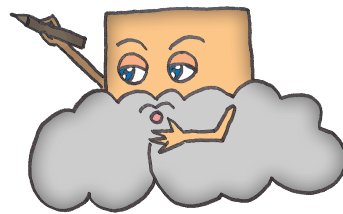


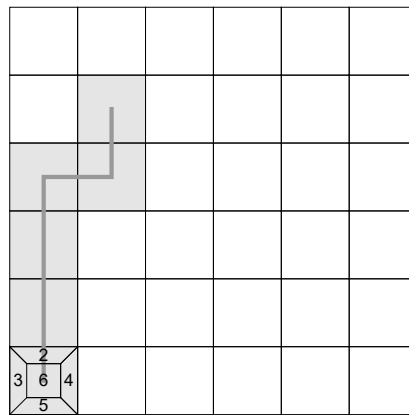


prof. Matemko



## Spodnja številka kocke

Kocka, katerega strani so označene z 1, 2, 3, 4, 5 in 6, se prevrača v ravnini. Na njeni poti označi kvadrat z ustrezno številko trenutne spodnje strani.

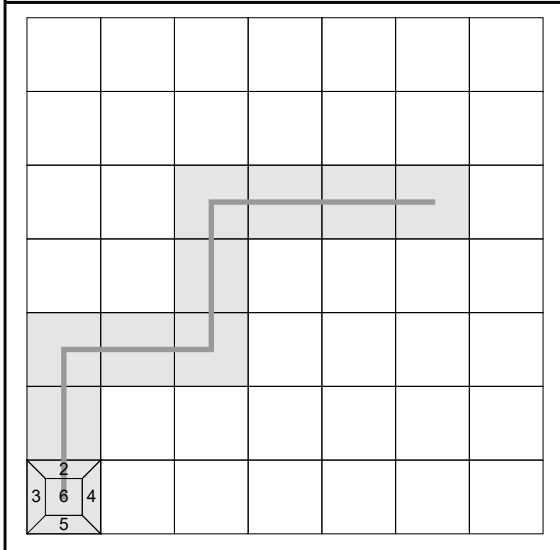
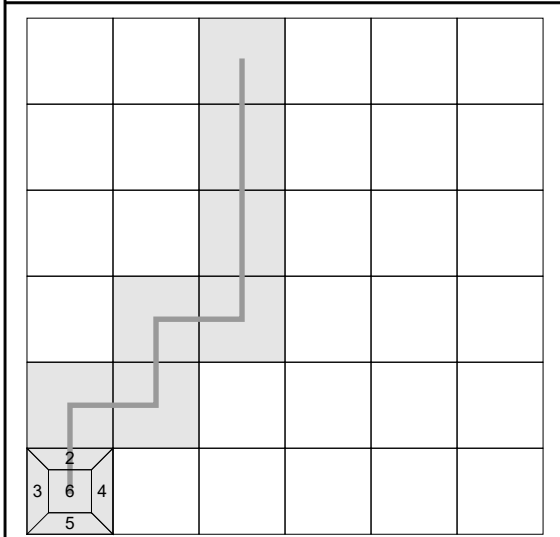
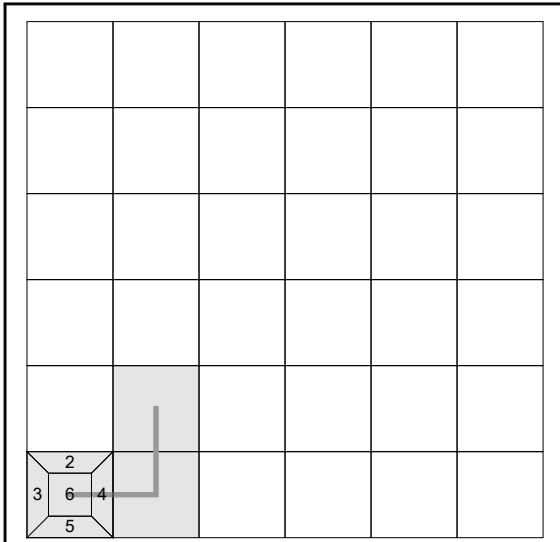


