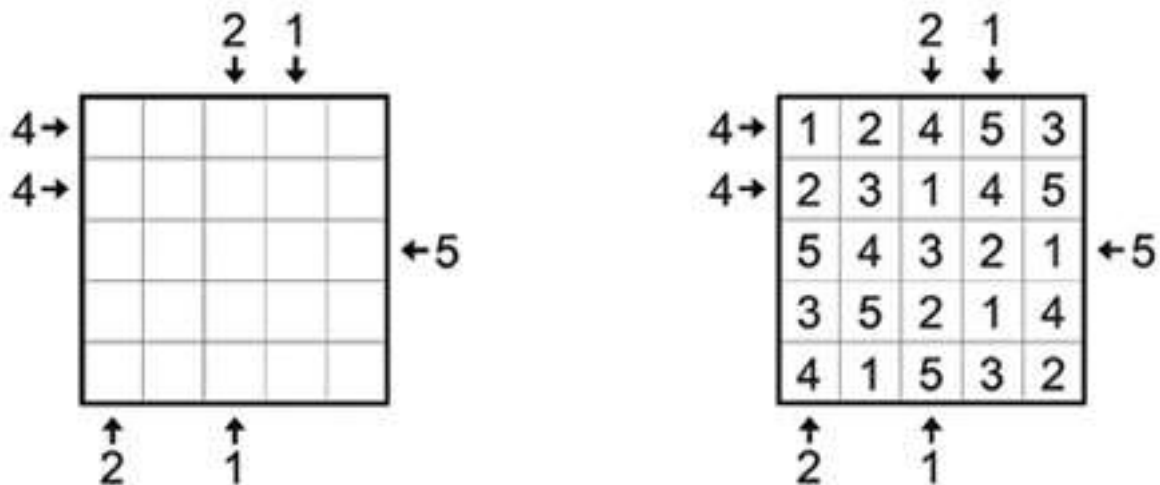


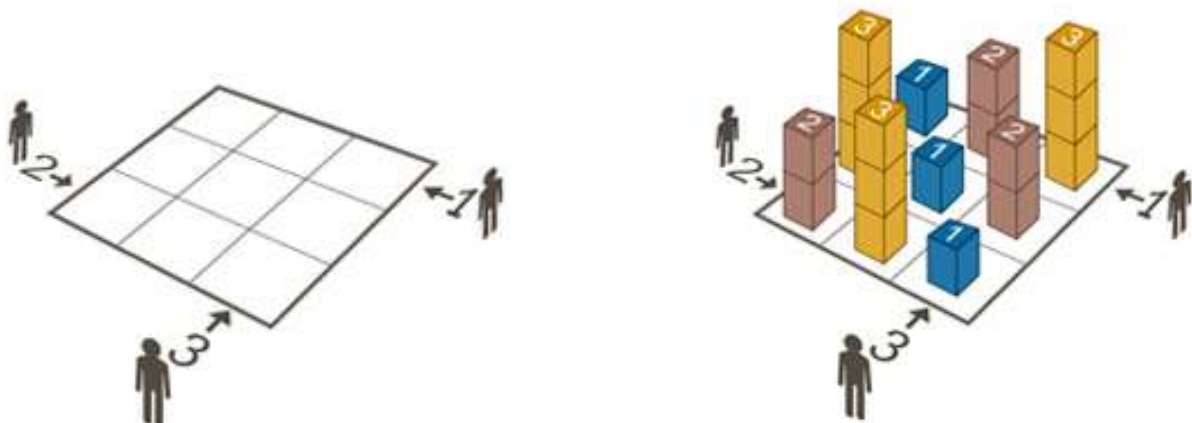
摩天大樓 Skyscrapers

Skyscrapers is a building placing puzzle based on an $N \times N$ grid with some clues along its sides. The object is to place a skyscraper in each square, with a height between 1 and N , so that no two skyscrapers in a row or column have the same number of floors. In addition, the number of visible skyscrapers, as viewed from the direction of each clue, is equal to the value of the clue.

