Haijo Tutorial

Place the numbers 1 to 7 in each row.
Numbers may appear multiple times in columns.
Identical numbers may not appear in neighbouring squares
Some diagonal totals are provided around the outside of the grid.

		19	10		9	20		
	1		4	5			2	
		2		3		5	6	
13	7	5	4		2	3		8
				5				
7				3			4	10
		7				3		
					7		5	

Now we know the rules, let's try and solve this puzzle ...

A A good place to start is with diagonal sums which have a single digit missing.

In this puzzle there are two locations so we should fill them in immediately.

Place a 3 in row 1, column 6 so that the diagonal adds up to 9.

Place a 6 in row 4, column 6 so that the diagonal adds up to 19.

		19	10		9	20		
	1		4	5		3	2	
		2		3		5	6	
13	7	5	4		2	3		8
				5		6		
7				3			4	10
		7				3		
					7		5	

B Another good place to start is with rows that are nearly complete. Look at the 3rd row from the top. This just needs us to find places for the 1 and the 6.

Because of the neighbour rule we can not place the 6 on the far right of the row as the 6 in the row above (red) blocks it.
The 6 must therefore be placed in column 4.
Which leaves the 1 to be placed in column 7.

		19	10		9	20		
	1		4	5		3	2	
		2		3		5	6	
13	7	5	4	6	2	3	1	8
				5		6		
7				3			4	10
		7				3		
					7		5	

C Diagonal sums with only two squares are also good because they consist of a manageable number of combinations.

A good example is the diagonal 10 at the top highlighted in green.

The combinations here are 7,3 ; 6,4 ; 5,5 ; 4,6 and 3,7

The 5,5 can be discounted immediately because of the neighbour rule.

The only combination that works is the one shown in the yellow squares because all others conflict with numbers already in the rows.

		19	10		9	20		
	1	6	4	5		3	2	
	4	2		3		5	6	
13	7	5	4	6	2	3	1	8
				5		6		
7				3			4	10
		7				3		
					7		5	

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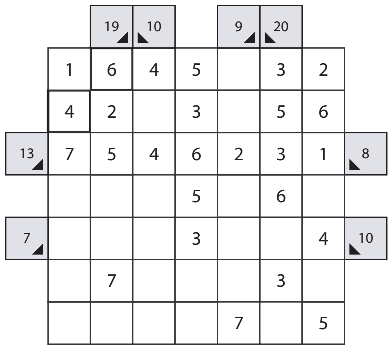
Solving puzzle continued ...

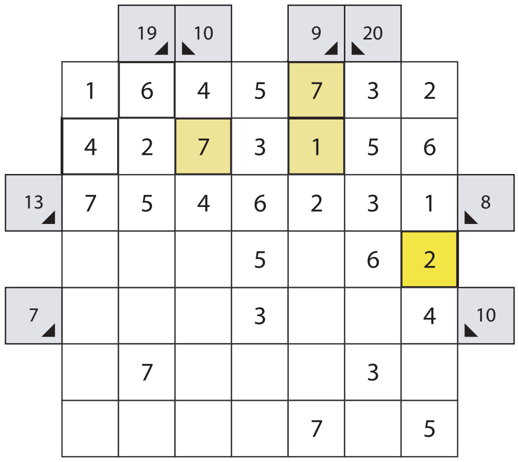


(D) Firstly we should be able to complete the first 3 rows now. These are shown in light yellow.

If a diagonal total is small and the number of squares in it is large then this can be helpful. Look at the 8 sum on the right hand side, it is made from 4 digits.

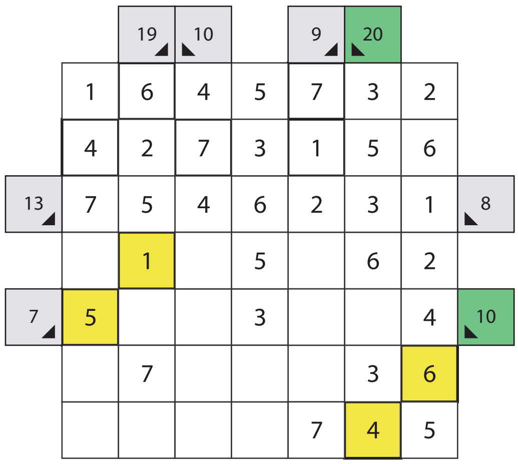
We can deduce that each square in this sum must be less than 5 because otherwise we would need three squares containing a 1 and this breaks the neighbour rule.

By looking at surrounding squares we can place a 2 at row 4, column 7 (bright yellow).



