



MaPP Challenge '19 – To Aleph-Zero And Beyond

Mathematical Puzzle Programs



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Game Resources

Reference Sheet

Letter	Decimal	Binary	Morse	Braille	ROT13	Letter	Decimal	Binary	Morse	Braille	ROT13
A	1	00001	.-	⠠	N	N	14	01110	-.	⠠	A
B	2	00010	...-	⠡	O	O	15	01111	---	⠡	B
C	3	00011	-. -.	⠢	P	P	16	10000	.-.-.	⠢	C
D	4	00100	-..	⠣	Q	Q	17	10001	--.-	⠣	D
E	5	00101	.	⠣	R	R	18	10010	.-.	⠣	E
F	6	00110	..-.	⠤	S	S	19	10011	...-	⠤	F
G	7	00111	--.	⠤	T	T	20	10100	-	⠤	G
H	8	01000	⠥	U	U	21	10101	..-	⠥	H
I	9	01001	..	⠥	V	V	22	10110	...-	⠥	I
J	10	01010	.----	⠦	W	W	23	10111	.-.-	⠦	J
K	11	01011	-.-	⠦	X	X	24	11000	-...-	⠦	K
L	12	01100	.-..	⠧	Y	Y	25	11001	-.-.-	⠧	L
M	13	01101	--	⠧	Z	Z	26	11010	--..	⠧	M

Some famous numbers and formulas

$\sqrt{2} \approx 1.41421\ 35623\ 73095\ 04880\ 16887\ 24209$ Pythagorean Theorem
 69807 85696 71875 37694 80731 76679 73799
 07324 78462 10703 88503 87534 32764 15727

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

$\pi \approx 3.14159\ 26535\ 89793\ 23846\ 26433\ 83279$ Quadratic Formula
 50288 41971 69399 37510 58209 74944 59230
 78164 06286 20899 86280 34825 34211 70679

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

$e \approx 2.71828\ 18284\ 59045\ 23536\ 02874\ 71352$ Euler's Formula
 66249 77572 47093 69995 95749 66967 62772
 40766 30353 54759 45713 82178 52516 64274

