

# A Magic Square

Find the missing numbers in this magic square.

<b>A</b> →	3		4
		3	
	2		3
<b>C</b> ↗	9	9	9

$$\text{Row } \mathbf{A} \quad 3 + \square + 4 = 9$$

$$\text{Column } \mathbf{B} \quad 4 + \square + 3 = 9$$

$$\text{Diagonal } \mathbf{C} \quad 2 + 3 + 4 = \square$$

# Adding Magic Squares

Check that **M** and **N** are magic squares.

**M**

5	6	1
0	4	8
7	2	3

**M** is a magic square

true  false

**M**'s sum = \_\_\_\_\_

**N**

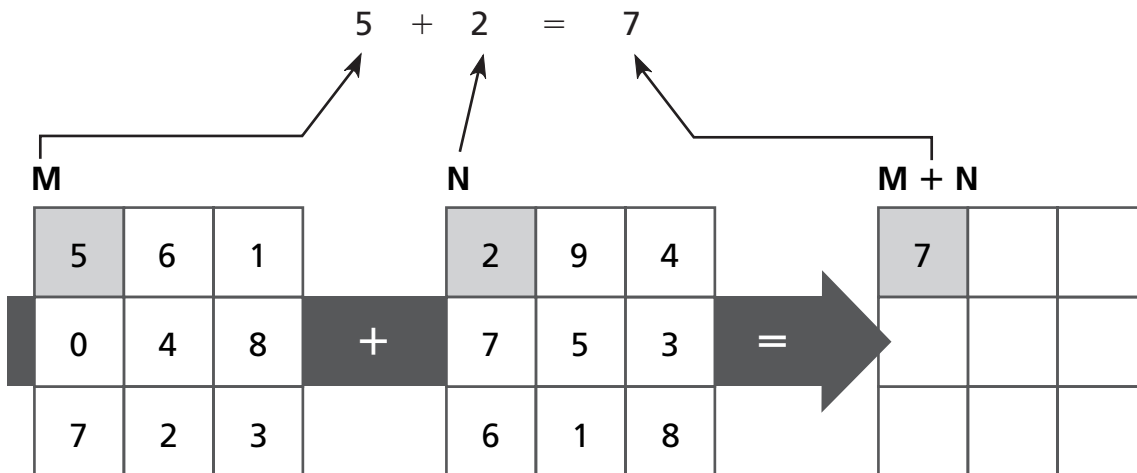
2	9	4
7	5	3
6	1	8

**N** is a magic square

true  false

**N**'s sum = \_\_\_\_\_

**Add the numbers in the upper left boxes of **M** and **N** to find the number in the upper left box of the new grid **M + N**. Add the numbers in the other boxes in the same way to complete the new grid.**



Is **M + N** a magic square? \_\_\_\_\_

**M + N**'s sum = \_\_\_\_\_

# What Happens If You Change the Order?

**Q**

3	1	2
1	2	3
2	3	1

**R**

7	0	5
2	4	6
3	8	1

**Q + R**


6      12

**R**

7	0	5
2	4	6
3	8	1

**Q**

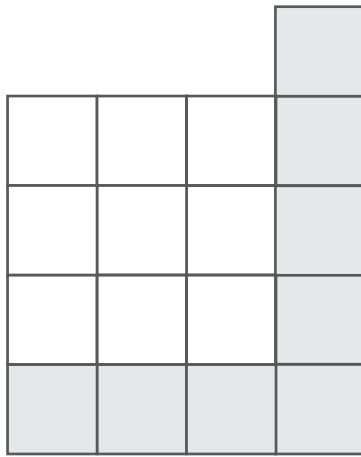
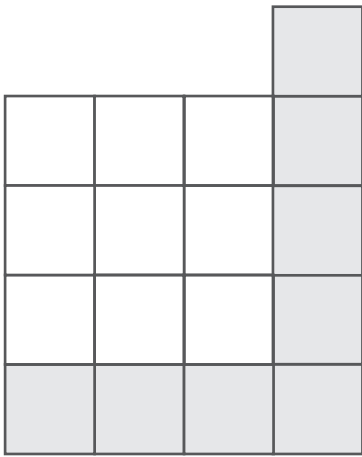
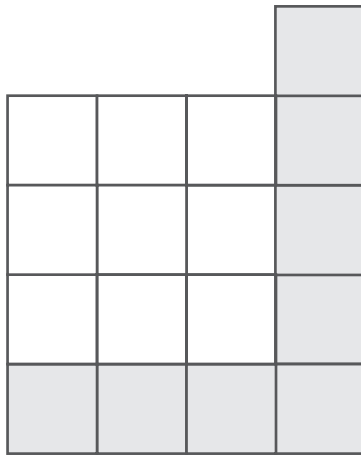
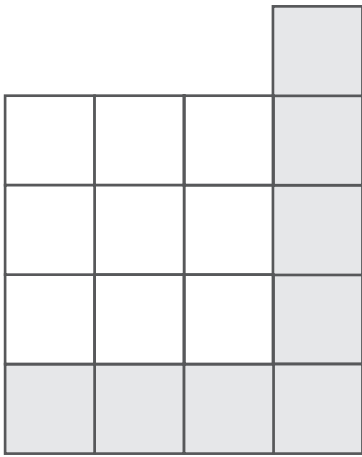
3	1	2
1	2	3
2	3	1

**R + Q**


12      6

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# Blank Magic Square Grids



# Number Cards



1 <b>1</b> 1	2 <b>2</b> 2	3 <b>3</b> 3
4 <b>4</b> 4	5 <b>5</b> 5	6 <b>6</b> 6
7 <b>7</b> 7	8 <b>8</b> 8	9 <b>9</b> 9

# Is $(A + B) \times 7$ a Magic Square?

The diagram illustrates the process of adding two 3x3 grids, A and B, and then multiplying the result by 7. Grid A is:

2	5	2
3	3	3
4	1	4

Grid B is:

1	3	2
3	2	1
2	1	3

An arrow labeled  $\times 7 =$  points from the sum of A and B to an empty 3x3 grid:


# Dividing and Multiplying a Magic Square

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