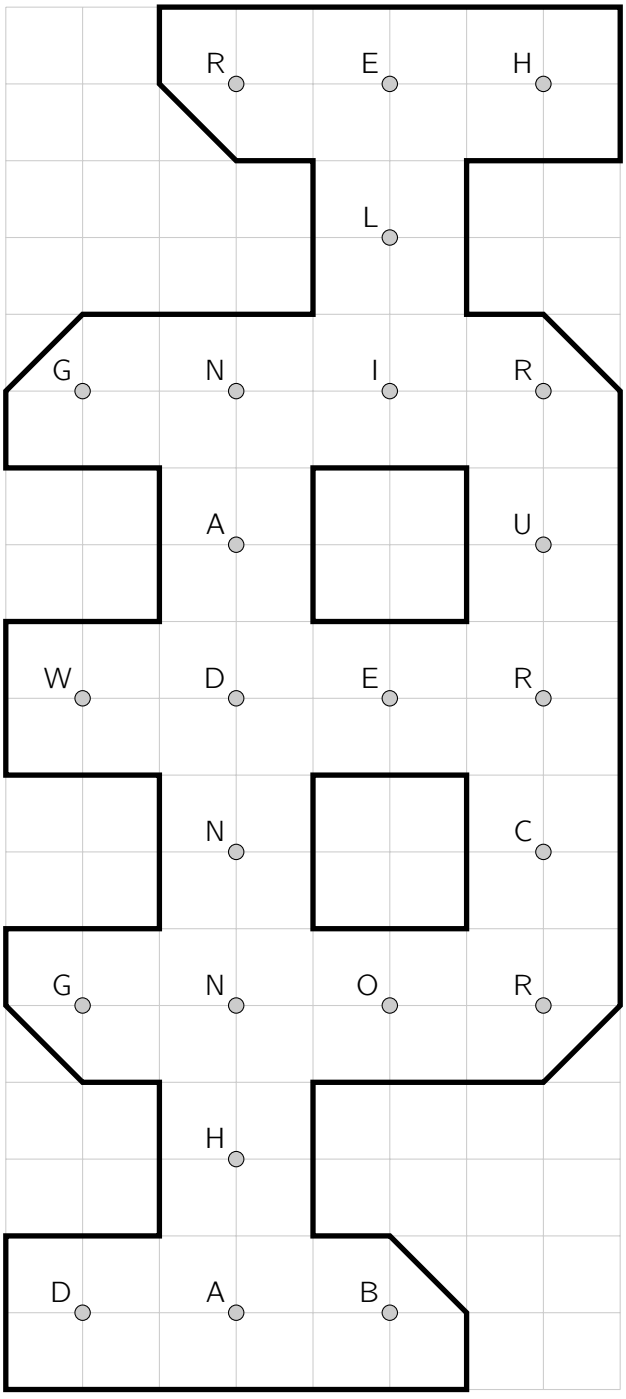
Extraterrestrial

Ship Floorplan



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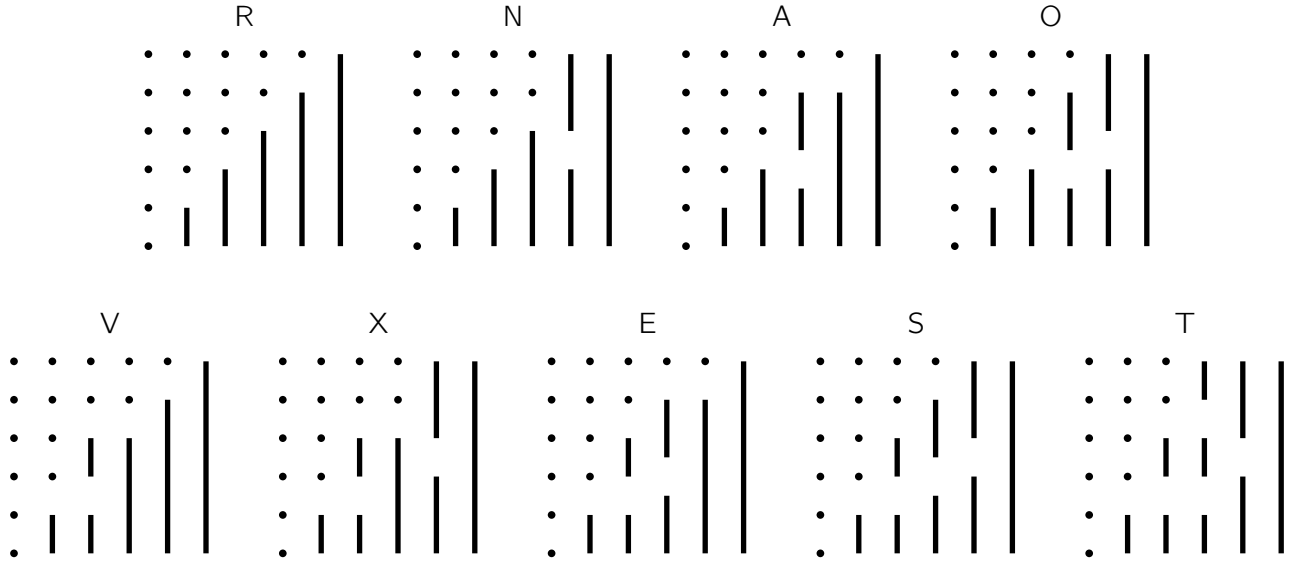
Wibbly-Wobbly Timey-Wimey

