Chapter 1

Lesson 1

Name _____ Date _____

Introducing Magic Squares

NCTM Standards 1, 6, 7, 8, 10

In a magic square, each row, column, and diagonal sums to the same number. Complete each magic square and complete the number sentence for one of the rows, columns, or diagonals.

1

		1	
2	1		
1		2	3
		3	

$1 + \square + 2 = 3$

2

			6
		3	
2		2	6
1		1	
6			

$1 + \square + 3 = 6$

3

2		3	6
	2		
1		2	

$2 + 2 + 2 = \square$

4

			12
1	8	3	12
6	4		
5		7	
12		12	

$6 + 4 + \square = \square$

Complete each magic square.

5

	5	2	
1	4		12
6	3		
		12	

6

			30
	10		
18		9	
	30		30

7

3	19		
	10	5	
	1		
			30

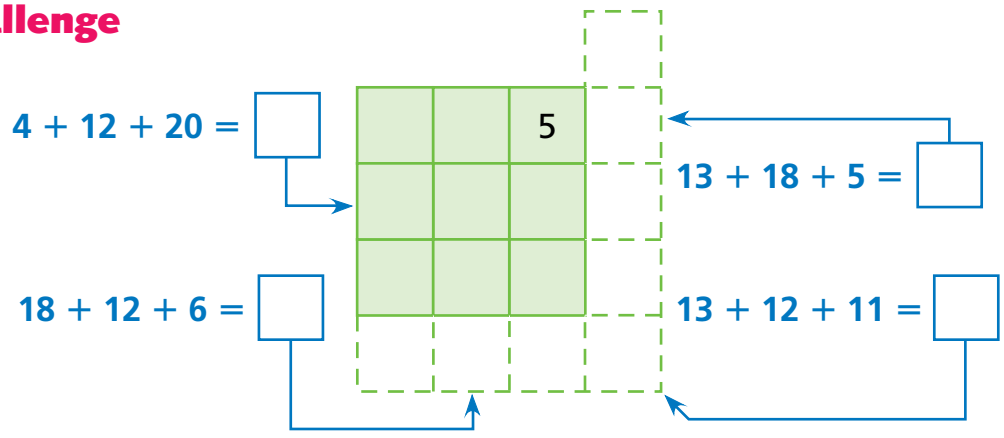
8

	25		
		21	42
23		16	

9 Katy and Sasha each have the same number of coins. Katy has 3 quarters, 2 dimes and 8 nickels. Sasha has 5 quarters and 1 dime. If the rest of her coins are nickels, how many nickels does Sasha have?

_____ nickels

10 Challenge



Chapter 1
Lesson 2

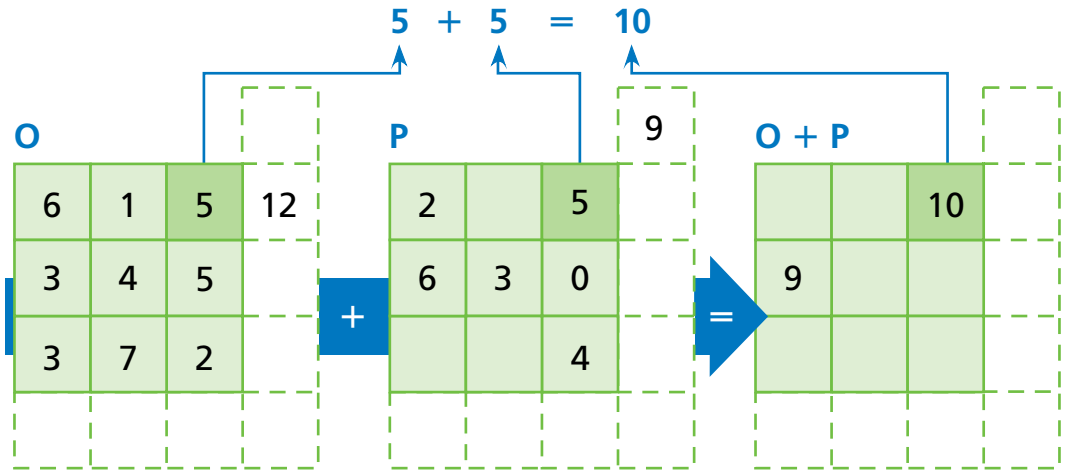
Name _____ Date _____

Adding Magic Squares

NCTM Standards 1, 2, 6, 7, 8, 10

Is the sum of two magic squares always a magic square? Complete the magic squares and then add them together.

1

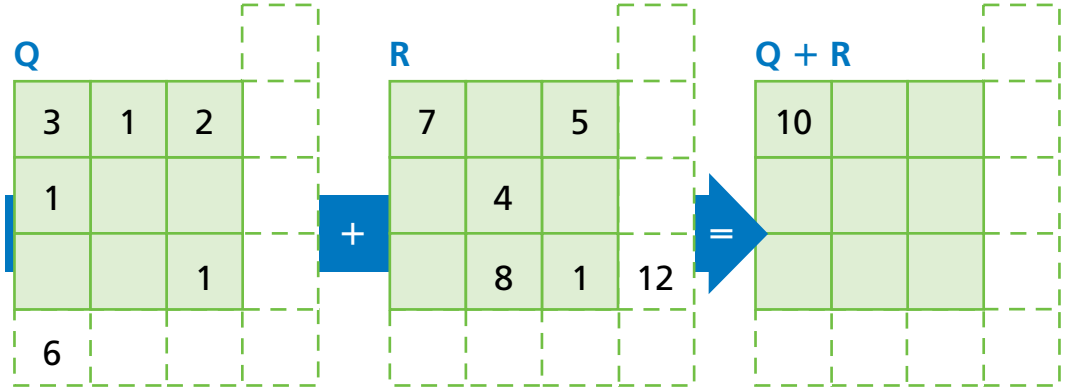


O + P is a magic square.

