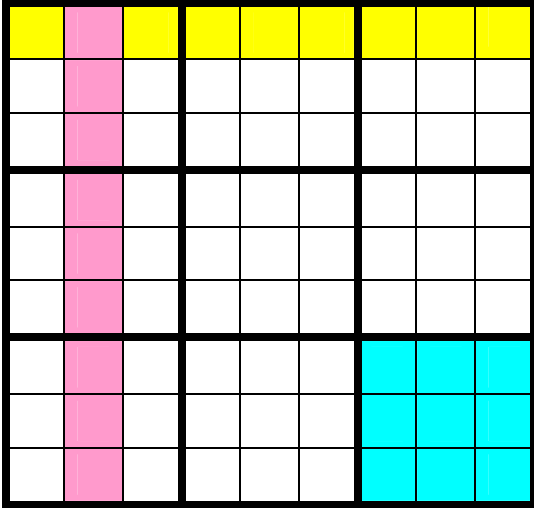


# LEARNING SUDOKU

#1



#1

Sudoku is a Japanese number placing game. Although numbers are involved, there is NO math. You use logic to decide where numbers should go. There is only one correct answer to each puzzle.

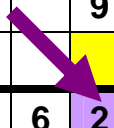
If this is your first time trying a sudoku, reading through these tips will help you get started. The most important thing to remember is not to just guess and put any number in anywhere. If you do that, big problems will happen! (Aaaahhhh...not big problems....run away, run away!)

To solve the puzzle, complete the grid so that each **row**, **column** and **3x3 box** (in the bold borders) contains every number from 1 to 9.

A big thanks to Miss O Club members SeeBabyBalloon and sweet2th for reviewing these instructions to make them as easy as possible for you!

#2-A

4		8						1
	6	3			8			9
					5	6		
		9				8	6	2
			5		1			
2	3	4				5		
		5	4					
9			2			4	3	
6						2		8



To begin, pick a number and use logic to narrow down where the rest of that number should go.

In figure #2-A, let's choose the number 2 [we chose that number because there are a lot of them already marked in the puzzle, so we should be able to fill in some missing numbers right away]. We've highlighted all the 2s in purple so you can see them.

First, look at the circled 2. You can eliminate all the squares highlighted in pink off the bat, because those appear in the same column, row, or box as the circled 2 (remember, a number can appear ONLY ONCE in each column, row or box.)

#2-B

4		8						1
	6	3			8			9
					5	6		
		9				8	6	2
			5	2	1			
2	3	4				5		
		5	4					
9			2			4	3	
6						2		8



Next, look at the 2 with the arrow. The squares highlighted in yellow can't have the missing 2 in it, because they are in the same column, row or box.

Now, look in the center grid. You will see only one open square that is not highlighted. That is where you will fill in your first number.

It's time to eliminate more choices. Look at the circled 2 in figure #2-B. We've already eliminated the squares marked in black, and now you can discard the additional squares marked in green as possibilities because they're in the same column, row or box.

Next, eliminate the squares in the same column, row or box as the 2 with the arrow. These are marked in grey.

#2-C

4		8						1
	6	3			8			9
					5	6		
		9				8	6	2
			5	2	1			
2	3	4				5		
	2	5	4					
9			2			4	3	
6						2		8

Now look at the grid in the bottom left. You will see only one open square that is not highlighted. Put your next 2 in there.

We're getting close! You can now remove the squares in same the column where you just put your 2. These are highlighted in orange. Look at that...another lonely, empty square in the upper left-hand box waiting for a 2 to go in it.

#2-D

4		8						1
	6	3			8			9
		2			5	6		
		9				8	6	2
			5	2	1			
2	3	4				5		
	2	5	4					
9			2			4	3	
6						2		8

Now look at the remaining open squares in figure #2-D to see what other choices you can eliminate that appears in the same column, row or box as a 2 that's already in there...

Right! Remember that first 2 we filled in? Look in the box above that and you'll see 3 empty squares where the next 2 CAN'T go because they're in the same column [highlighted in blue]. That leaves only one square left in that box, where you'll put your next 2.

#2-E

4		8			2			1
	6	3			8			9
		2			5	6		
		9				8	6	2
			5	2	1			
2	3	4				5		
	2	5	4					
9			2			4	3	
6						2		8

There's only one box left to go for the 2s. Look in the top right box on figure #2-E and you'll see three open squares. Now, look in to the left of each square to find the row without a 2 already in it.

Exactly!

