

### 3. Twenty five again

6 + 6

1				
				11
		16		

1				
		17		
			8	

Fill the tables with numbers from 1 to 25, starting from the cell with "1" and writing each next number in one of eight neighbour cells. None of two numbers in the same row or column can give the sum ending with "0".

*Answer key: write down the content of the second bottom rows. For the*

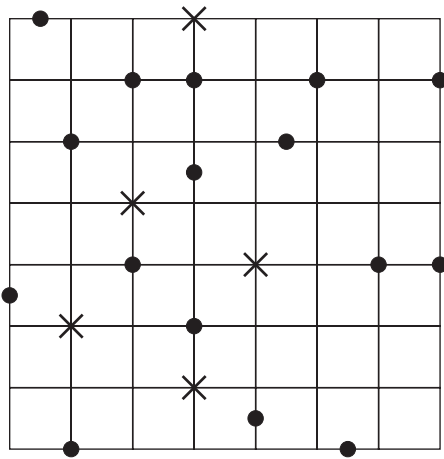
*Example:*

1	14	13	12	11
2	15	4	9	10
16	3	5	6	8
17	18	19	20	7
25	24	23	22	21

*example the answer would be: 17, 18, 19, 20, 7.*

### 4. Breaking the loop

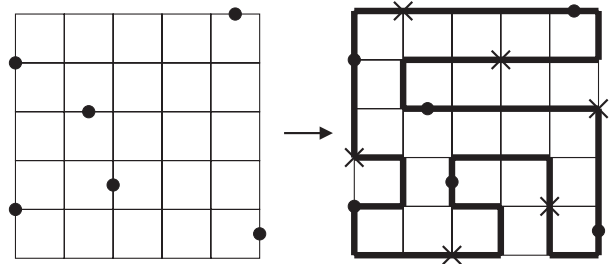
7



Draw a single closed loop going through all the grid nodes. Then break this loop into 16 pieces. In each row and column of the nodes must be exactly two breaking points (some are shown in table as "X"s). Middle points of all 16 pieces are shown as dots.

*Answer key: write down the lengths of all pieces clockwise, beginning with the piece going through top left corner. For the example the answer would be: 4, 7, 7, 5, 7, 6.*

*Example:*



### 5. Equal ships

≤ 8

	A	B	C	D	E	F	G	H	I	J	K	L
1	3	2	5	1	3	4	2	6	3	2	1	3
2	1	3	1	2	6	5	1	3	1	4	3	2
3	4	5	2	3	1	3	2	1	5	6	2	2
4	2	2	5	2	3	1	4	1	3	3	4	1
5	1	5	6	3	2	4	2	3	4	1	2	4
6	3	2	4	2	5	4	2	2	3	5	3	2
7	2	6	5	4	1	3	1	5	8	4	2	3
8	4	2	3	6	1	4	2	4	2	1	3	5
9	3	5	2	2	3	1	4	6	7	2	5	3
10	5	4	1	4	2	5	2	3	6	4	5	2
11	2	6	3	1	4	5	3	2	1	6	4	5
12	5	1	4	3	3	6	2	5	1	3	5	2

Place in grid some ships (2, 3 and 4-unit), so that they do not touch each other, even diagonally. Sums of the digits covered by each ship must be equal. For each 2-unit ship add 4 to your result, for each 3-unit ship add 5 and every 4-unit ship adds 6 to your result. Maximize your result.

*Answer key: write down the coordinates of top left units of all your ships with their lengths and orientations (H - horizontal, V - vertical). For the example: A1-3H, J2-2V. Best answer brings 8 points; each next answer will bring two points less.*