True ◯

False ◯

2

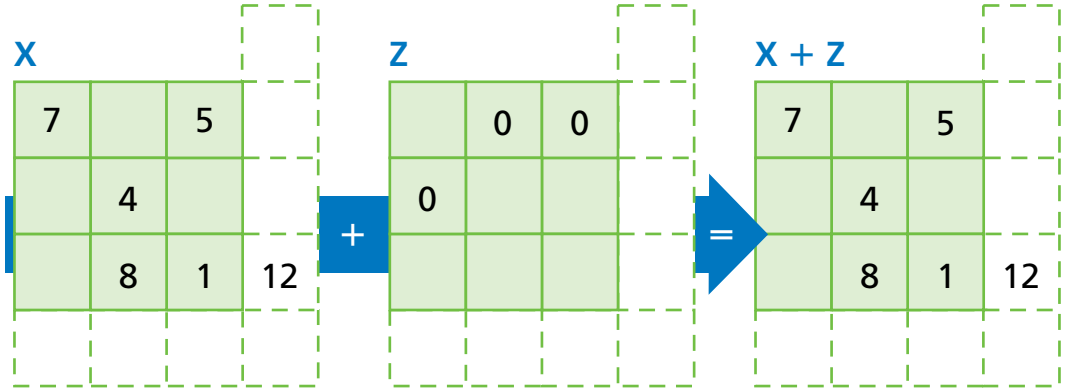


Q + R is a magic square.

True ◯

False ◯

3

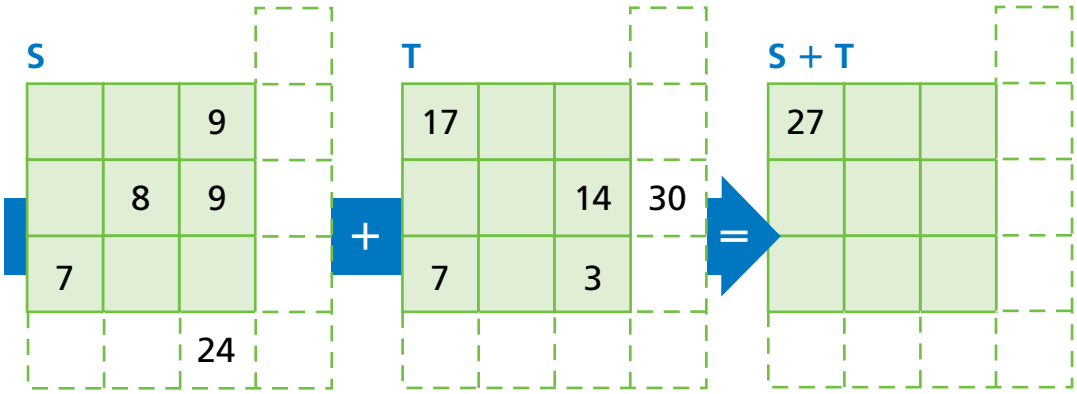


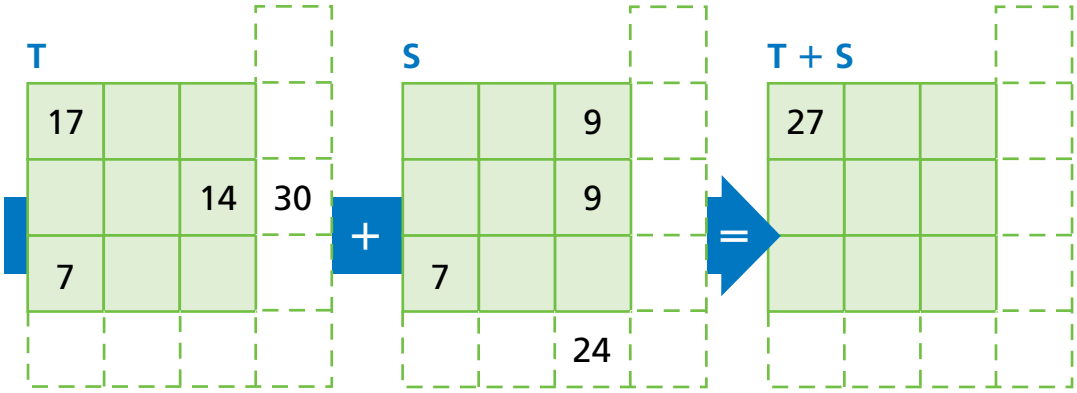
X + Z is a magic square.