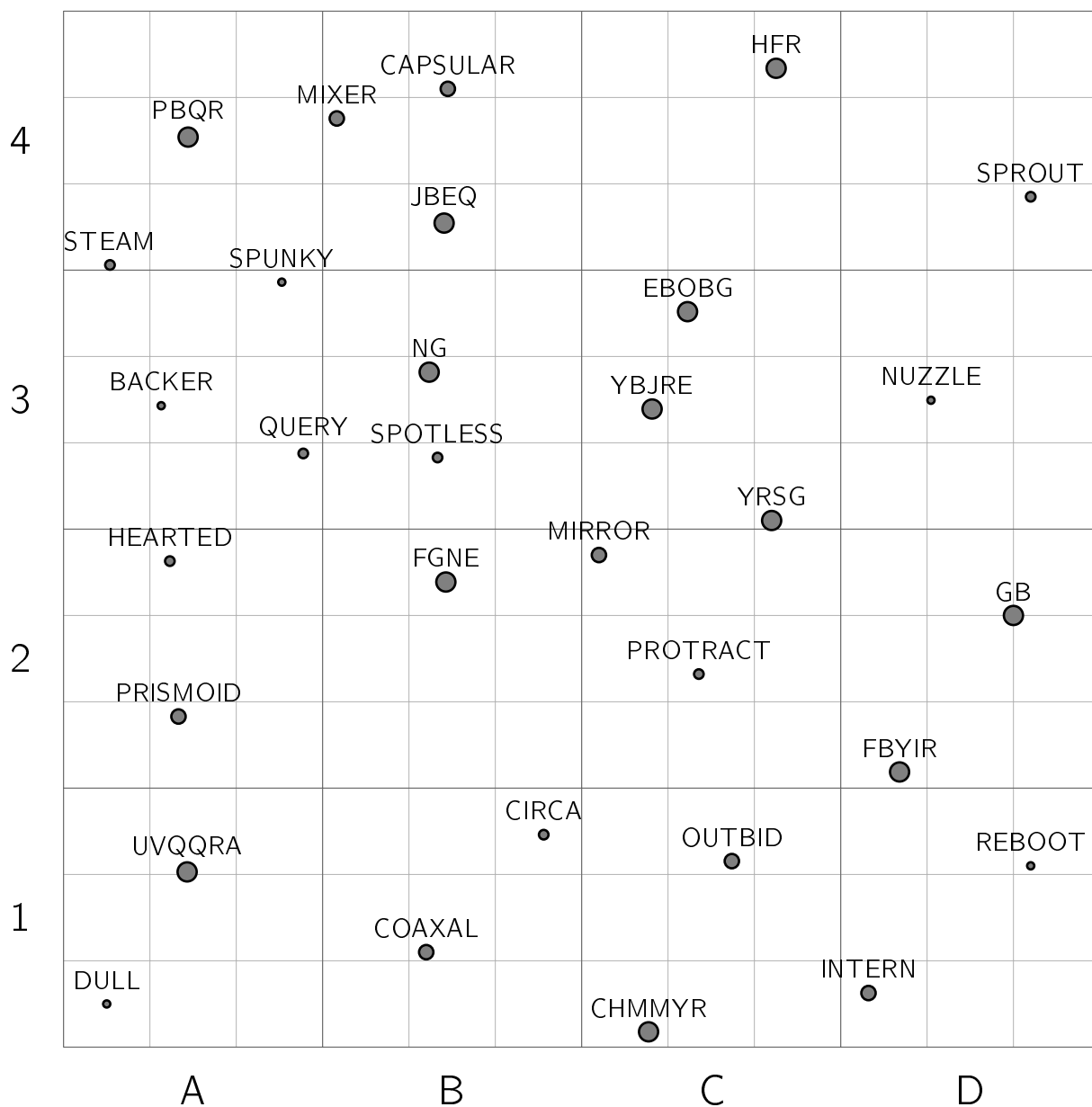
$$e^{ix} = \cos(x) + i\sin(x)$$

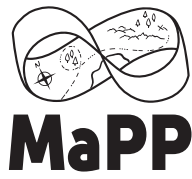


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Where No One Has Gone Before

Galaxy Chart



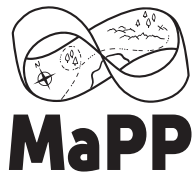


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Good News Everyone

Delivery Schedule

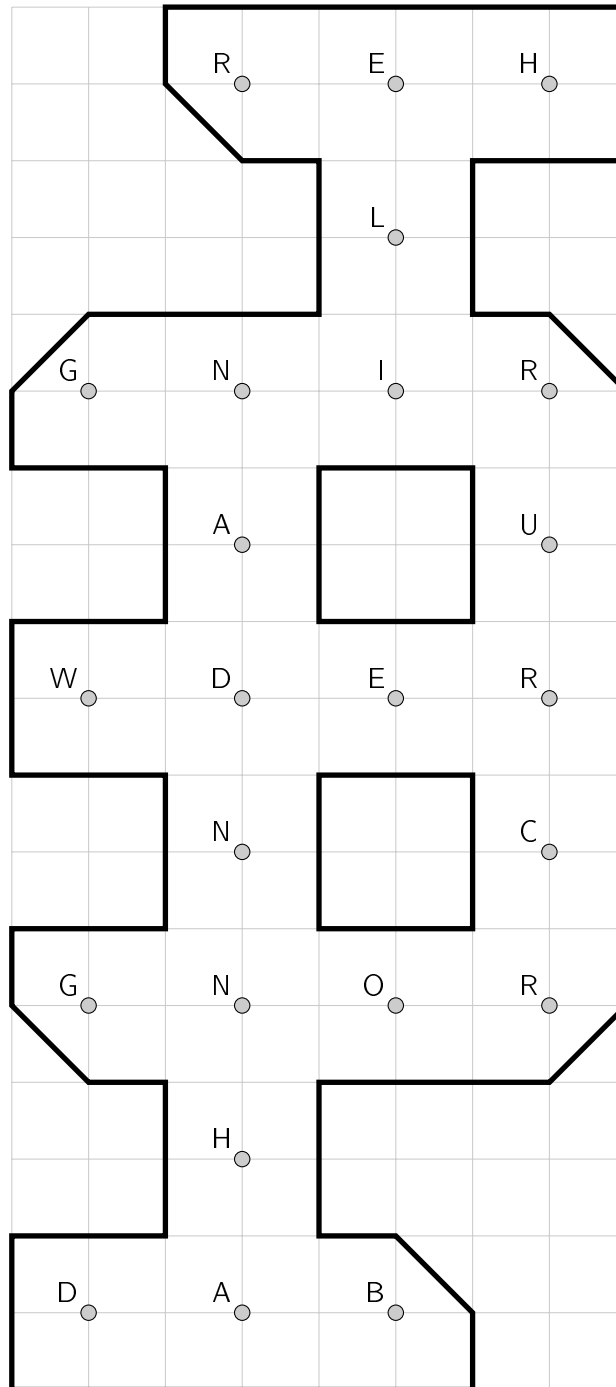
		1st	2nd	3rd	4th	5th	6th		
Home Planet	Monday	Comet		Venus	Oxygen	Belt		Home Planet	Monday
	Wednesday			Solar		Helmet	Alpha		Wednesday
	Friday		Light				Photon		Friday