Odgovor

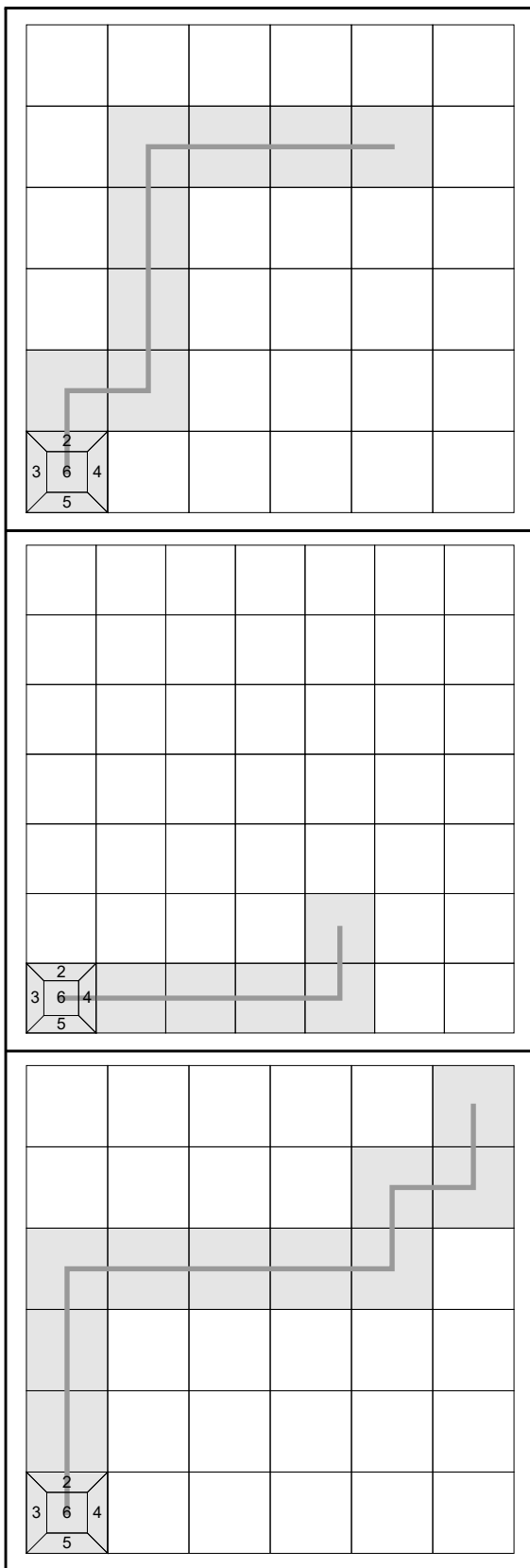
	1				
5	4				
6					
2					
1					

**MATHEMA**

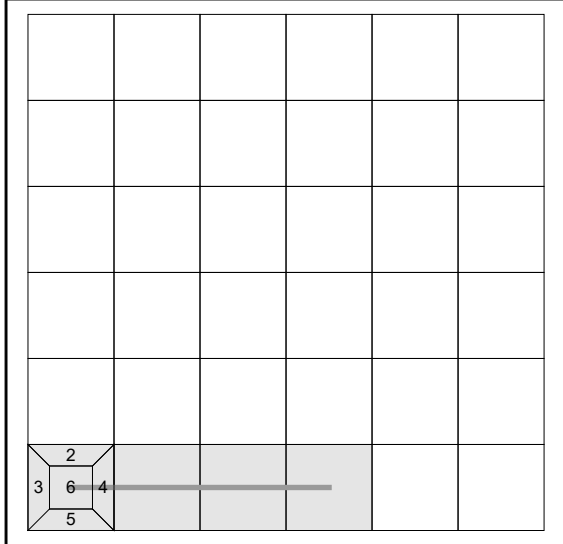
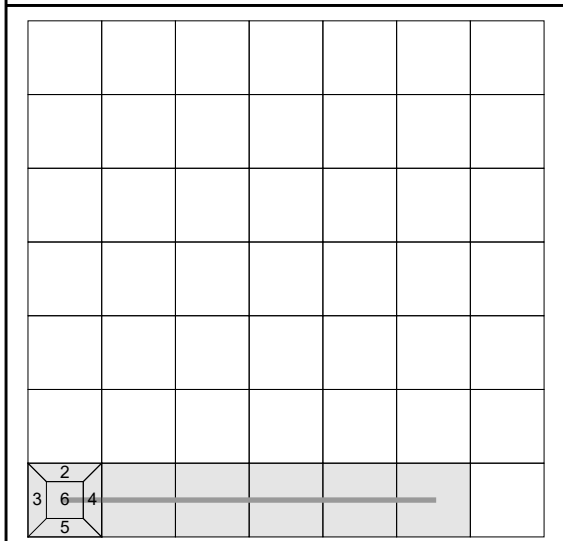
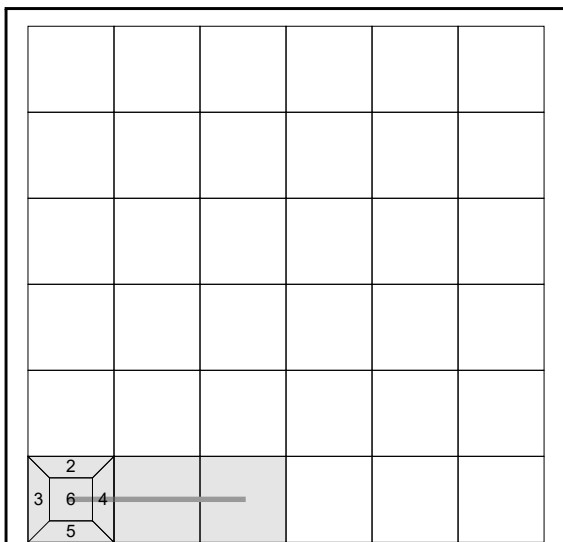
1