True ◯

False ◯

4

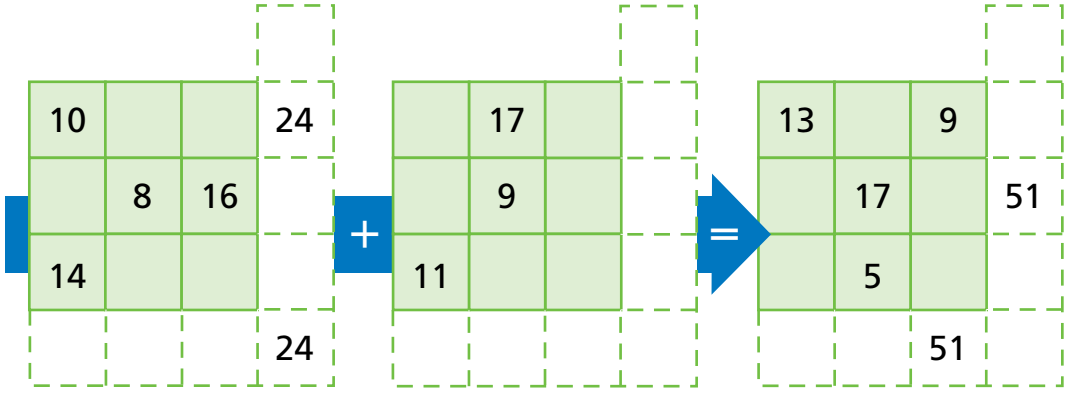




S + T = T + S

True ◯ False ◯

5 Challenge Complete these magic squares.



Chapter 1

Lesson 3

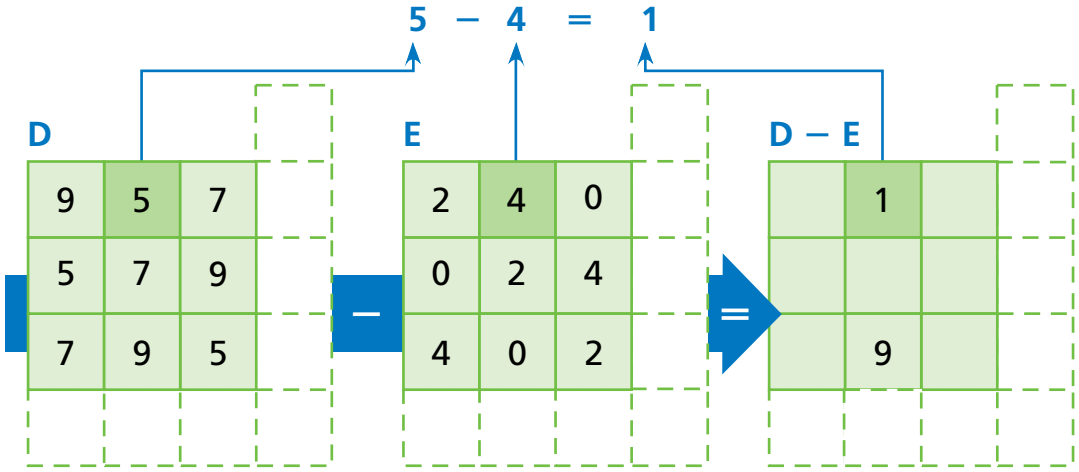
Name _____ Date _____

Subtracting Magic Squares

NCTM Standards 1, 2, 6, 7, 8, 10

Complete the magic squares. Find their difference.

1

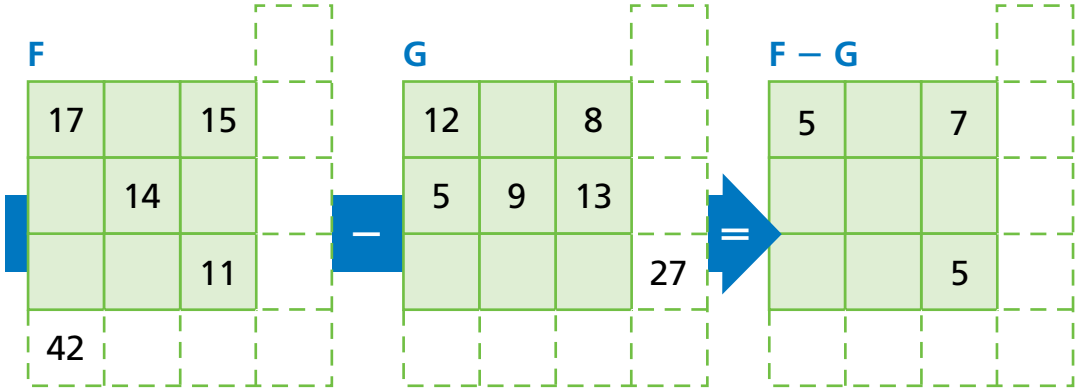


D – E is a magic square.

True ◯

False ◯

2

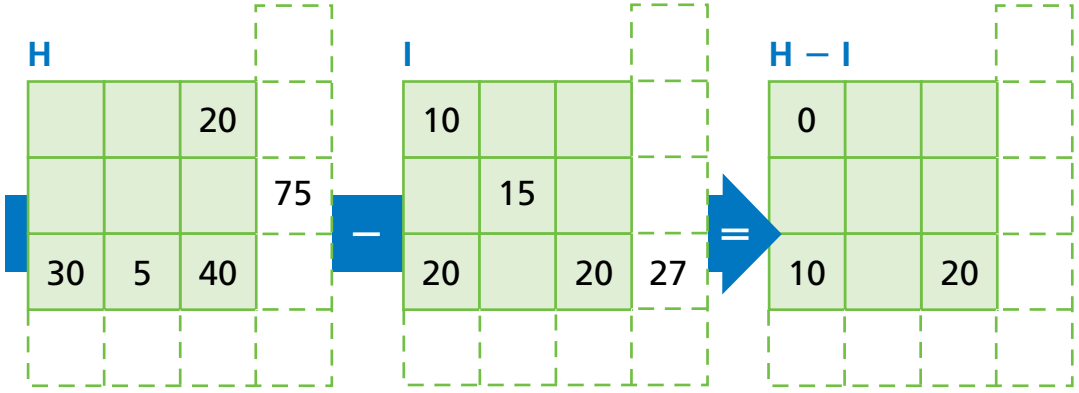


F – G is a magic square.

True ◯

False ◯

3

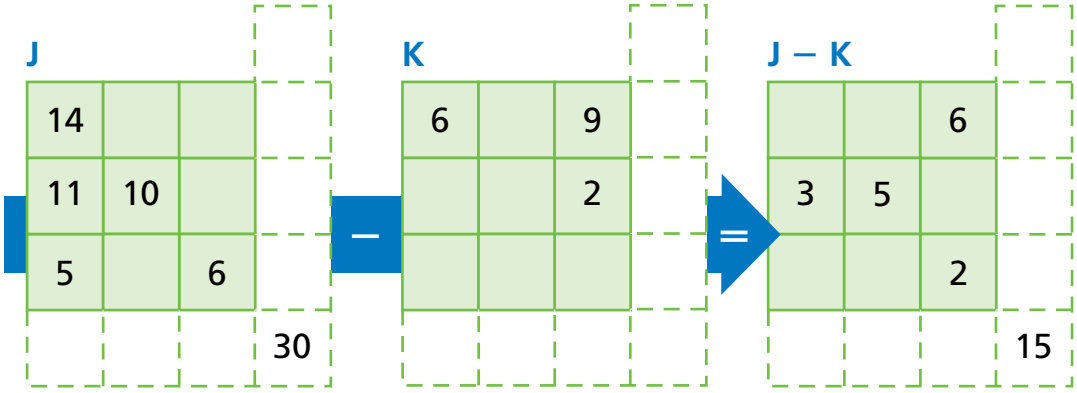


H – I is a magic square.