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Extraterrestrial

Ship Floorplan

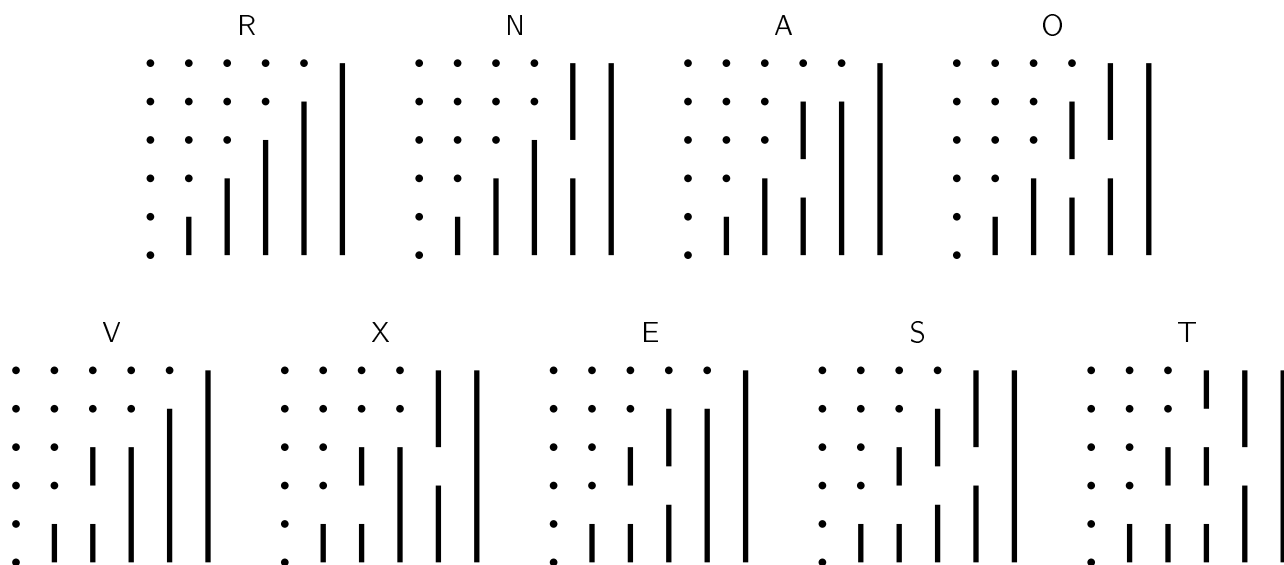




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Wibbly-Wobbly Timey-Wimey

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

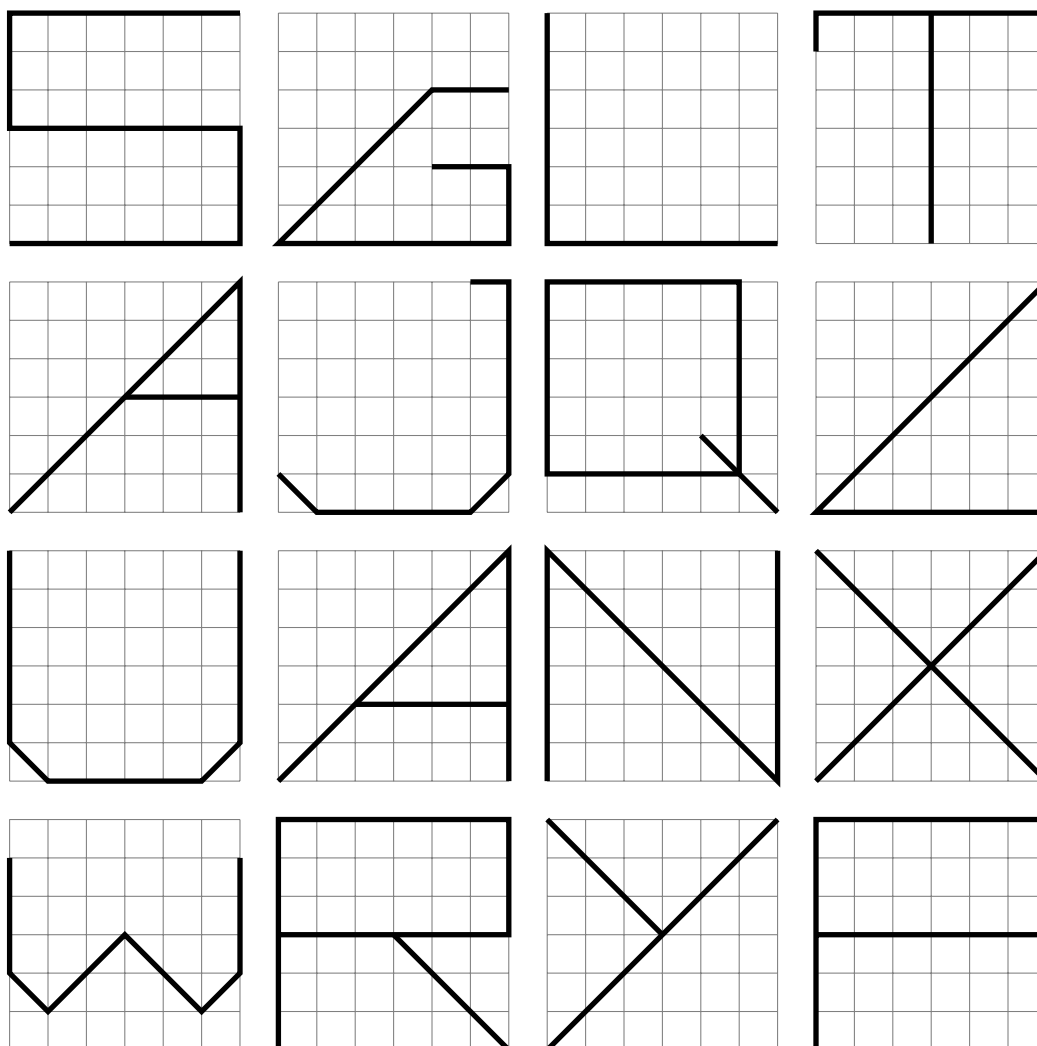
12-32-64-70-89-96



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Jumping Through Hyperspace

Hyperspace Engines





Bleeps and Bloops





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Out of Gas

Reserve Tank Switchboard

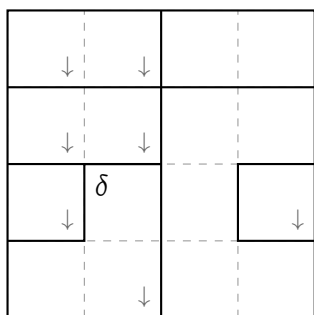
								H		
	57 M			49		U	51			19
			J					N		P
	25		F		27	G		32		19
C				L						D
	58 K			17			42 O			51
			Y						I	
	26			40			14			19
		W			S					