2



3

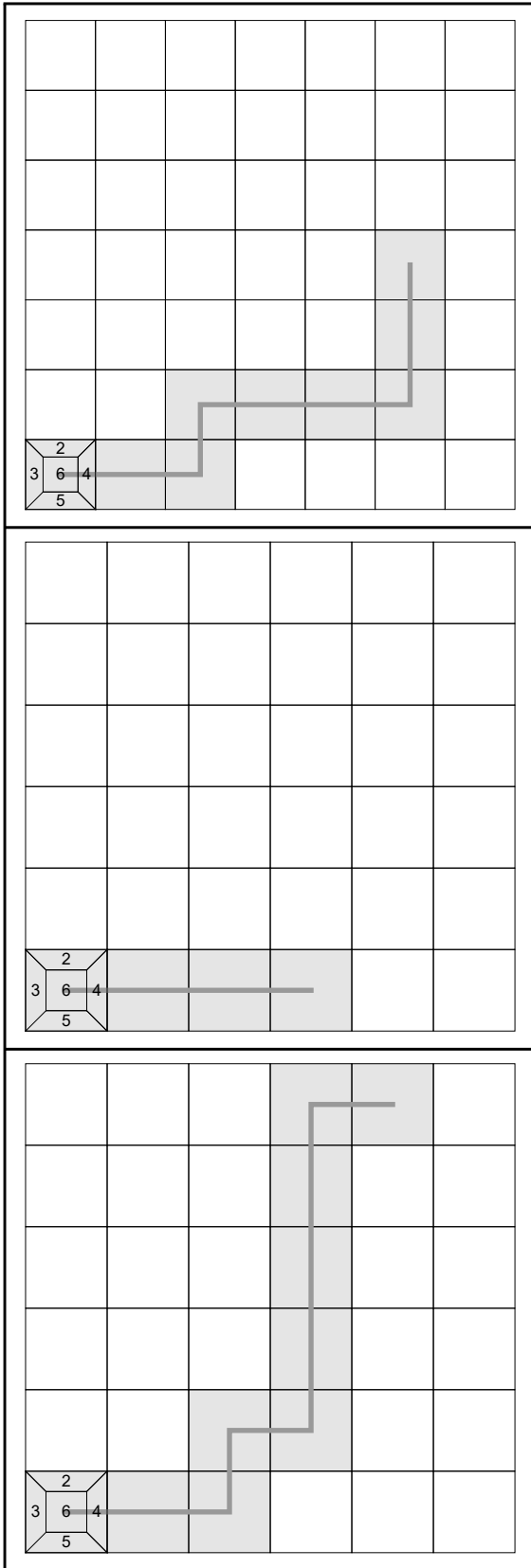


4

The image displays three 6x6 grids, each with a die in the bottom-left corner. The die has faces labeled 2 (top), 3 (left), 4 (right), 5 (bottom), and 6 (center). A shaded path is drawn on each grid, starting from the '6' face of the die.

- Top Grid:** The path starts at the '6' face, moves right to the 4th column, then up to the 5th row, then right to the 5th column.
- Middle Grid:** The path starts at the '6' face and moves right to the 4th column.
- Bottom Grid:** The path starts at the '6' face, moves right to the 3rd column, then up to the 4th row, then right to the 4th column.