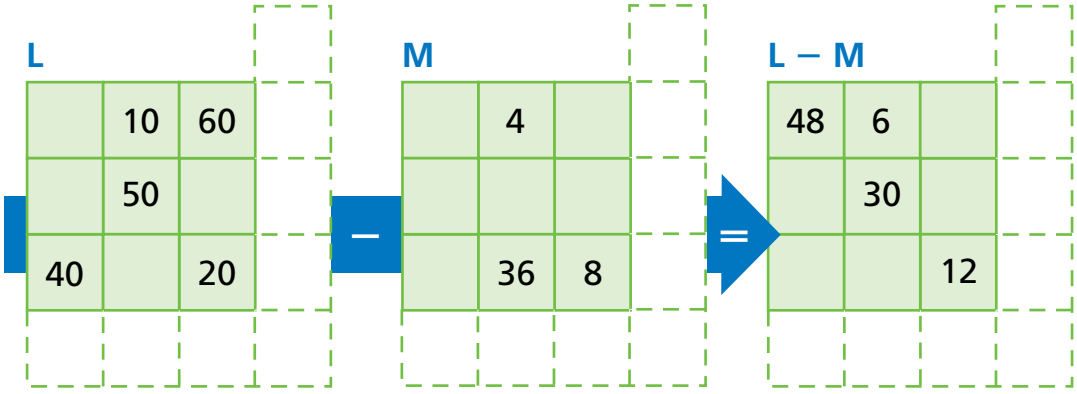
True ◯

False ◯

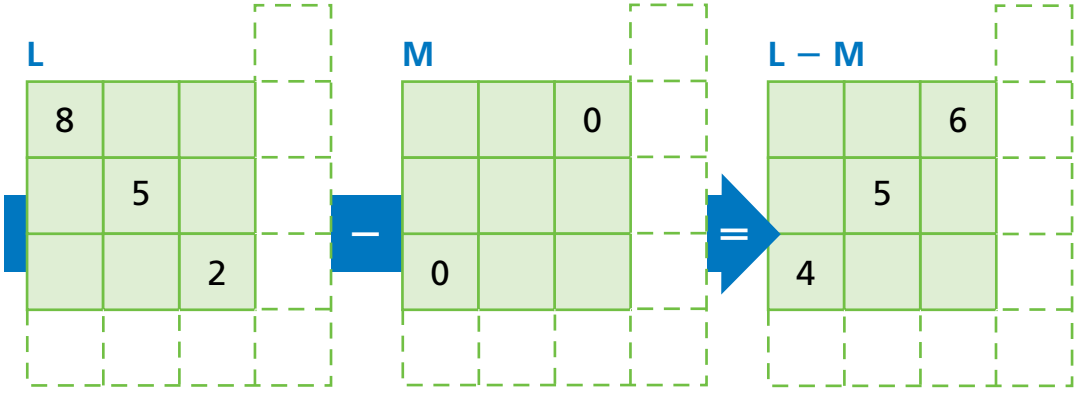
4



5



6



7 Challenge Jennifer paid for a stamp with a $1 bill. The stamp cost 53¢. How much change did she receive?

_____

If the cashier gave her the fewest possible coins in change, how many coins did she receive? What were they?

_____

Chapter 1
Lesson 4

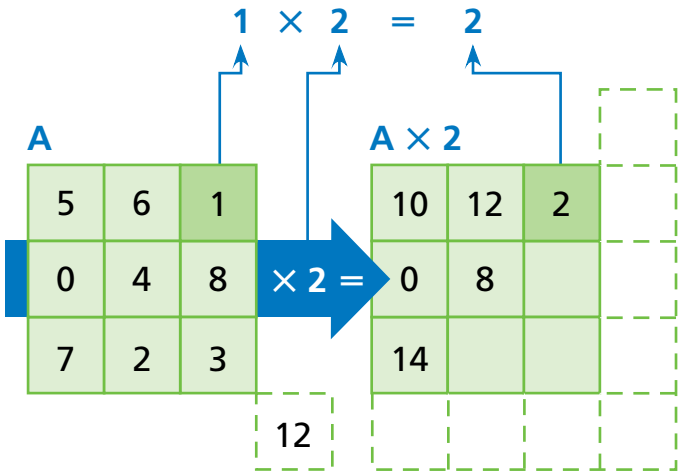
Name _____ Date _____

Multiplying Magic Squares

NCTM Standards 1, 2, 6, 7, 8, 10

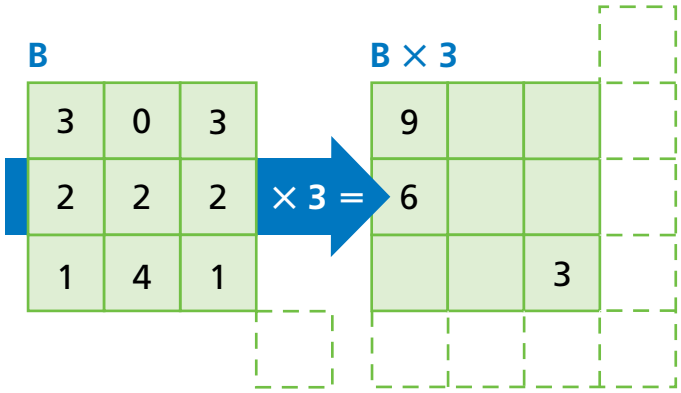
Multiply each magic square by the given number.