E							A			V
	26			42			04			27
			Q							X
	H								R	
	30			14			30			14
			T		B					



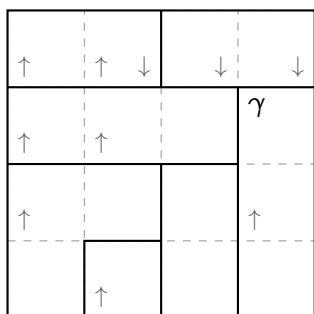
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An AI Odyssey

Cubic Monolith



Top Level



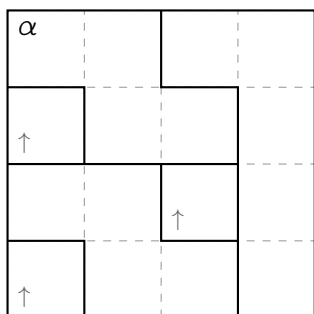
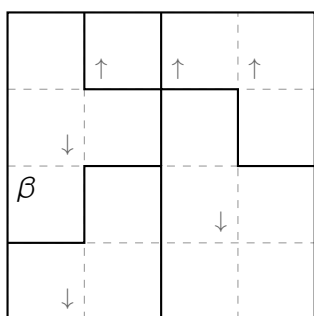
$$5\beta - \alpha + 2\delta$$

$$5\alpha + \delta - \gamma$$

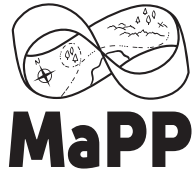
$$2\beta - 5\gamma + \alpha$$

$$\gamma + 3\delta - 2\beta$$

$$\alpha + \beta + 3\gamma + 3\delta$$



Bottom Level



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Word Problem

Mysterious Message

*For a time I tried carefully to detail 'analogues',
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,