5

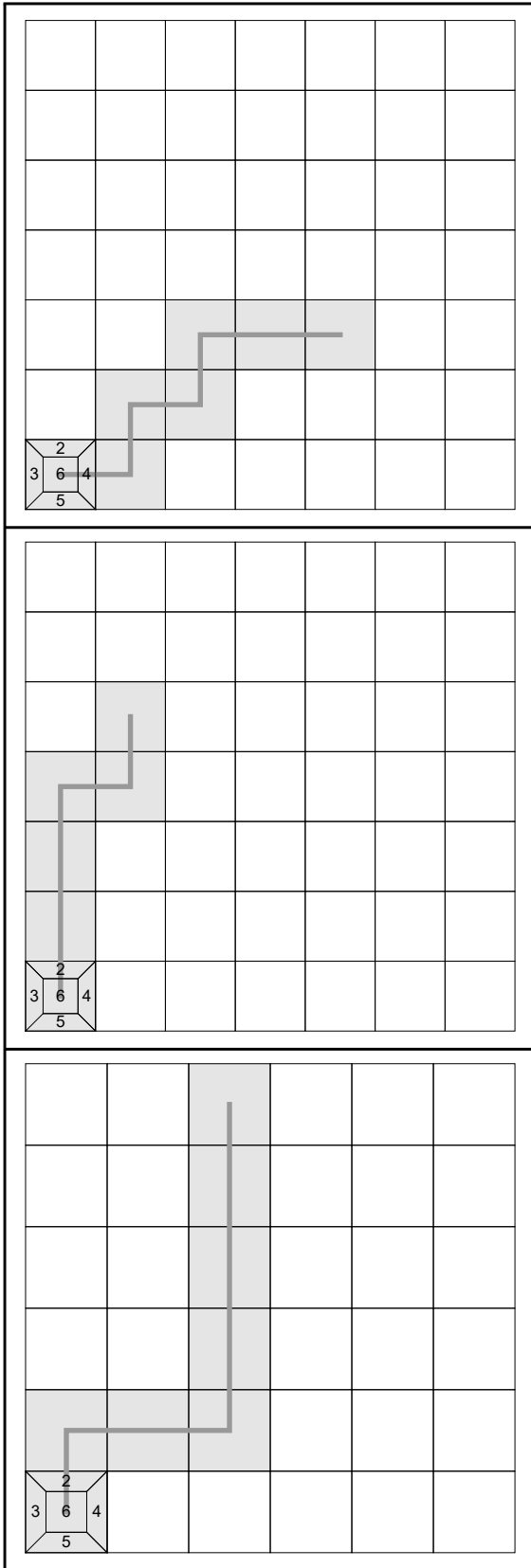


6

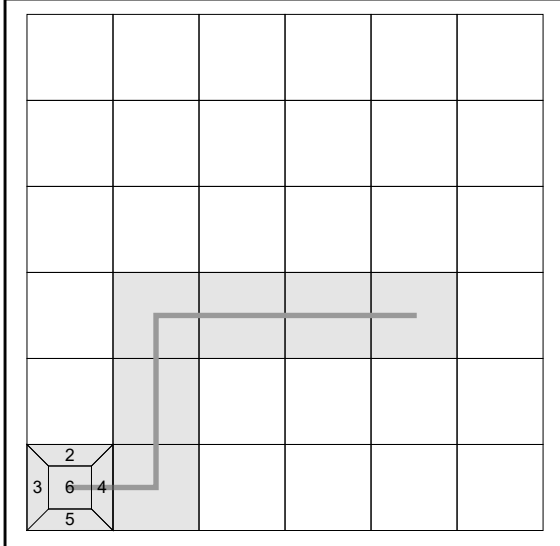
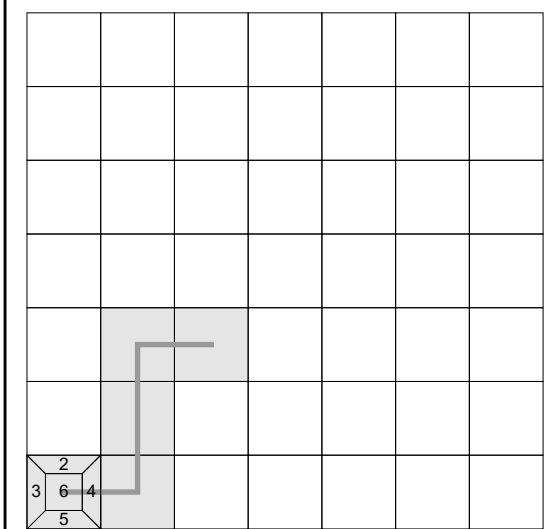
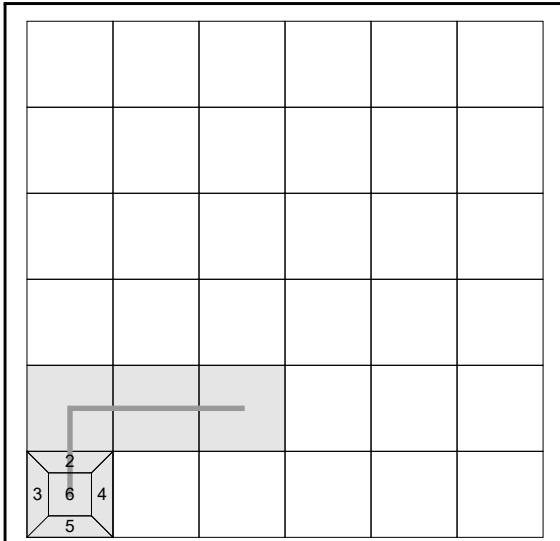
The image displays three 7x7 grids, each containing a die face template in the bottom-left corner. The die face template is a square divided into six triangles, with faces labeled 2, 3, 4, 5, and 6. The '4' face is on the right side of the template. The first grid shows a path of shaded cells starting from the '4' face, moving right, then up, then right, then up, then right, then up, then right. The second grid shows a single shaded cell to the right of the '4' face. The third grid shows a horizontal path of shaded cells starting from the '4' face and extending to the third column.



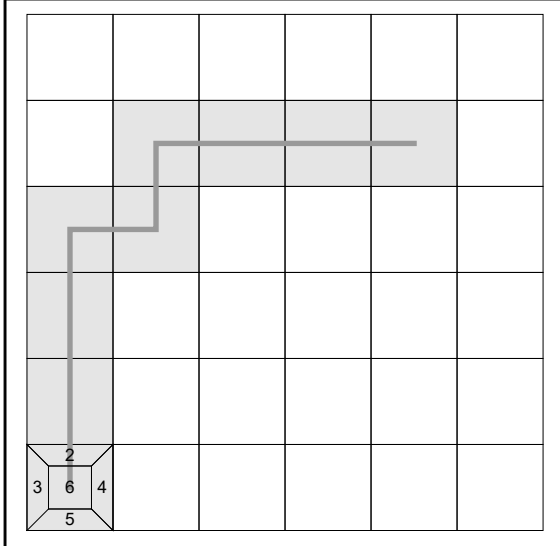
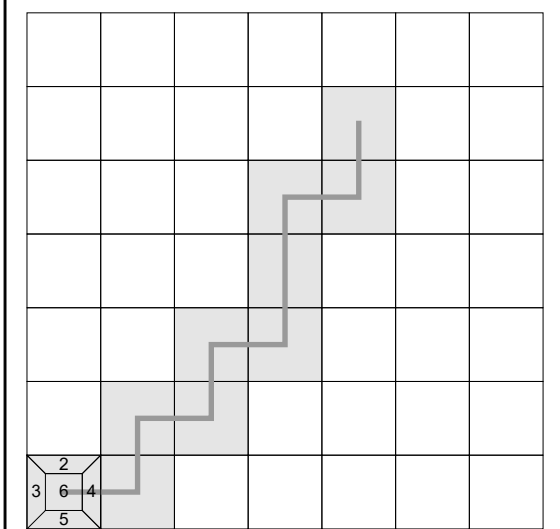
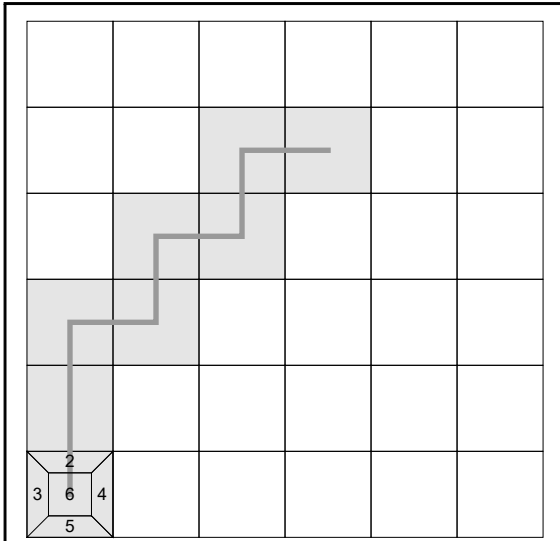
7