1



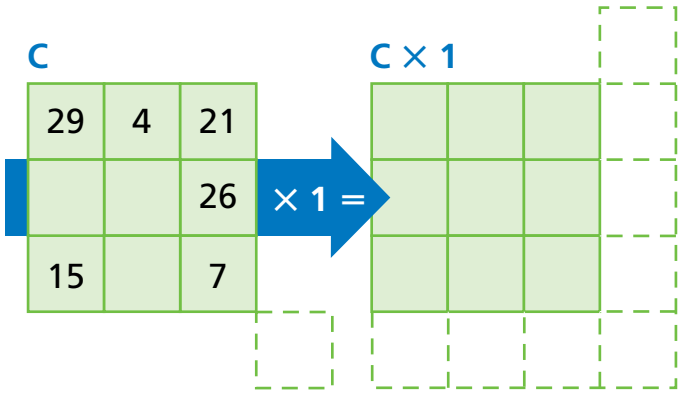
Row, column, or diagonal sum before multiplication	12
Numbers in A are multiplied by	2
Row, column, or diagonal sum after multiplication	24

2



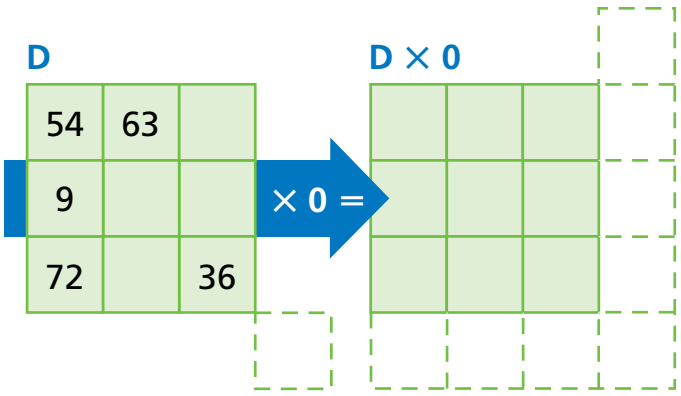
Row, column, or diagonal sum before multiplication	
Numbers in B are multiplied by	
Row, column, or diagonal sum after multiplication	

3

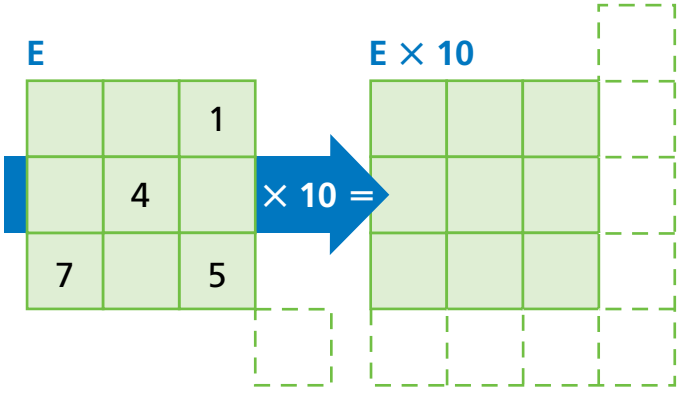


Row, column, or diagonal sum before multiplication	
Numbers in C are multiplied by	
Row, column, or diagonal sum after multiplication	

4



5



6

	A	B	C	D	E	
Row, column or diagonal sum before multiplication						■
Numbers are multiplied by						▲
Row, column, or diagonal sum after multiplication						★

7 Challenge Fill in the blanks with + , − , × , ÷ , or = .

■ ○ ▲ ○ ★ ★ ○ ■ ○ ▲

▲ ○ ■ ○ ★ ★ ○ ▲ ○ ■

Chapter 1

Lesson 5

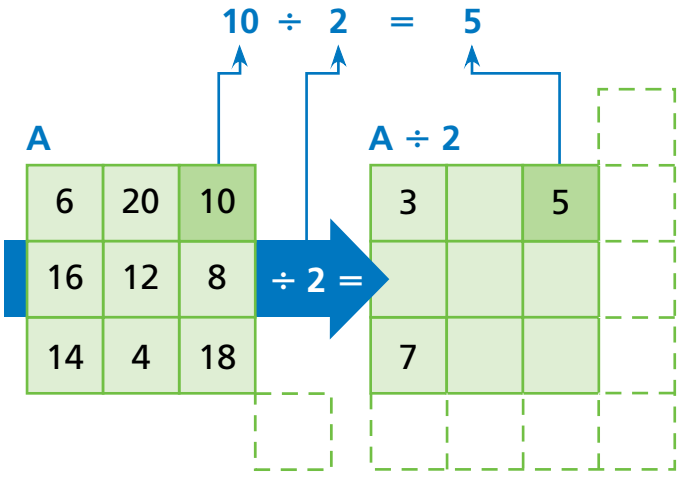
Name _____ Date _____

Dividing Magic Squares by Numbers

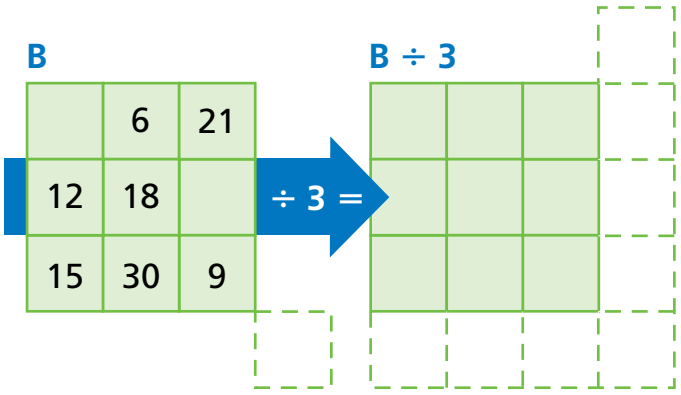
NCTM Standards 1, 6, 8, 9, 10

Divide each magic square by the given number.