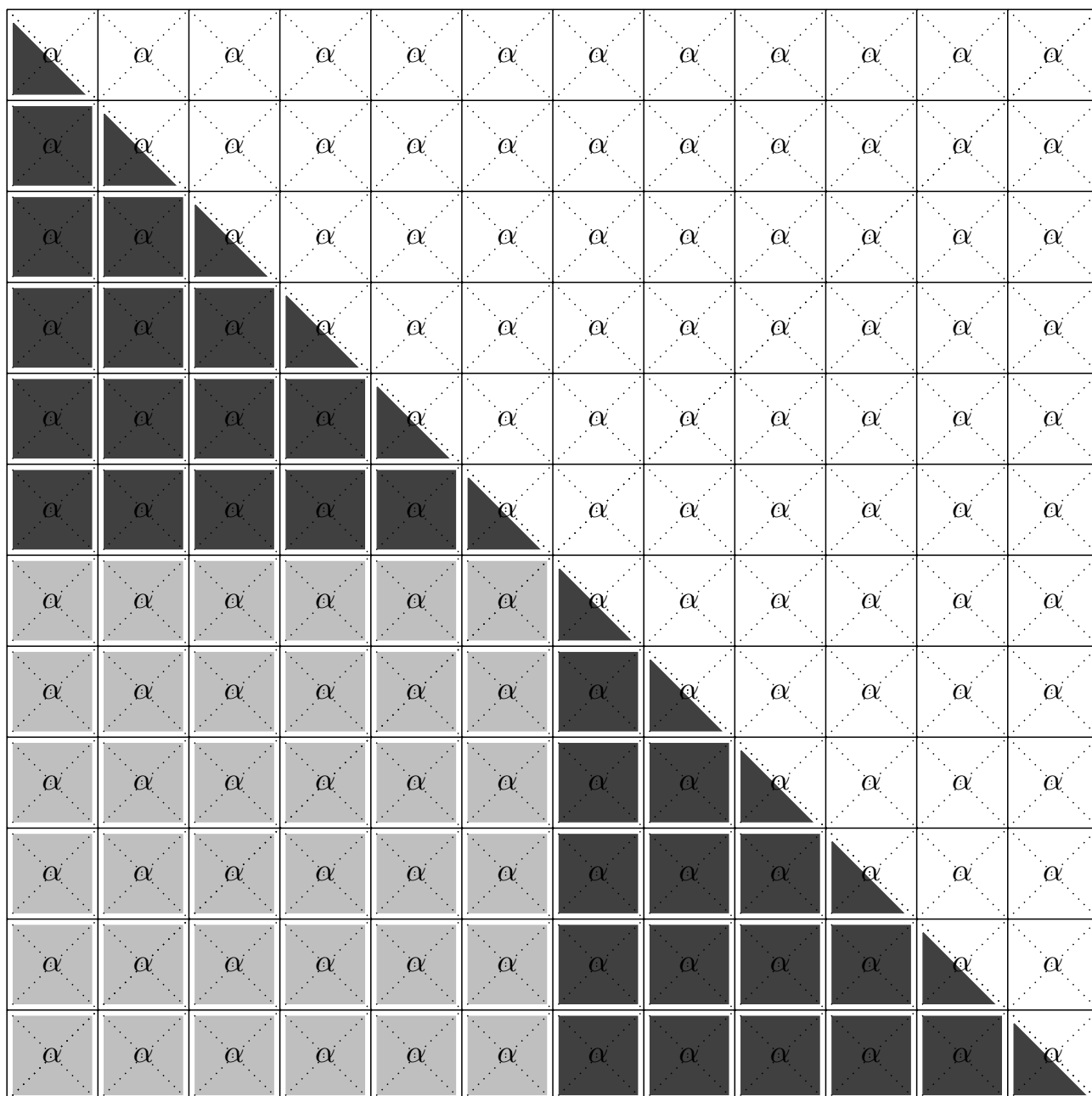
ban laughable cuneiform!

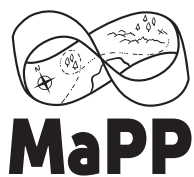


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The Cosmic Wheel

Wormhole Alpha (6x6)

