



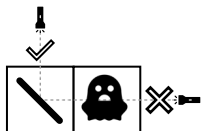
Grateful Undead



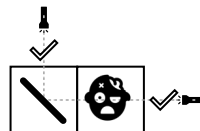
UNDERGRAD

It's so dark in this haunted mirror maze that you can't see anything at all!

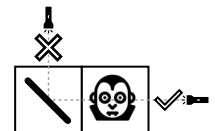
Each blank cell in a grid contains a ghost, a zombie, or a vampire. Each number outside the grid indicates how many monsters you can see when you stand outside in that position and shine a flashlight into the grid. Whether you can see each monster in your line of sight (which bounces off of mirrors at 90-degree angles) depends on the type of monster and whether they are before or after your line of sight reaches a mirror. Figure out where the monsters are in each maze before you bump into them!



Ghosts are **not** visible directly, but their reflections **are** seen in mirrors.

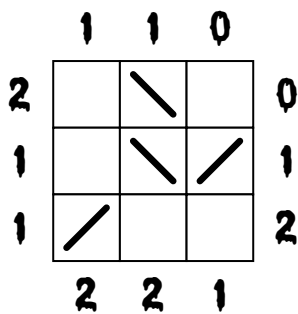


Zombies **are** visible directly and their reflections **are** seen in mirrors.



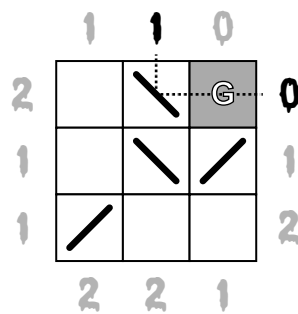
Vampires **are** visible directly but their reflections are **not** seen in mirrors.

Example Puzzle



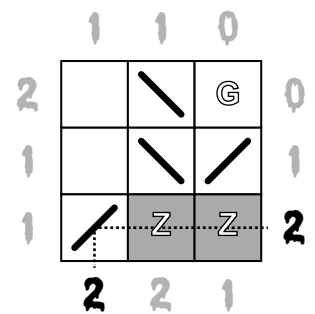
Step 0

Each puzzle is provided as a grid of cells, some of which contain mirrors. Each perimeter has a number.



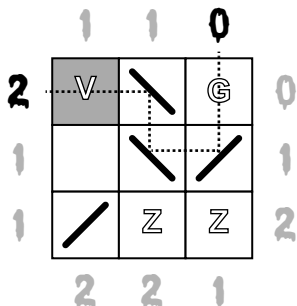
Step 1

The lines of sight between the top 1 and the righthand 0 are indicated by the dotted line. The monster in the shaded cell is not seen directly but their reflection is seen. Thus, it must be a ghost.



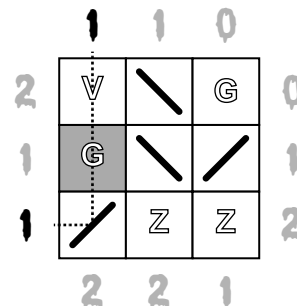
Step 2

The lines of sight between the bottom 2 and the righthand 2 are indicated by the dotted line. The monsters in the shaded cells and their reflections are seen directly. Thus, they must be zombies.



Step 3

The lines of sight between the lefthand 2 and the top 0 are indicated by the dotted line. The reflection of the monster in the shaded cell is not seen. Thus, it must be a vampire.



Step 4

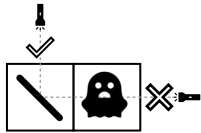
The lines of sight between the lefthand 1 and the top 1 are indicated by the dotted line. The monster in the shaded cell is not seen directly, because the top 1 is already satisfied by the vampire below it that *can* be seen directly. Thus, it must be a ghost.



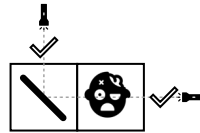
Grateful Undead



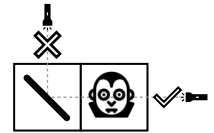
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Vampires *are* visible directly but their reflections are *not* seen in mirrors.

		2	2	4	2	
2	\			/	0	
1		/			3	
2	\				4	
0	\	/		\	0	
		0	0	4	0	

1	4	4

		1	1	1	2	
0	\		/	/	2	
2				/	1	
3			\		2	
0	/	/		\	1	
		2	1	1	1	

2	3	3

		3	1	2	1	
2			/	/	1	
1		\		/	1	
2		\	/	/	0	
3	/			\	0	
		2	1	0	2	

2	4	1

		3	3	1	0	
2					2	
2			\		1	
3				/	2	
3	/	/		\	1	
2	/		\	\	0	
		0	1	0	2	

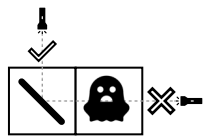
3	5	4



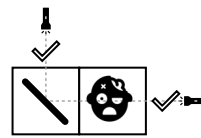
Grateful Undead



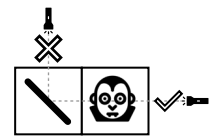
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		1	1	1	3	
0		/	/	/	2	
2				/	1	
1	/	/			3	
1		\		\	1	
	2	0	3	3		

2	4	2

		0	2	2	3	
1				/	0	
3					3	
2	/		\		2	
1	/	/			2	
	3	0	2	3		

3	3	5

		1	0	2	1	2	
3		/	/	/		1	
0	/		/			4	
2					/	2	
0	/			/	/	3	
	2	1	2	2	2		

4	4	3

		0	2	1	2	
1			/	/	0	
1				/	0	
2	/			/	1	
3	/	/			2	
	1	2	3	1		

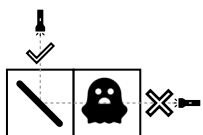
3	3	3



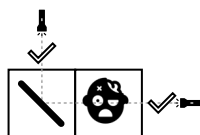
Grateful Undead



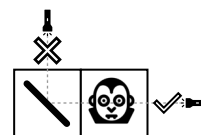
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		2	1	1	1	
3	\	\		/	0	
3					3	
2		/	\		2	
3				\	0	
	3	1	2	2		

2	4	4

		1	2	1	3	
3		\	\		1	
0	/				3	
2	/		\		2	
0			\	\	3	
	1	1	2	2		

3	4	2

		0	1	2	2	
0		/	/	/	1	
1	\	\			2	
3				\	1	
1	/	/			2	
	1	2	3	2		

2	4	2

		3	2	2	3	
4		\			2	
0	\		/		2	
3					3	
0	/		\	\	3	
	1	0	1	2		

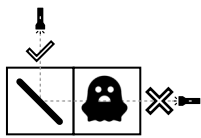
3	5	2



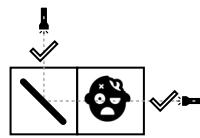
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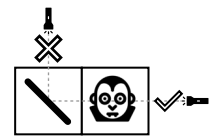
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		0	2	2	1	
2	/	/				0
0	/				/	2
1		/				1
3		/				2
	2	2	2	2		

3	4	3

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