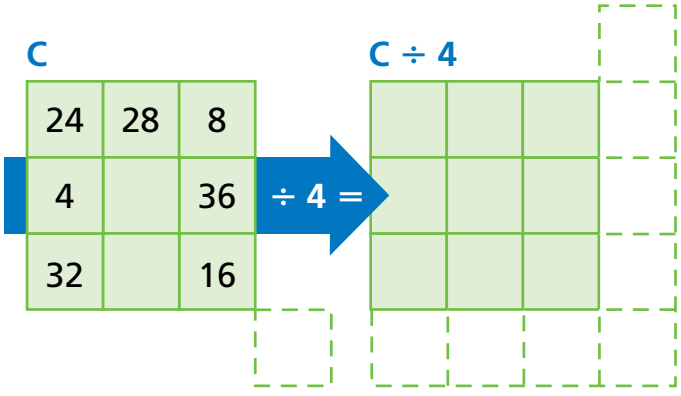
1



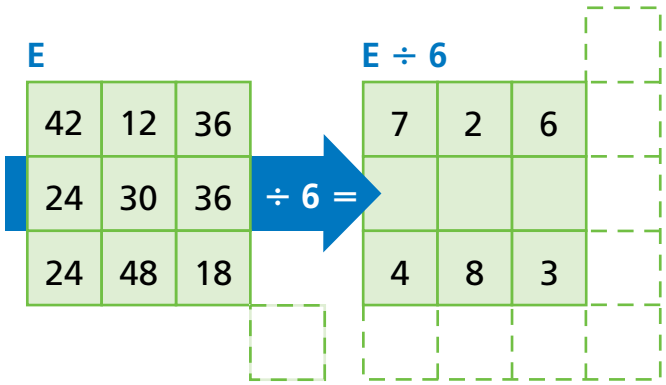
2



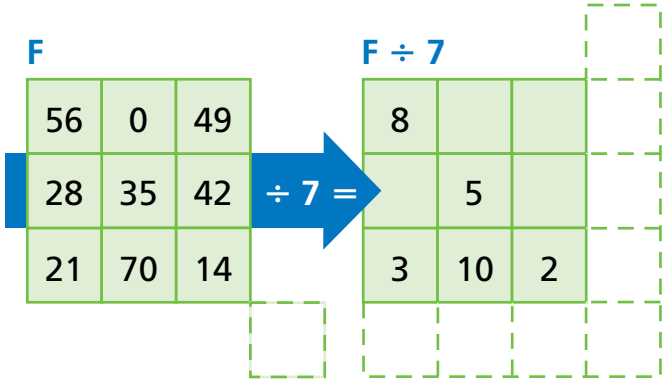
3



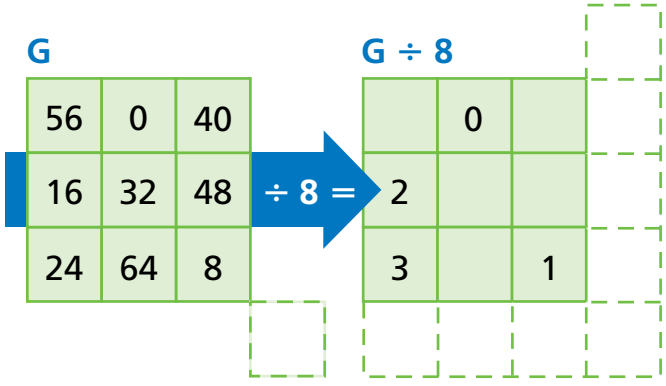
4



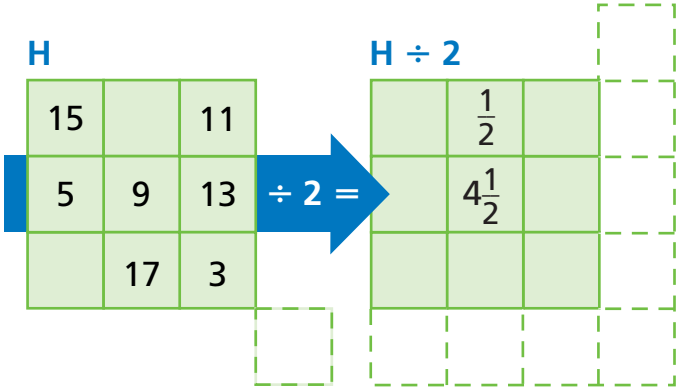
5



6



7 Challenge



Chapter 1

Lesson 6

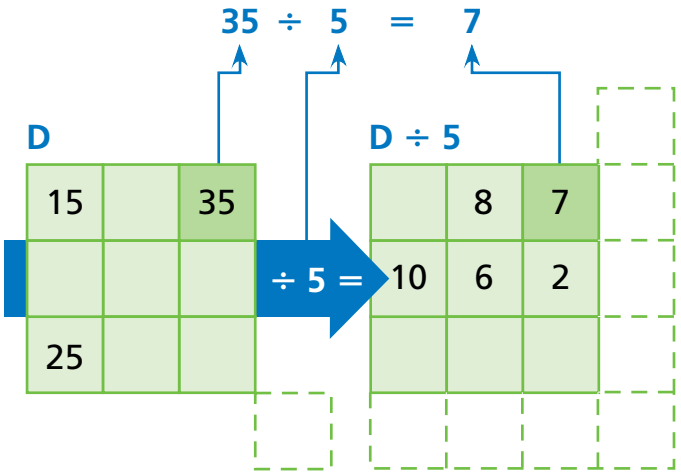
Name _____ Date _____

Working Backward and Forward

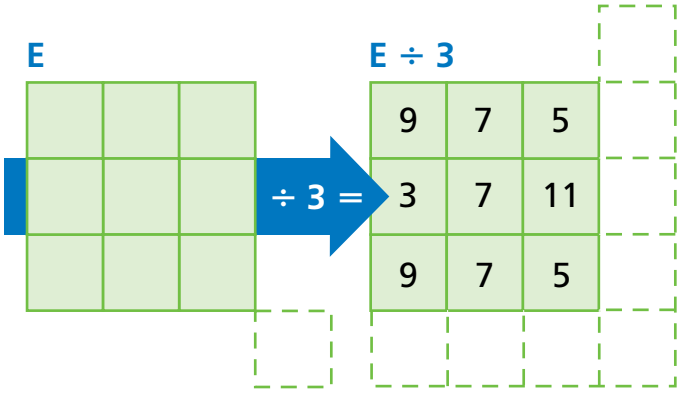
NCTM Standards 1, 6, 8, 9, 10

Complete the magic squares.