Dimensional Signals



02-45-49-60-67-85

11-28-38-43-72-84

14-27-31-42-62-87

04-15-37-50-73-80

03-32-45-65-90-92

12-32-64-70-89-96

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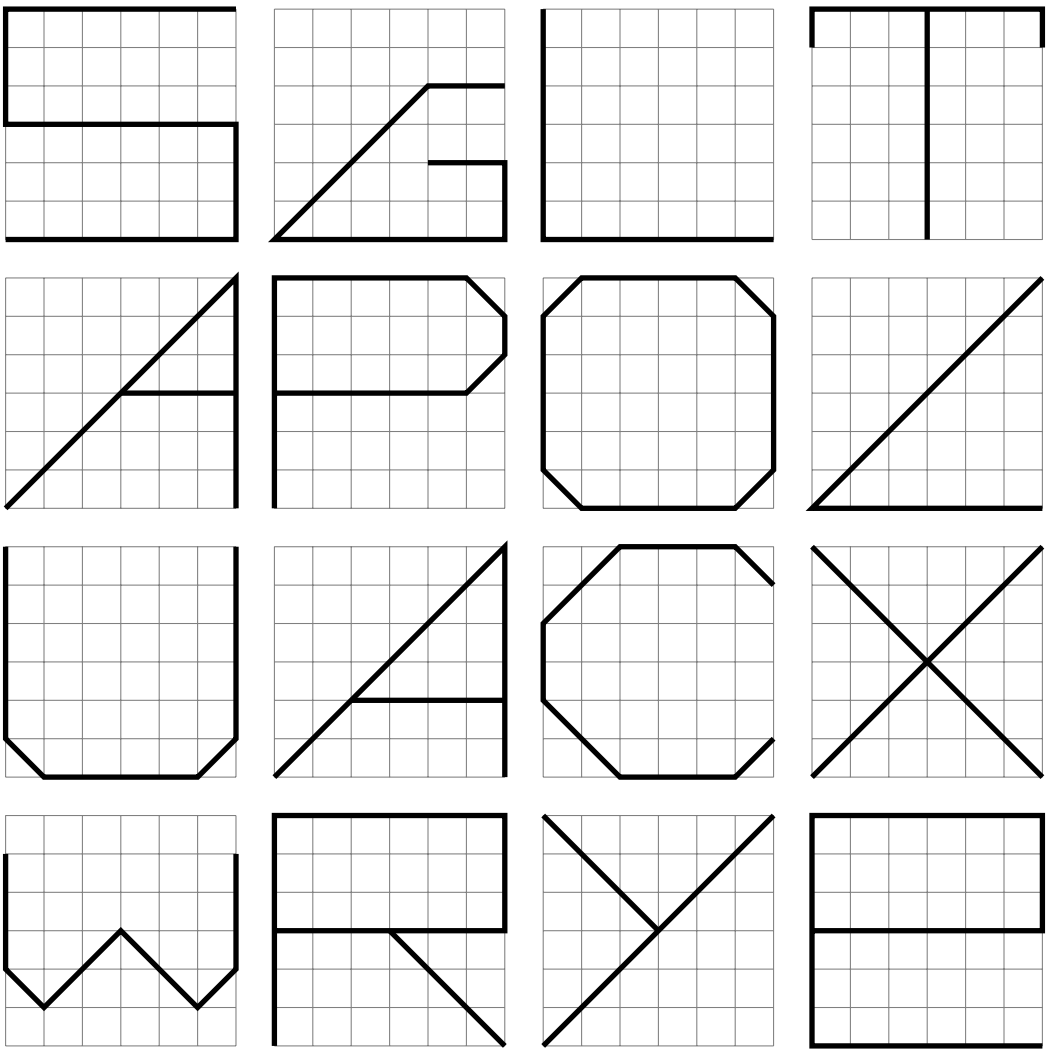
Jumping Through Hyperspace