8



9

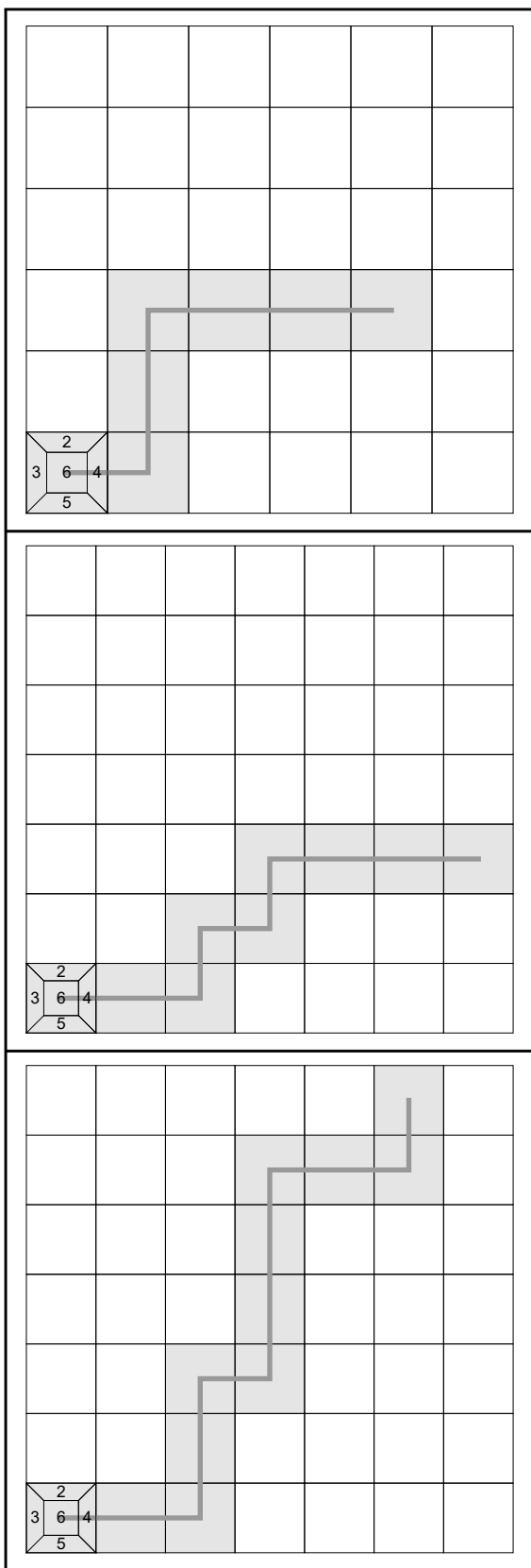


10

The image displays three 6x6 grids, each containing a die in the bottom-left corner and a path of shaded cells. The die has faces labeled 2 (top), 3 (left), 4 (right), 5 (bottom), and 6 (center). The number 10 is written above the top grid.

- Top Grid:** The path starts at the die's right face (4) and moves right to the second cell, then up to the third cell.
- Middle Grid:** The path starts at the die's right face (4) and moves right to the second cell, then up to the third cell, then right to the fourth cell, then up to the fifth cell, then right to the sixth cell, and finally up to the top cell.
- Bottom Grid:** The path starts at the die's right face (4) and moves right to the second cell, then up to the third cell, then right to the fourth cell.

11



12

The image displays three 7x7 grids, each with a die face in the bottom-left corner. The die face has faces with numbers 2 (top), 3 (left), 4 (right), 5 (bottom), and 6 (center). A path is drawn from the center of the die face (6) into the grid.

- Top Grid:** The path moves horizontally to the right from the center of the die face, ending at the center of the die face in the 7th column of the 6th row.
- Middle Grid:** The path moves vertically down from the center of the die face, then horizontally right, then vertically up, and finally horizontally right, ending at the center of the die face in the 4th column of the 4th row.
- Bottom Grid:** The path moves vertically down from the center of the die face, then horizontally right, then vertically up, then horizontally right, then vertically up, and finally horizontally right, ending at the center of the die face in the 5th column of the 3rd row.

13

The image contains three 7x7 grids, each with a die face template in the bottom-left corner. The die face template has faces labeled 2 (top), 3 (left), 4 (right), 5 (bottom), and 6 (center). A grey shaded path is shown in each grid, starting from the center of the die face template.

- Grid 1:** The shaded path consists of 10 cells. It starts at the center (row 6, col 2), moves right to (6, 3), then right to (6, 4), then up to (5, 4), then up to (4, 4), then up to (3, 4), then left to (3, 3), then left to (3, 2), then left to (3, 1), then down to (4, 1), and finally down to (5, 1).
- Grid 2:** The shaded path consists of 4 cells. It starts at the center (row 6, col 2) and moves right to (6, 3), (6, 4), and (6, 5).
- Grid 3:** The shaded path consists of 1 cell, which is the center (row 6, col 2).

