

# Magic Square Solution

How To Find A Magic Square Solution? I'll show you **how to solve that magic square**, first in words, then you can watch on video.

If you're *not* already familiar with magic squares, you may want to check out the [magic square puzzle](#) page first. And here's the [magic square worksheets](#) page.

## Solving a 3 by 3 Magic Square

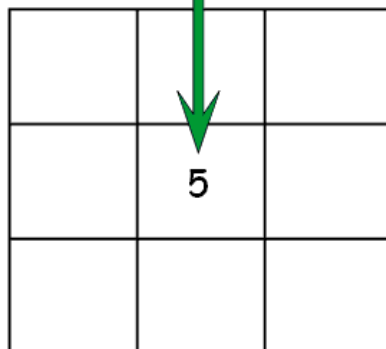
Okay, so we will first look at solving a 3 by 3 magic square puzzle. First off, keep in mind that a 3 by 3 square has 3 rows, and 3 columns.

When you start your 3 by 3 square with you will either choose or be given a set of nine consecutive numbers start with to fill the nine spaces.

Here are the steps:

- List the numbers in order from least to greatest on a sheet of paper.
- Add all nine of the numbers on your list up to get the total. For example, if the numbers you are using are 1, 2, 3, 4, 5, 6, 7, 8, and 9, you would do the following:  $1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9 = 45$ . So **45 is the total**.
- Divide the total from Step 2 by 3.  $45 \text{ divided by } 3 = 15$ . *This number is the **magic number**.* (The number all rows, columns, and diagonals will add up to.)
- Go back to your list of numbers and the number in the very middle of that list will be placed in the center of the magic square.

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



	5	

- In the picture below x the number in the center

represents square so

for our example,  $x$  is equal to 5.

- Place the number  $x + 3$  in the upper right-hand square.
- Place the number  $x + 1$  in the upper left-hand square.
- Place the number  $x - 3$  in the lower right-hand square.
- Place the number  $x - 1$  in the lower upper left-hand square.

$X + 1$		$X + 3$
	$X$	
$X - 3$		$X - 1$

Take a look at the picture below.

6		8
	5	
2		4

So for our example, the numbers will be filled in like the picture below.

- For the last step, fill in the remaining squares keeping in mind the magic number is 15. So that means all the rows, columns, and diagonals need to add up to 15. You

should have no problem figuring where to place the remaining numbers keeping this in mind.