

July 27: Seating charts

The CDC (Centers for Disease Control) has provided strict guidance for classroom arrangement this Fall. Earlier in the summer, OBU sent them our classroom dimensions and they have returned acceptable seating charts. Unfortunately, the CDC conferred with the CIA (Center for Incomplete Assignments) and have given us just barely enough information to construct the seating charts.

The Rules

In each classroom, we are given only the sum of the seats in each row and column.

- All usable seats (indicated by black squares) in a row sum up to the number at the right.
- All usable seats in a column sum up to the number at the bottom.
- A particular seat's value is given by its position, so the first cell in a row is 1, the second 2, The small gray numbers are there to remind you of the value of that row or column.

Here is a 4x4 classroom and its solved seating chart. The fourth row has seats in position 2 and 4, resulting in a sum of 6. The second column has seats in positions 1, 3, and 4, resulting in a sum of 8.

Puzzle

	1	2	3	4	
1					3
2					1
3					5
4					6
	3	8	3	4	

Solution

	1	2	3	4	
1	•	•	•	•	3
2	•	•	•	•	1
3	•	•	•	•	5
4	•	•	•	•	6
	3	8	3	4	

Puzzle 1

	1	2	3	4	5	
1						4
2						7
3						10
4						1
5						3
	6	5	8	3	3	

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Puzzle 2

	1	2	3	4	5	6	
1							13
2							10
3							6
4							6
5							7
6							1
	7	5	1	3	6	9	

Puzzle 3

	1	2	3	4	5	6	
1							13
2							10
3							6
4							6
5							7
6							1
	7	5	1	3	6	9	

Puzzle 4

	1	2	3	4	5	6	7	
1								23
2								18
3								23
4								26
5								12
6								9
7								24
	19	24	21	18	21	17	15	

Puzzle 5

	1	2	3	4	5	6	7	
1								18
2								27
3								21
4								19
5								22
6								7
7								22
	7	13	14	21	20	22	18	

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