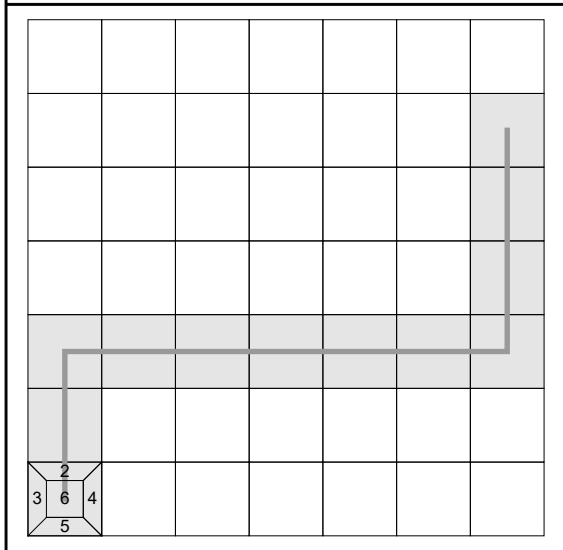
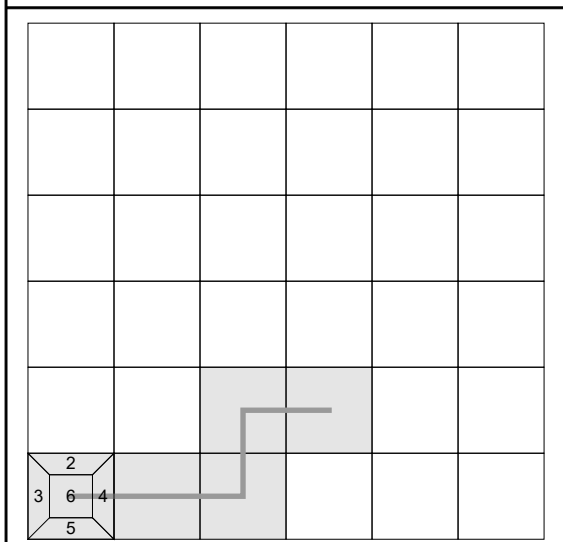
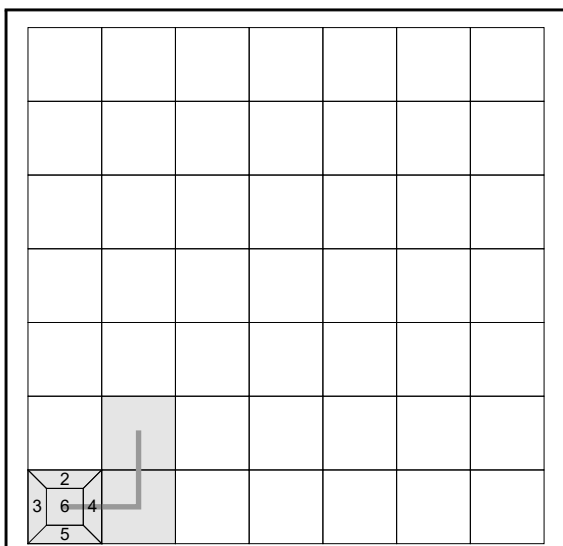
14

The image displays three 6x6 grids, each containing a starting cube net in the bottom-left corner. The cube net is a 2x3 grid of squares with faces labeled 2 (top), 3 (left), 4 (right), and 5 (bottom), and a central face labeled 6. A path is drawn from the right side of the net, and the cells it visits are shaded gray.

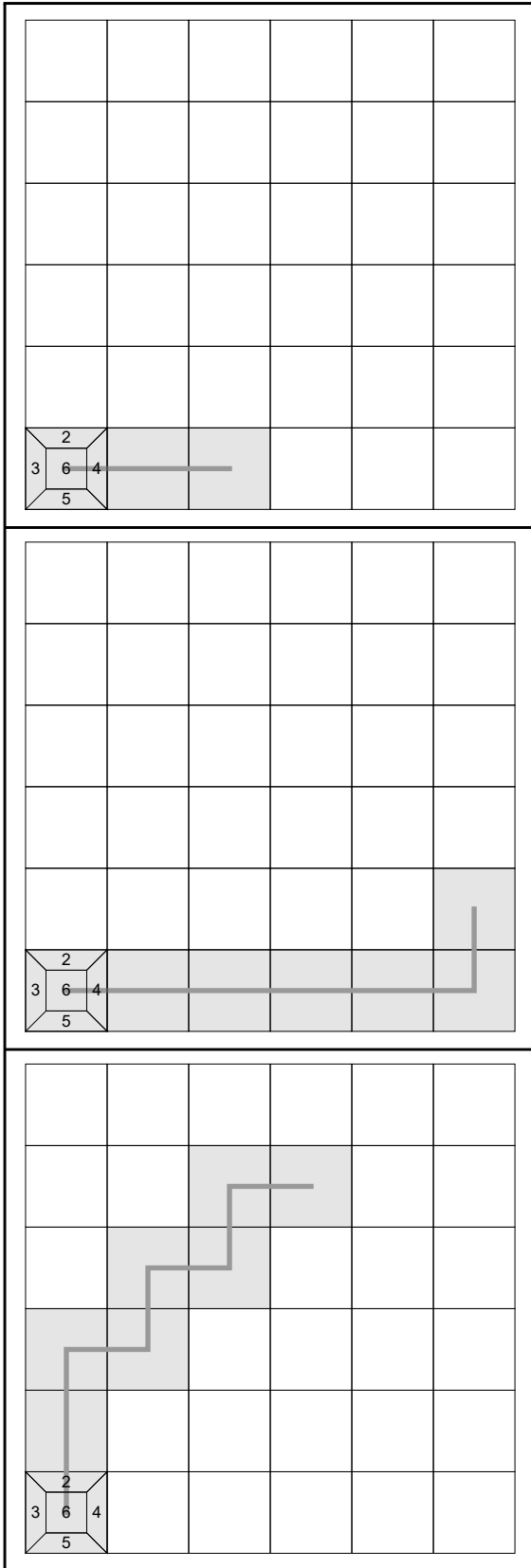
- Grid 1:** The path starts at the right side of the net and moves horizontally to the right, visiting 4 cells in total.
- Grid 2:** The path starts at the right side of the net, moves horizontally to the right, then up, then left, then up, then left, then up, then left, visiting 6 cells in total.
- Grid 3:** The path starts at the right side of the net, moves horizontally to the right, then up, then left, then up, then left, visiting 5 cells in total.