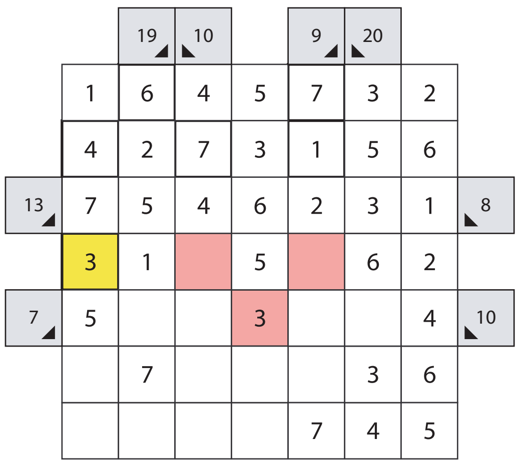
(E) Using a similar technique to Step (C) we can deduce the combination for the diagonal 10 sum on the right hand side.

We can also do the same for the diagonal 20 at the top.



(F) The 3 in the fifth row is useful because it can eliminate positions for the number 3 in the fourth row.

These positions are cloured red and the 3 must go in column 1 (yellow).



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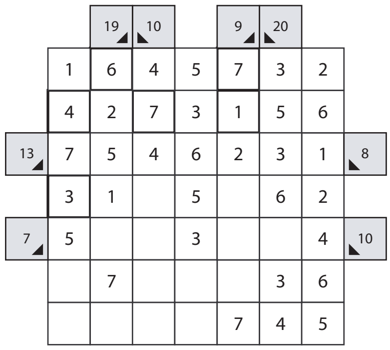
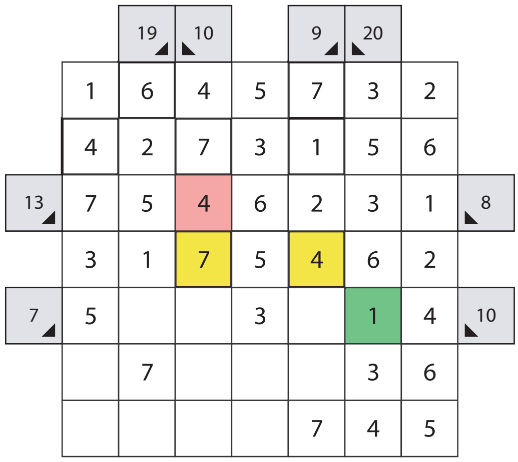
Solving puzzle continued ...



G

Row 4 can now be completed because we need to fit a 4 and a 7 into the two remaining squares. The 4 in the third row (red) forces the placement (yellow).

Remember that all of the squares in the 8 diagonal must have a digit less than 5. This means that row 5, column 6 must be the number 1 (green).

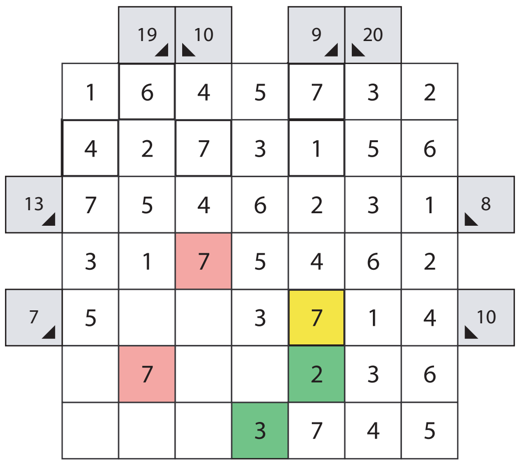


H

Once again we can find a combination for the remaining two squares in the 8 diagonal.

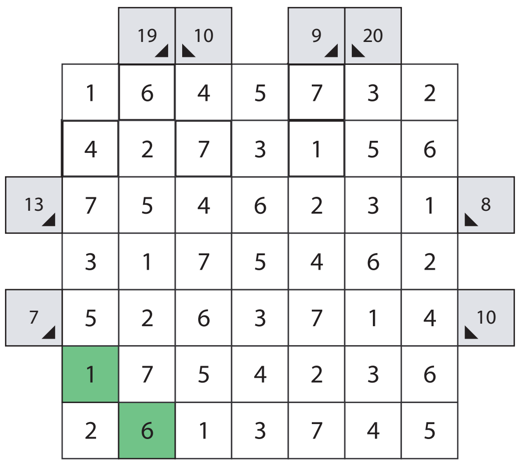
This must be a 2 and a 3 (green).

We can also use the two 7s in the fourth and sixth rows to place the 7 (yellow) in the fifth row.



I

After finding the right combination for the 7 diagonal on the left (green) the rest of the puzzle is relatively easy to complete.



Congratulations, you have just solved your first Haijo.

Please visit http://www.vexuspuzzle.com if you wish to try more Haijo puzzles.