Hyperspace Engines



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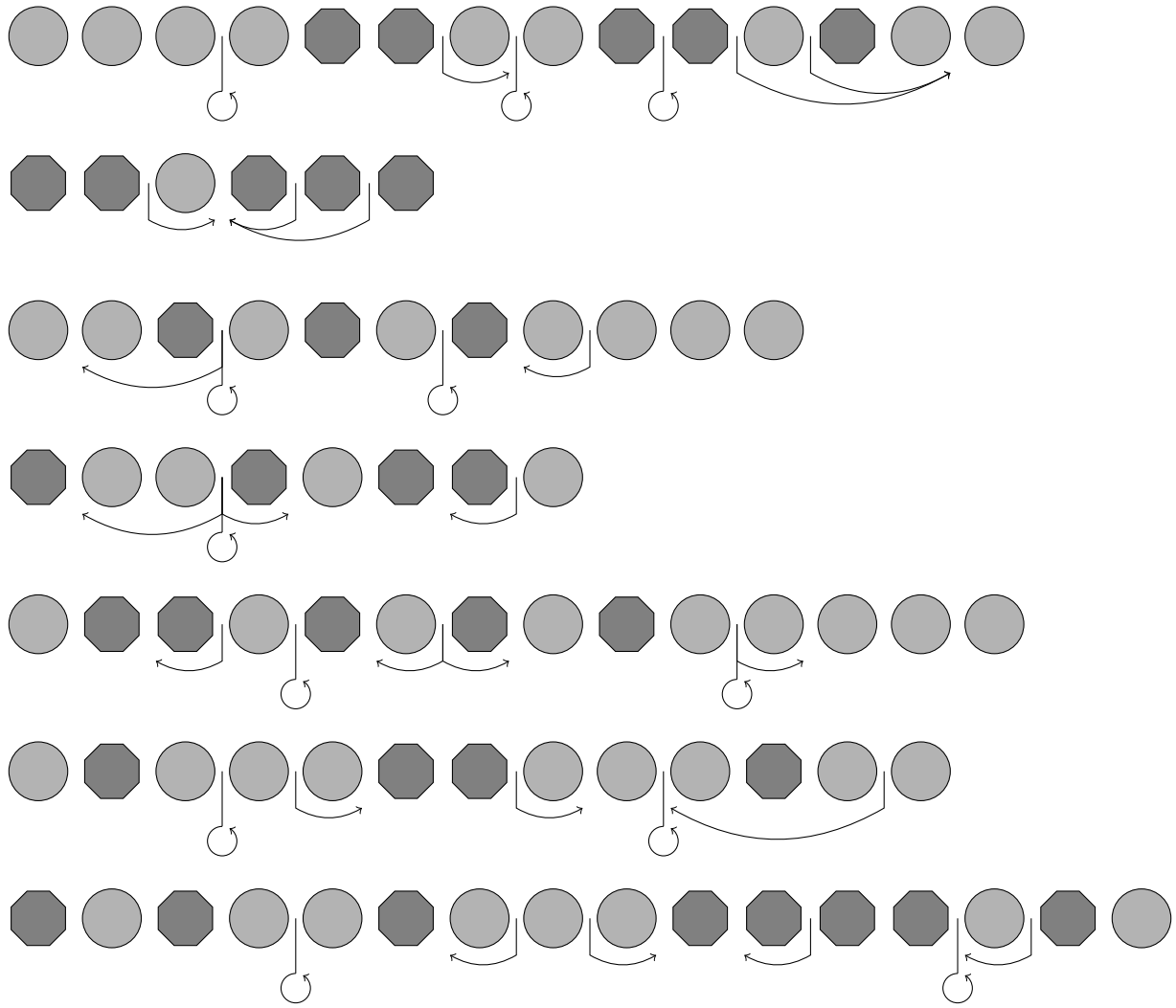
Hailing Frequencies Open