15



16



17

The image displays three 6x6 grid puzzles, each containing a 3D shape and a cube net. The cube net is a cross shape with faces labeled as follows: top (2), middle-left (3), middle-center (6), middle-right (4), and bottom (5).

**Puzzle 1 (Top):** The 3D shape is composed of 10 grid cells. It consists of a horizontal row of 4 cells in the 4th row, a horizontal row of 3 cells in the 5th row, and a vertical column of 2 cells in the 3rd column. The cube net is identical to the one shown in the other puzzles.

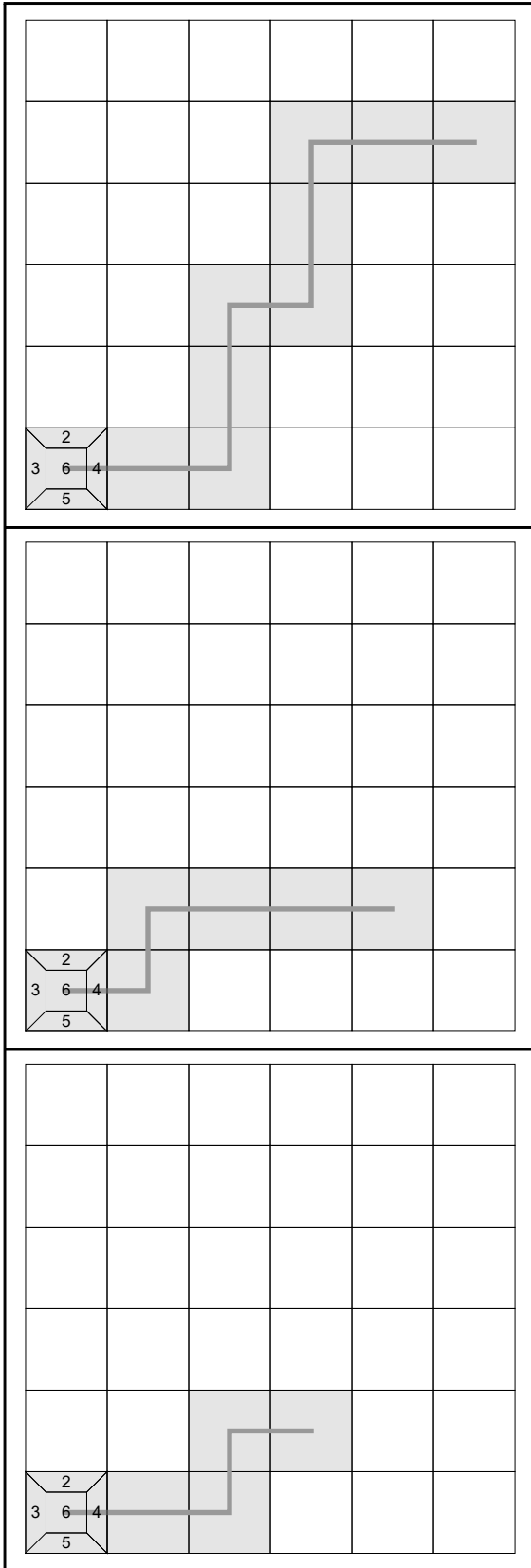
**Puzzle 2 (Middle):** The 3D shape is composed of 14 grid cells. It consists of a horizontal row of 4 cells in the 4th row, a horizontal row of 3 cells in the 5th row, a horizontal row of 2 cells in the 6th row, and vertical columns of 2 cells in the 3rd and 6th columns. The cube net is identical to the one shown in the other puzzles.

**Puzzle 3 (Bottom):** The 3D shape is composed of 10 grid cells. It consists of a horizontal row of 4 cells in the 4th row, a horizontal row of 3 cells in the 5th row, and a vertical column of 2 cells in the 3rd column. The cube net is identical to the one shown in the other puzzles.