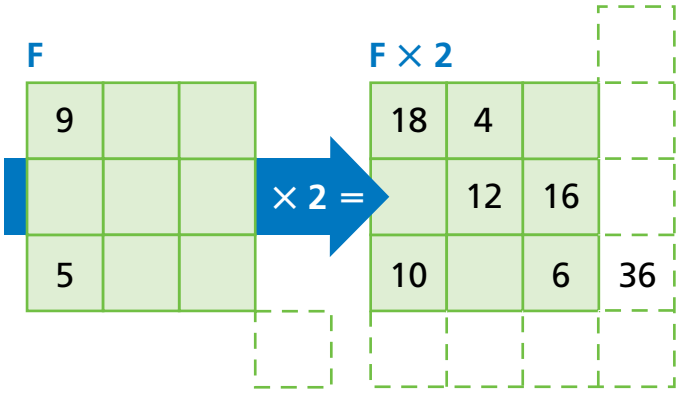
1



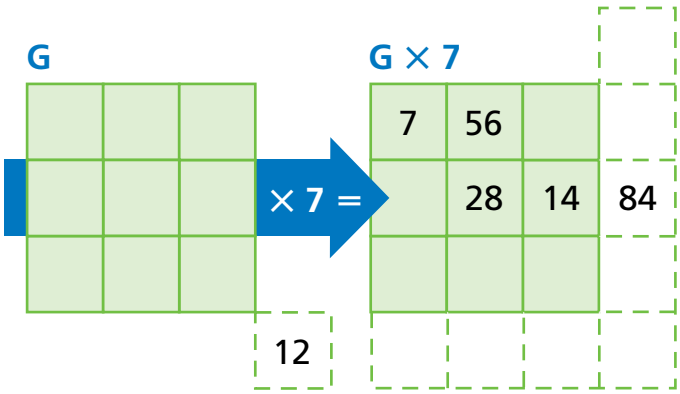
2



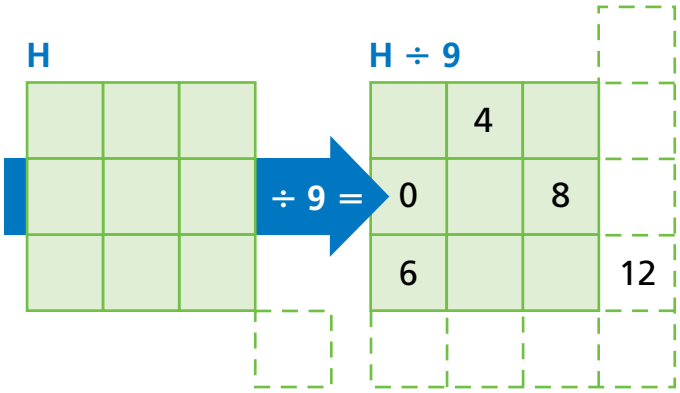
3



4



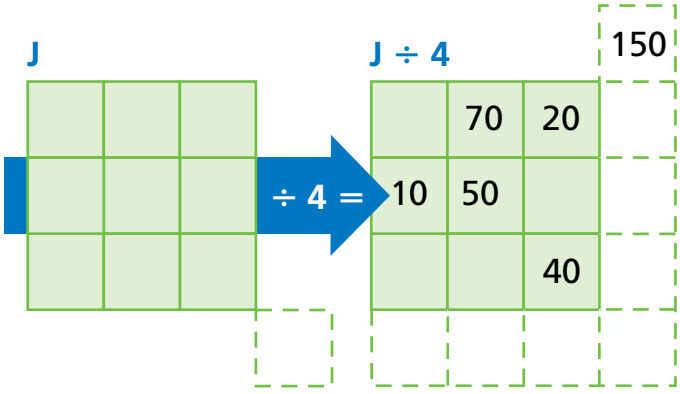
5



6 A class split up into 6 teams to work on science projects. Two of the teams had 6 students, the rest had 5 students. How many students were in the class?

_____ students

7 Challenge



Chapter 1

Lesson 7

Name _____ Date _____

Problem Solving Strategy

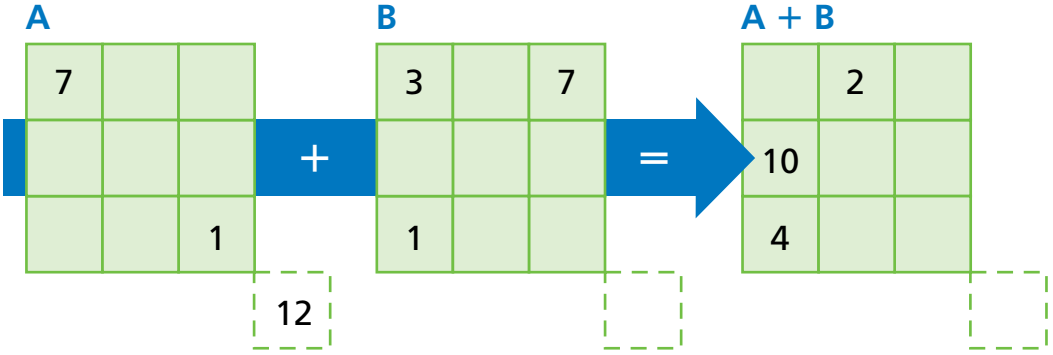
Work Backward

NCTM Standards 1, 2, 6, 7, 8, 10

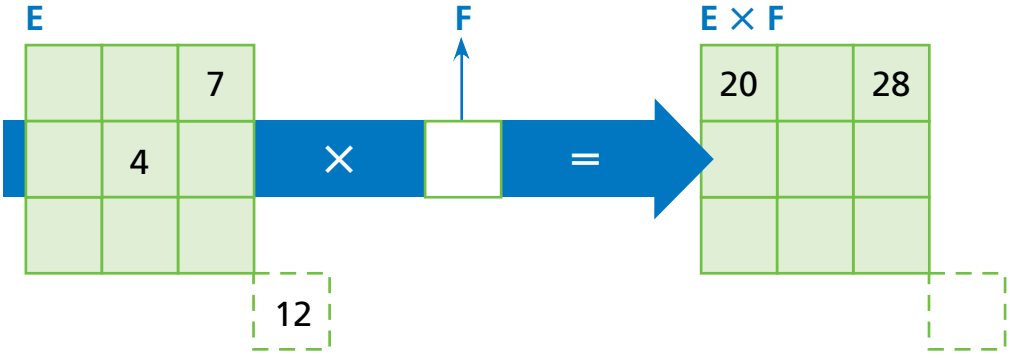
Understand
Plan
Solve
Check

Solve each problem.