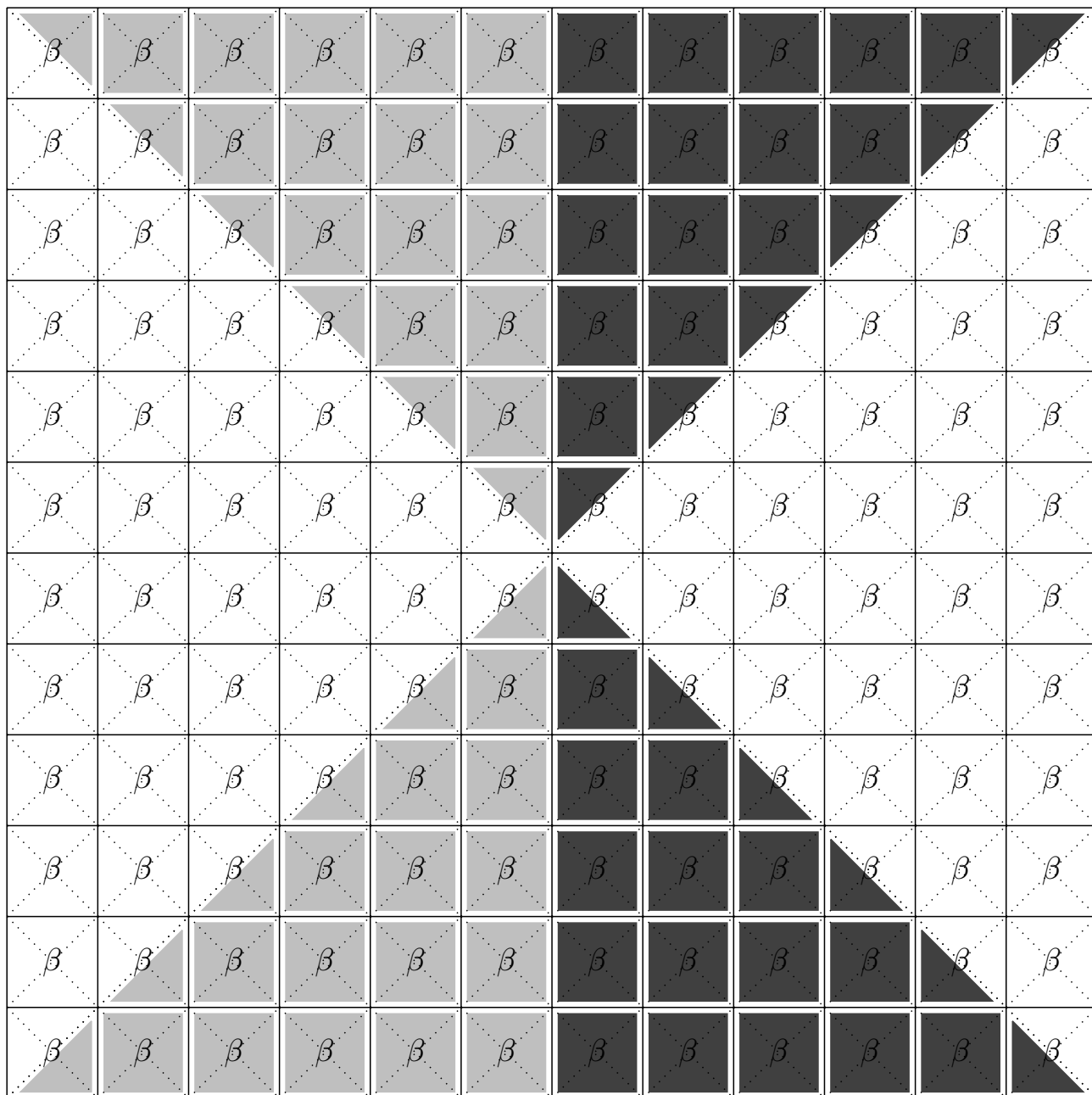




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The Cosmic Wheel

Wormhole Beta (6x6)