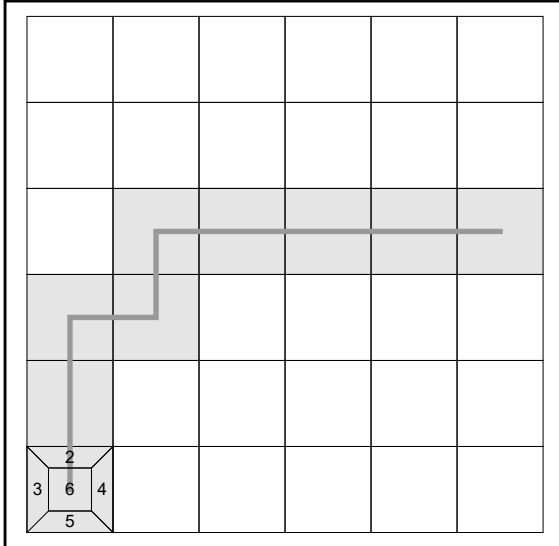
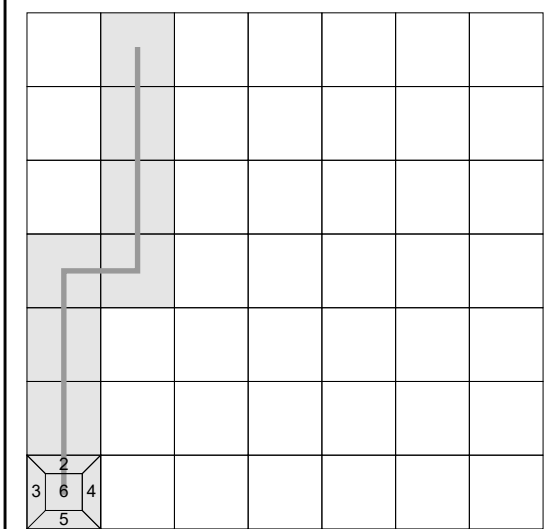
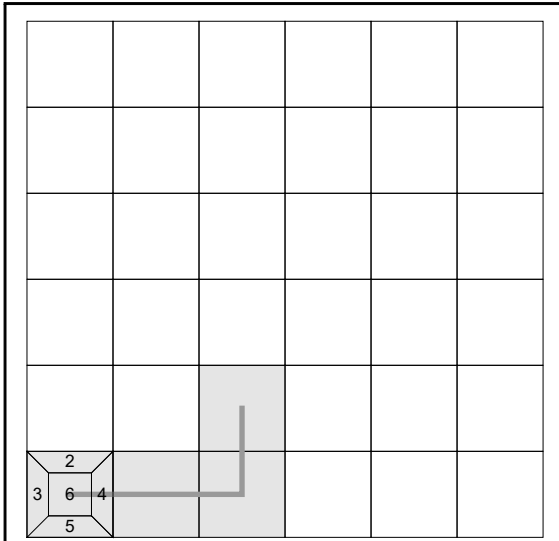
18

The image displays three 7x7 grids, each containing a 3D cube net in the bottom-left corner. The cube net is a 2x2 square of cells with a horizontal line extending from the right side of the bottom row. The faces of the cube are labeled with numbers: 2 (top), 3 (left), 4 (right), 5 (bottom), and 6 (center). The first grid shows a 2x2 square of shaded cells in the bottom-left corner. The second grid shows a horizontal line of shaded cells extending from the right side of the bottom row of the cube net. The third grid shows a horizontal line of shaded cells extending from the right side of the bottom row of the cube net.

19



20



1

	2				
1	4				

		4			
		2			
		3			
	6	5			
2	4				
1					

		6	3	1	4	
		5				
6	4	1				
2						
1						

2

	1	5	6	2	
	3				
	6				
2	4				
1					

				2		
1	4	6	3	1		

					2
				1	4
5	4	2	3	5	
6					
2					
1					



3

1	4	6			

1	4	6	3	1	4	

1	4	6	3		

4

				6		
				2		
				1		
				5		
				6		
2	4	5	3	2		
1						

1	4	6	3		

		2			
		6			
2	4	5			
1					

5

					3	
					1	
		2	3	5	4	
1	4	6				

1	4	6	3		

			3	5	
			6		
			4		
			1		
		2	3		
1	4	6			

6

					2	6
1	4	6	3	1	4	

1	4					

1	4	6	3			

7

		3	5	4		
	2	6				
1	4					

	1					
5	4					
6						
2						
1						

		5				
		1				
		2				
		6				
2	4	5				
1						

8

2	4	5			
1					

	3	6			
	2				
1	4				

	3	6	4	1	
	2				
1	4				

9

		3	2		
	5	1			
6	4				
2					
1					

				6	
			2	4	
			1		
		3	5		
	2	6			
1	4				

	1	2	6	5	
5	4				
6					
2					
1					

10

	2				
1	4				

					2
				1	4
		2	3	5	
1	4	6			

		2	3		
1	4	6			



11

	3	6	4	1	
	2				
1	4				

			1	5	6	2
		2	3			
1	4	6				

					3	
			2	6	5	
			4			
			5			
		1	3			
		2				
1	4	6				

12

1	4	6	3	1	4	

	5					
6	4					
2						
1						

	3	1	4	6		
	5					
6	4					
2						
1						

13

	3					
	5					
6	4					
2						
1						

1	4	6	3		

1	4				

14

1	4	6	3	1	

	6	5	1	2		
2	4					
1						

	2	6			
1	4				

15

	2					
1	4					

		2	3		
1	4	6			

						2
						6
						5
6	4	1	3	6	4	1
2						
1						

16

1	4	6			

					2
1	4	6	3	1	4

		3	2		
	5	1			
6	4				
2					
1					

17

		6	3	1	
2	4	5			
1					

					6
			3	2	4
	6	5	1		
2	4				
1					

			4			
			1			
5	4	2	3			
6						
2						
1						

18

2	4					
1						

1	4	6	3	1	4	6

1	4	6	3	1	4



19

			4	6	3
			5		
		1	3		
		2			
1	4	6			

	2	6	5	1	
1	4				

		2	3		
1	4	6			

20

		2			
1	4	6			

	6				
	3				
	1				
5	4				
6					
2					
1					

	5	1	2	6	5
6	4				
2					
1					

Referenca : Izidor Hafner

"Coloring the Plane with a Rolling Tetrahedron"

[http://](http://demonstrations.wolfram.com/ColoringThePlaneWithARollingTetrahedron/WolframDemonstrationsProject)

[demonstrations.wolfram.com / ColoringThePlaneWithARollingTetrahedron / Wolfram  
Demonstrations Project](http://demonstrations.wolfram.com/ColoringThePlaneWithARollingTetrahedron/WolframDemonstrationsProject)

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