Bleeps and Bloops



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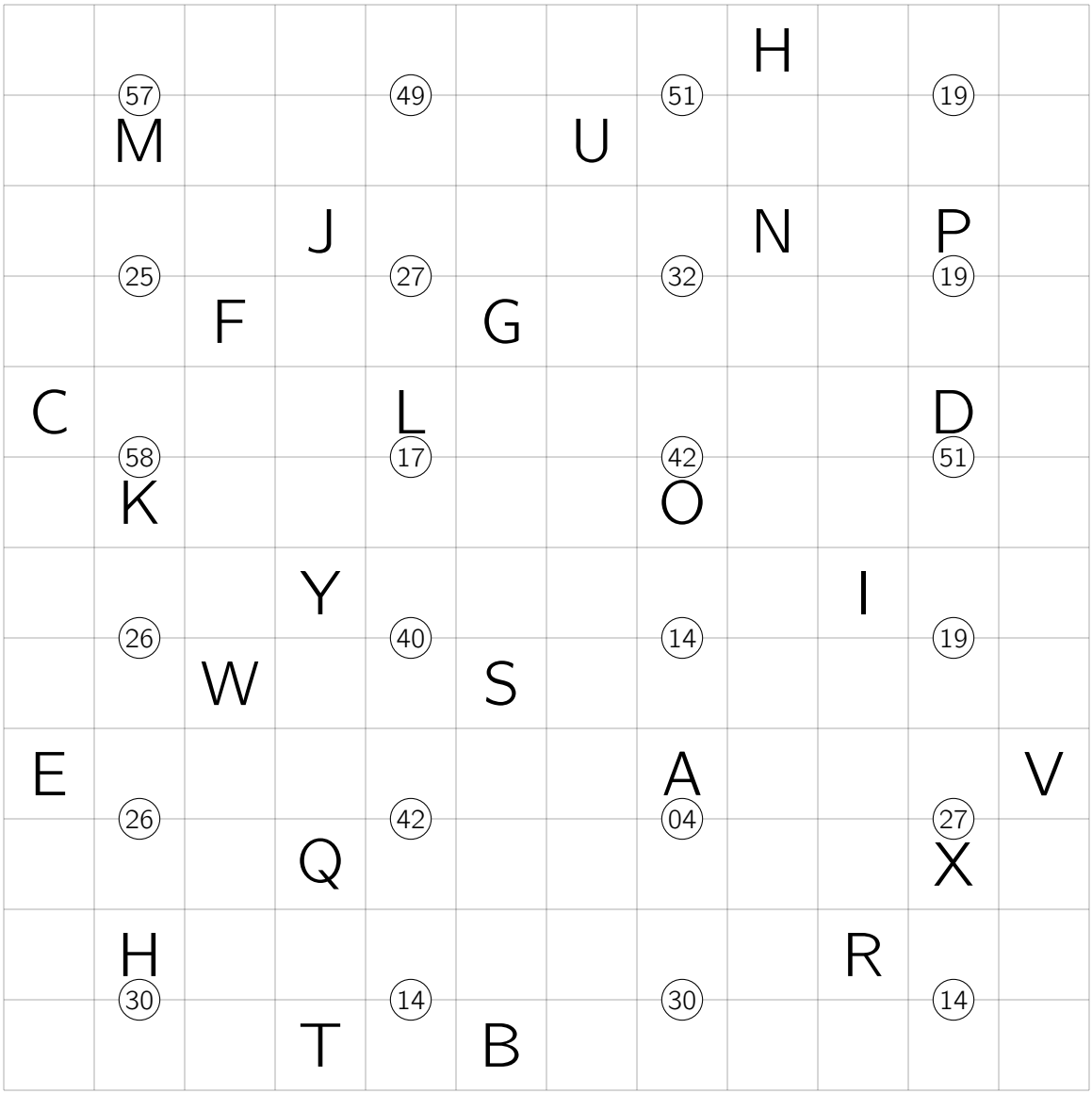
Out of Gas

Reserve Tank Switchboard



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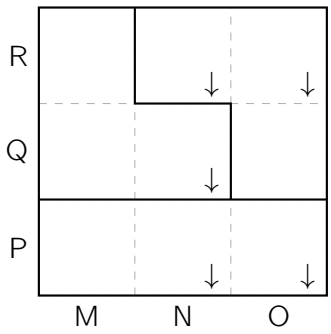
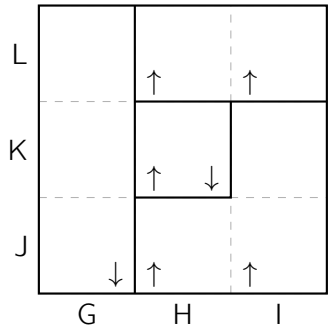
AI Odyssey

Cubic Monolith





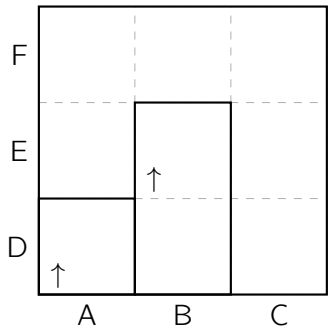
$OQ \times CD + IL \times NP$

$GK \times BE + NR \times AF$

$GJ \times CF + BD \times NQ$

$HL \times AD + HJ \times MQ + OP$

$CD \times NR + MP \times GK + IJ$



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Word Problem

Mysterious Message

For a time I tried carefully to detail interruptions
via large crawling textboxes.