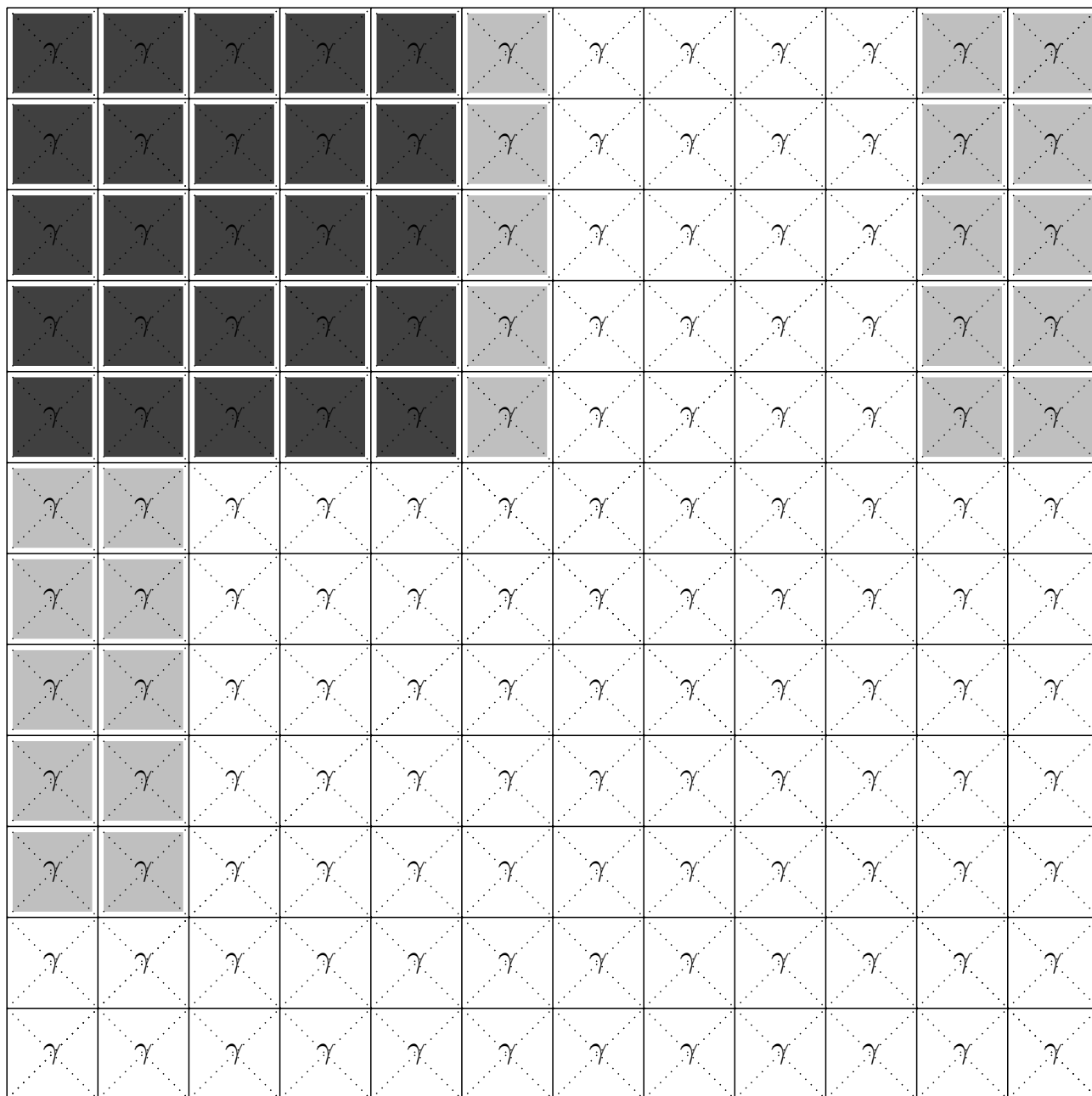


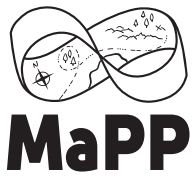


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The Cosmic Wheel

Wormhole Gamma (5x5)

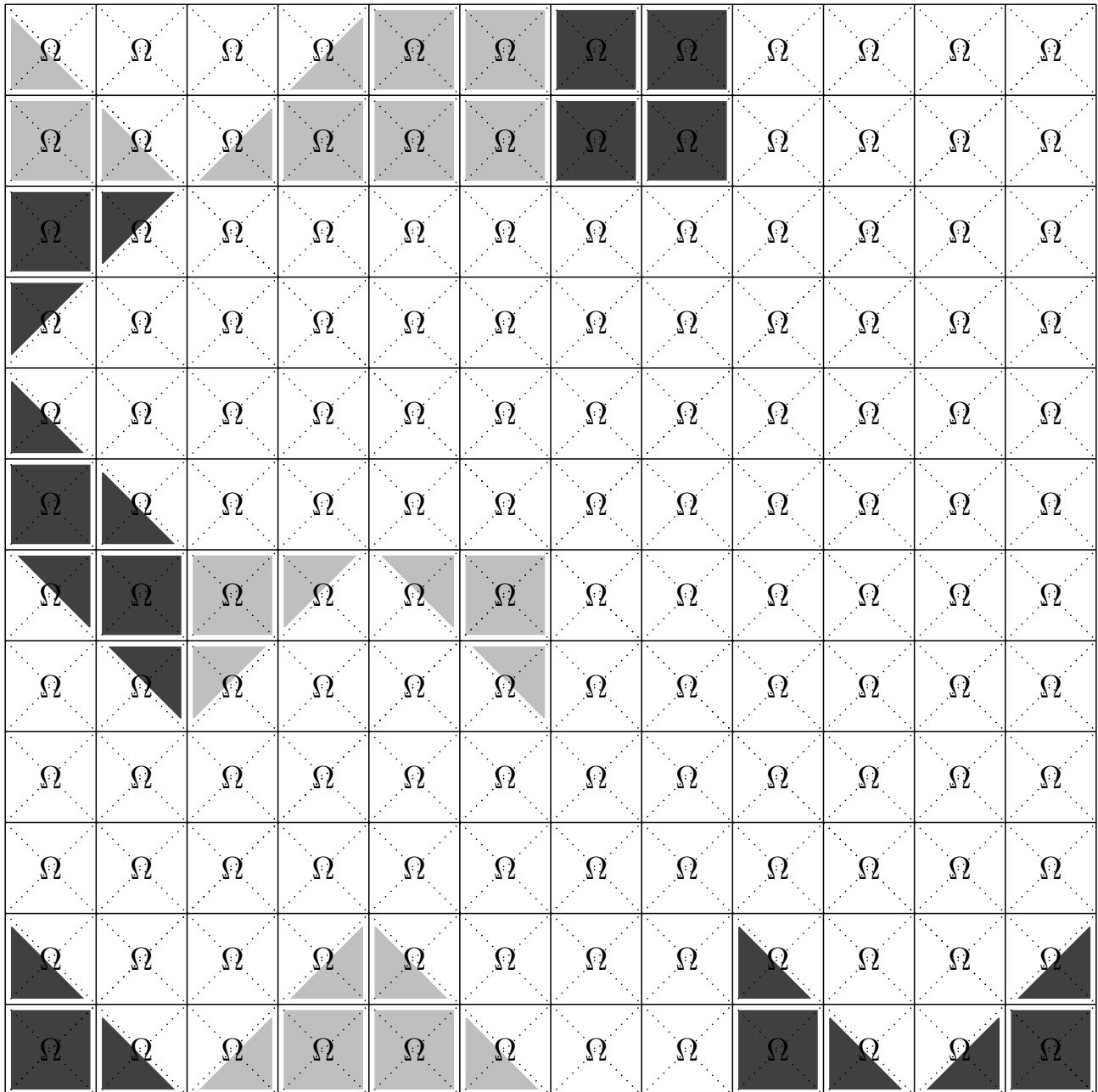


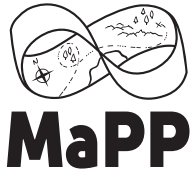


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The Cosmic Wheel

Wormhole Omega (4x4)

