# **Introducing Magic Squares**

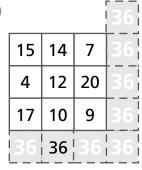
In a magic square, each row, column, and diagonal sums to the same number. Check to see whether these grids are magic squares.

			6
2	2	1	5
1	2	3	6
3	2	1	6
6	6	5	5

r - -,

			12
3	2	7	12
8	4	0	12
1	6	6	13
12	12	13	13

) Yes No B



Yes

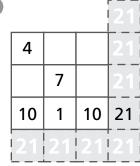
#### **Complete the magic squares.**

4

			18
8		3	18
	6		18
9	5	4	18
18	18	18	18

			12
7		3	12
	4		12
5		1	12
12	12	12	12

6





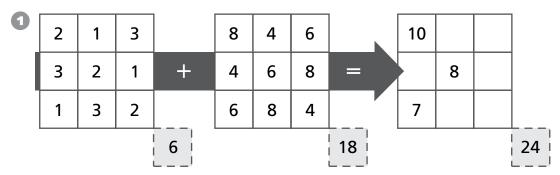
#### **Test Prep**

Cedric has a quarter to buy pencils. Pencils cost 4¢ each, or 3 for 10¢. If Cedric buys 7 pencils, how much change will he receive?

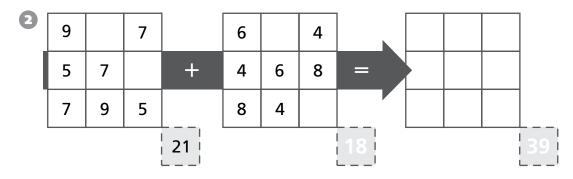
- **A**. 1¢
- **B.** 3¢
- **C**. 9¢
- **D.** 11¢

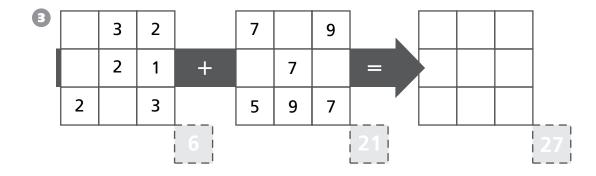
# **Adding Magic Squares**

Add the magic squares.



Complete the magic squares and then add them.







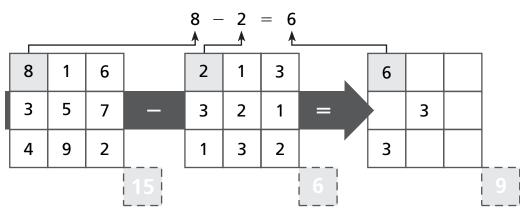
#### **Test Prep**

- **4** What is the value of  $8 + (6 \div 2)$ ? **A.** 7
- **C.** 11
- **B.** 10
- **D.** 16

# **Subtracting Magic Squares**

Subtract the magic squares.

1



2	13		8		8		6				
	4	9		_	3	5	7	=			
	10	12	5		4	9					
				27				15			12

B		5	11		5		2			
		9	9	_		4				
	7		7		6	3	3			
			•	27				12	•	15



### **Test Prep**

4 Which fact is in the same fact family as  $72 \div 9 = \blacksquare$ ?

**A.** 
$$9 \times \blacksquare = 72$$

## **Multiplying Magic Squares**

Multiply each magic square by the given number.

8	1	6		16	2	
3	5	7	× 2 =	6	10	
4	9	2				

5	0	7		
6	4	2	× 4	8
1	8	3		

4	9	2			
3	5	7	× 1 =		
8	1	6		8	

5	0	7			
6	4	2	$\times$ 6 =	•	
1	8	3			

8	1	6		18
3	5	7	×3=	
4	9	2		

6	7	2			
1	5	9	$\times 5 =$		
8	3	4			

#### **Test Prep**

 How many ways can you make 35¢ using only dimes, nickels, or quarters? Explain how you found your answer.



## **Dividing Magic Squares by Numbers**

Divide each magic square by the given number.

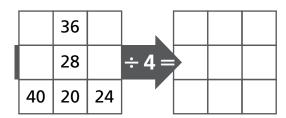
1

40	5	30			
15	25	35	÷ 5		
20	45	10			

54	63	18			
9	45	81	÷ 9		
72	27	36			

B

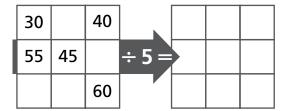
24	10	20		12	10
		22	÷ 2		11
16		12			



6

	30	27	
36		12	÷ 3
		33	

6





#### **Test Prep**

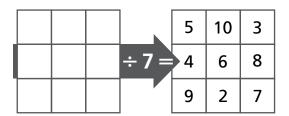
Sally bought 2 rulers for 15¢ each and 7 erasers for 3¢ each. How much did Sally spend? Explain.

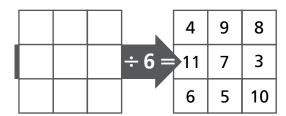
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### **Working Backward and Forward**

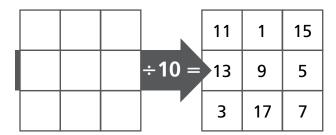
Work backward to complete the magic squares.

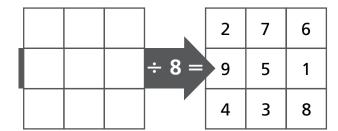
0

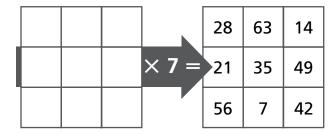


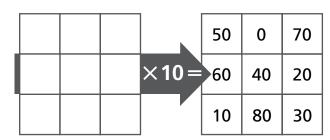


**B** 











#### **Test Prep**

2 Shaina needs to leave for school in 25 minutes. At what time does she need to leave? Explain how you found your answer.



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