1



2



3 Todd sold ornaments at a craft fair. The first customer bought 5 ornaments. The second customer bought half of what Todd had left. The third customer bought 8 ornaments. After that Todd had 2 ornaments left. How many ornaments did Todd start with?

_____ ornaments

Problem Solving Test Prep

Choose the correct answer.

1 Which set of input-output values follows the rule in the table?

INPUT	2, 7	3, 9	1, 0	5, 1
OUTPUT	14	27	0	5

A. Input: 4, 6; Output: 10

B. Input: 2, 8; Output: 10

C. Input: 5, 2; Output: 10

D. Input: 10, 2; Output: 10

2 The sum of the magic square is 15. What are the values of A, B, and C?

A	9	B
7	C	3
6	1	8

A. A = 5, B = 4, C = 2

B. A = 5, B = 2, C = 4

C. A = 4, B = 5, C = 2

D. A = 2, B = 4, C = 5

3 Which is the only figure that is **not** a parallelogram?

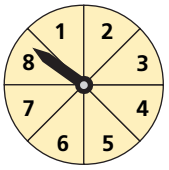
A. trapezoid

B. square

C. rhombus

D. rectangle

4 For one spin on this spinner, which statement is true?



A. An odd number is more likely than an even number.

B. A number greater than 5 is more likely than a number less than 4.

C. An even number is more likely than an odd number.

D. A number greater than 4 is more likely than a number less than 4.

Show What You Know

Solve each problem. Explain your answer.

5 Jason wants to buy a book for $19. He has a $10 bill and two $1 bills. His father lends him money to pay the rest. What is the least number of bills his father can give him to buy the book? Explain.

Chapter 1

Name _____ Date _____

Review/Assessment

NCTM Standards 1, 2, 6, 8, 9, 10

Complete the magic squares. Lesson 1

1

24		18	
		6	
			45

2

3		7	
1			
12			

Complete the magic squares. Then add them. Lessons 2 and 3

3

A

	4	6	
			12

+

B

	5		7
	1		3

=

A + B

			12
	8	8	
			24

4 There are 27 students in Mrs. Albia's class. Fifteen of the students are girls. Write a number sentence to show how many boys are in Mrs. Albia's class. Lessons 2 and 3

_____

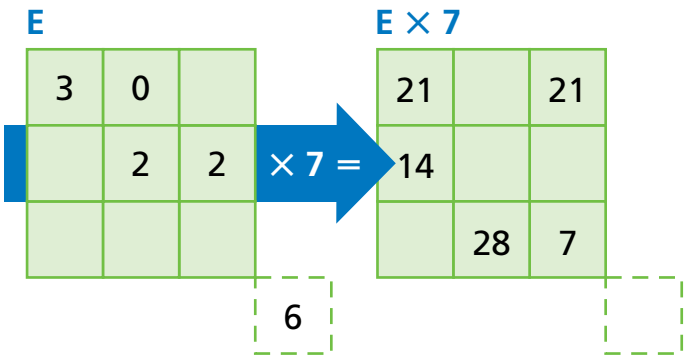
5 Solve. Lessons 4 and 5

(14 2) 2 _____

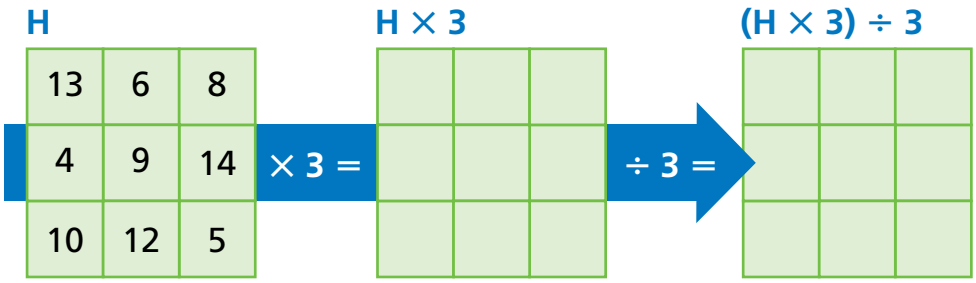
(36 2) 2 _____

Multiply and divide. Lessons 4 and 5

6

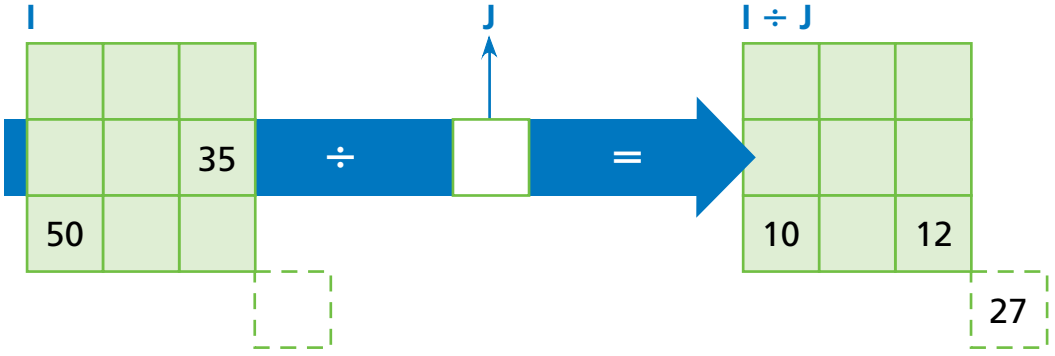


7



Complete the magic square. Lessons 5 and 6

8



9 Phillip went to the music store and bought a CD for $14 and a DVD for $9. He had $6 in his wallet when he got home. How much money did he have before he went to the music store? Lesson 7

10 Maria had 36 stamps in her collection. Each week she added 6 more stamps. How many weeks passed until Maria had 72 stamps? Explain. Lesson 7