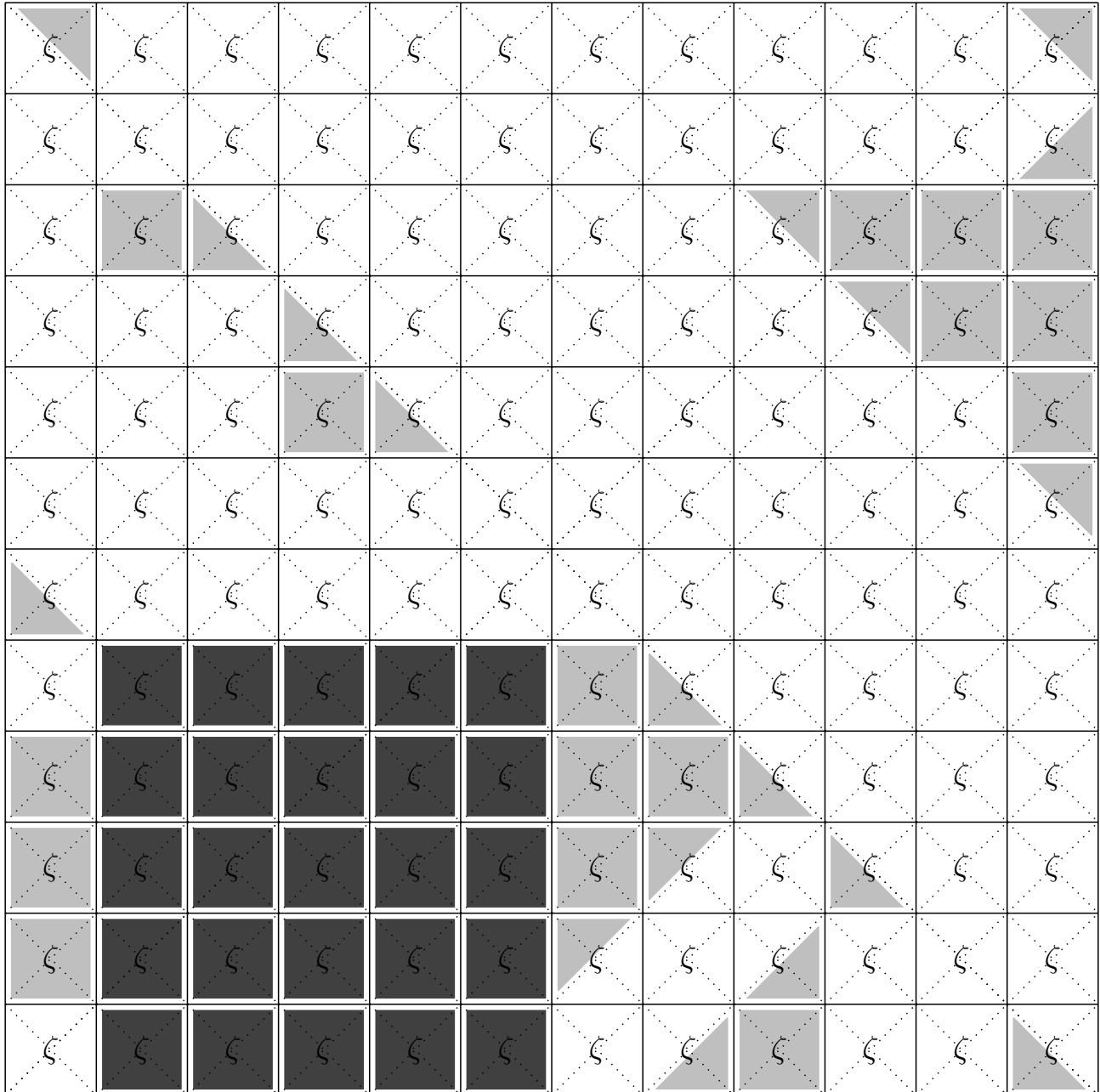


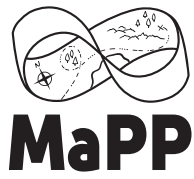


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The Cosmic Wheel

Wormhole Zeta (5x5)





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To the Rescue!

Enemy Insignias