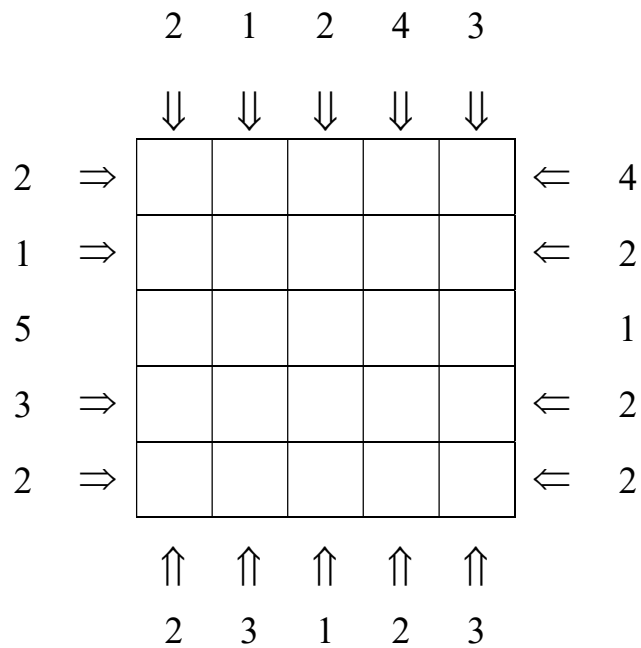
In the example below, we have a 5×5 Skyscrapers puzzle with five columns and five rows. We now need to place 1-floor to 5-floor skyscrapers in each row and column according to the above rules



Below is a 3-D graph. There is a skyscraper in each square. The numbers outside the grid show the number of visible skyscrapers viewed from the direction of each clue. Note that higher skyscrapers block the view of lower skyscrapers located behind them.

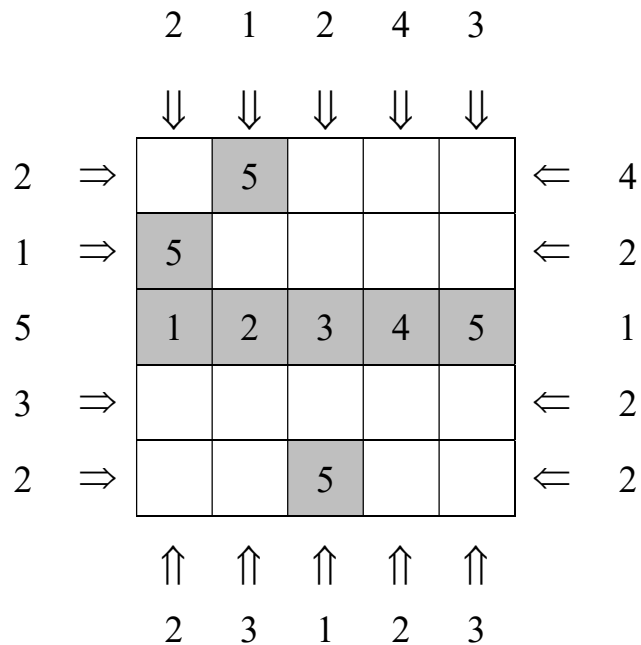


Sample



Stage 1: The highest skyscraper should be placed in the square next to clue 1.
 (The highest skyscraper blocks the view of the remaining buildings.)

Stage 2: Skyscrapers must be placed in ascending order from the clue with highest value.
 (no building gets blocked.)



Stage 3: Place '4's in the positions that block views, and place '5's in the suitable positions.

		2	1	2	4	3	
		⇓	⇓	⇓	⇓	⇓	
2	⇒		5	4			⇐ 4
1	⇒	5				4	⇐ 2
5		1	2	3	4	5	1
3	⇒		4		5		⇐ 2
2	⇒	4		5			⇐ 2
		↑	↑	↑	↑	↑	
		2	3	1	2	3	

Stage 4: Place '2' and '3' in the positions that does not block views, and finish the game using 'rule of Sudoku'.

		2	1	2	4	3	
		⇓	⇓	⇓	⇓	⇓	
2	⇒	3	5	4	2	1	⇐ 4
1	⇒	5	1	2	3	4	⇐ 2
5		1	2	3	4	5	1
3	⇒	2	4	1	5	3	⇐ 2
2	⇒	4	3	5	1	2	⇐ 2
		↑	↑	↑	↑	↑	
		2	3	1	2	3	