Have a look at these two squares of numbers:

| 1 | 5 | 7 |
| :--- | :--- | :--- |
| 3 | 8 | 2 |
| 4 | 9 | 6 |


| 8 | 4 | 7 |
| :--- | :--- | :--- |
| 6 | 1 | 2 |
| 5 | 9 | 3 |

## What do you see? What is the same about the two squares? What is different?

'Magic' squares are square grids with a special arrangement of numbers in them. The arrangement is special because the numbers in each row, column and diagonal add up to the same total - the 'magic total'.

Looking at the left hand square above, if we add the top row of numbers, $1+5+7$, we get a total of 13 :


If we add the left hand column of numbers, $1+3+4$, we get a total of 8 . So, we know already that this square is not a magic square as these two totals are different.

Use the numbers 1 to 9 to create a magic square.
Can you find another way of doing it? And another? And another? What do you notice about your magic squares?