#2-F

4		8			2			1
	6	3			8		2	9
		2			5	6		
		9				8	6	2
			5	2	1			
2	3	4				5		
	2	5	4					
9			2			4	3	
6						2		8

The last 2 of the puzzle will go in the middle square of that last box. (See figure #2-F)

Whew! Only eight more numbers to go!

#5-A

4		8			2			1
	6	3			8		2	9
		2			5	6		
		9				8	6	2
			5	2	1			
2	3	4				5		
	2	5	4					
9			2			4	3	
6						2		8

Sometimes when you pick a number and start eliminating square choices, you won't be able to fill in that number in a grid right away – you need more information.

In figure #5-A we started removing choices for the number 5 in the middle row of boxes. Those are highlighted in pink. That left two choices in the left middle box.

#5-B

4		8			2			1
6	3				8		2	9
		2			5	6		
?	?	9				8	6	2
			5	2	1			
2	3	4				5		
	2	5	4					
9			2			4	3	
6						2		8

We know that a 5 needs to go in one of those squares, but which one? First, we'll look up and down in the column of each square to see if we can find another 5 (figure #5-B)

There are no 5s in either of those columns so we still don't know which square to put it in.

Oh well. We'll put that to the side and figure out another one. It's important NOT TO GUESS where it goes! Every number leads to filling in another number and if we're wrong now, the whole puzzle will be wrong!

#5-C

4		8			2			1
	6	3			8		2	9
		2			5	6		
?	?	9				8	6	2
			5	2	1			
2	3	4				5		
	2	5	4					
9			2			4	3	
6						2		8

In figure #5-C, we'll remove choices for the 5 in the top middle box. These are in yellow.

See it? There's only one empty square in the top right box. We can fill in a 5 there.

#5-D

4		8			2		5	1
X	6	3			8		2	9
		2			5	6		
?	?	9				8	6	2
			5	2	1			
2	3	4				5		
	2	5	4					
9			2			4	3	
6						2		8

Now, in figure #5-D, eliminate the boxes in the column and row with that 5 we just filled in. These are highlighted in green.

There weren't that many, but we see in the top left box that we can fill in another square (marked with red X).

#5-E

4		8			2		5	1
5	6	3			8		2	9
		2			5	6		
	X	9				8	6	2
			5	2	1			
2	3	4				5		
	2	5	4					
9			2			4	3	
6						2		8

[Figure #5-E] Once we eliminate the squares in the same column as the 5 we just filled in (highlighted in grey), we can figure out which of the question marks is supposed to be the 5 (marked with red X).

#5-F

4		8			2		5	1
5	6	3			8		2	9
		2			5	6		
	5	9				8	6	2
			5	2	1			
2	3	4				5		
	2	5	4					
9			2			4	3	X
6						2		8

Time to work on the bottom boxes [figure #5-F]. There's only one 5, in the bottom left box, so after we remove all the choices in the same column, row or box (highlighted in orange), we see that there's only one empty square for the 5 to go over in the bottom right box (marked with red X.)

One more to go!

#5-G

4		8			2		5	1
5	6	3			8		2	9
		2			5	6		
	5	9				8	6	2
			5	2	1			
2	3	4				5		
	2	5	4					
9			2			4	3	5
6				X		2		8

**[Figure #5-G]** Look at the empty squares in the bottom middle box. When you look up-and-down and right-and-left, you will be able to discard as choices all the boxes with lines through them.

Voila! That means the last 5 has to go in the bottom row, center square (red X)!

Now, when you are doing the puzzles, you won't actually be highlighting the squares, you will have to mentally do that, but those are some steps you can take to start to work the sudoku puzzle.

Once you get the hang of it, you'll probably learn more tricks of your own!

We've already done all the numbers for 2 and 5. Now take a stab using these tips to try to figure out the rest of the puzzle!

**p.s. If you get stuck on a number, and don't see a solution right away, don't stress! Just move to another number, and come back to that one later. Sudoku is a fun challenge, and may be hard at first.**

**YOUR TURN!**

4		8			2		5	1
5	6	3			8		2	9
		2			5	6		
	5	9				8	6	2
			5	2	1			
2	3	4				5		
	2	5	4					
9			2			4	3	5
6				5		2		8

(answer on next page)

ANSWER:

4	9	8	6	7	2	3	5	1
5	6	3	1	4	8	7	2	9
7	1	2	3	9	5	6	8	4
1	5	9	7	3	4	8	6	2
8	7	6	5	2	1	9	4	3
2	3	4	8	6	9	5	1	7
3	2	5	4	8	7	1	9	6
9	8	7	2	1	6	4	3	5
6	4	1	9	5	3	2	7	8