Lamentably, composing all of the anecdotes,
when curbed by finite room, the current
strategy now is cruelly killing sound
handwriting.

To sidestep probable oversights

intensely loathe, I entreat humankind,

ban laughable cuneiform!

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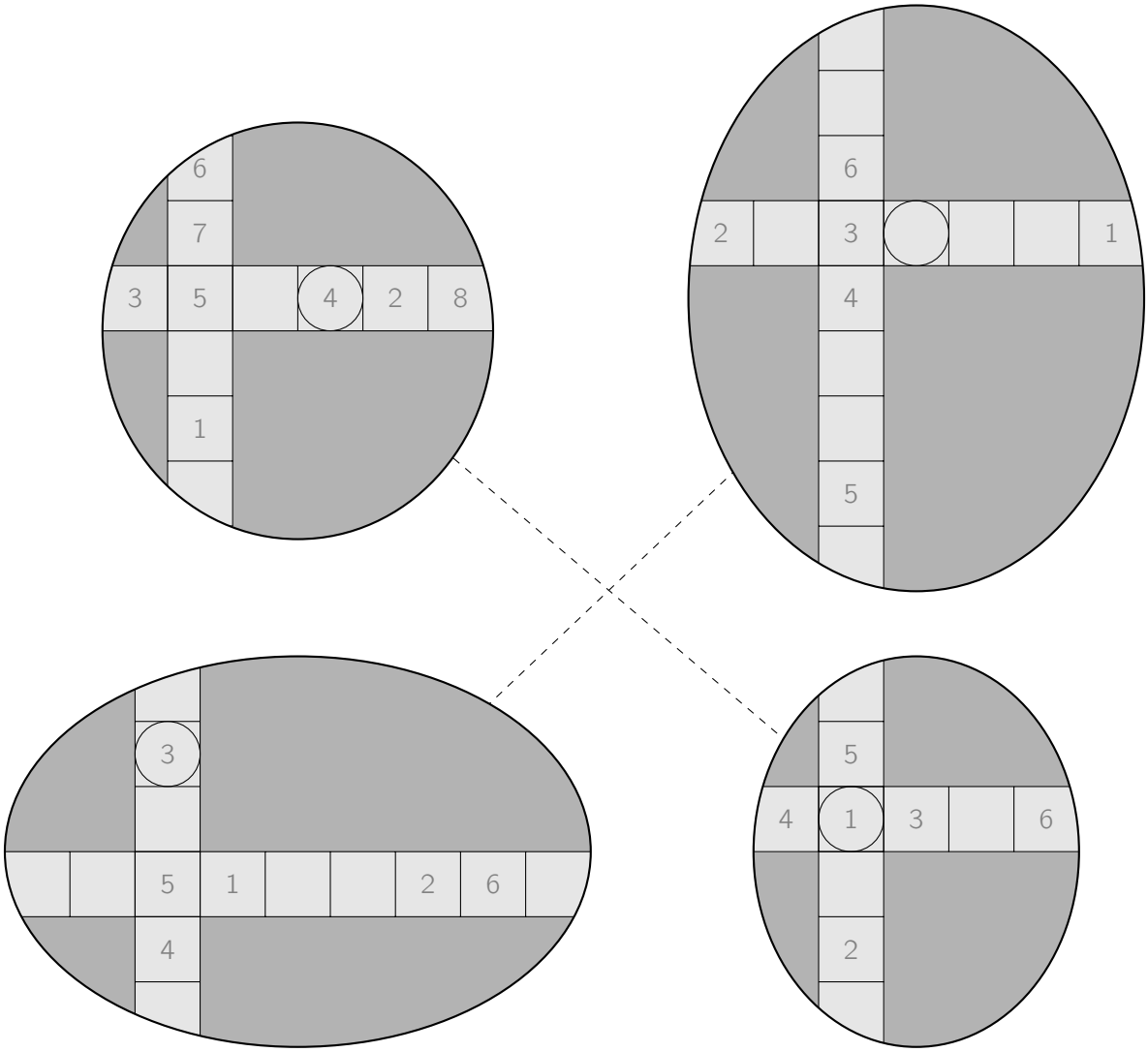
To the Rescue!

Enemy Insignias