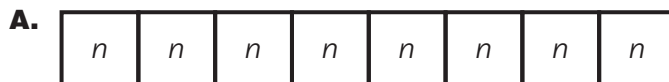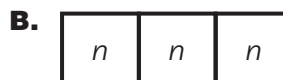Name _____

Multiplication Match-Up

Match each word problem to a model. Write the equation and solve.
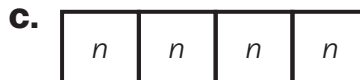
**1.** Angie has 36 coins. This is 4 times as many coins as Scott has. How many coins does Scott have?

A.

n	n	n	n	n	n	n	n

n

_____

2. Cindy bought 20 stamps. This is 5 times the number of postcards that Yoshi bought. How many postcards did Yoshi buy?

B.

n	n	n

n

_____

3. Jessica has 48 stickers. This is 8 times as many stickers as Taylor has. How many stickers does Taylor have?

C.

n	n	n	n

n

_____

4. Joshua picked 24 apples. This is 3 times the number of apples that Carly picked. How many apples did Carly pick?

D.

n	n	n	n	n

n

_____
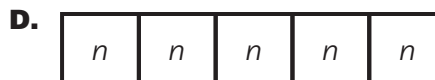
5. Stretch Your Thinking Write four comparison sentences for the product 12.
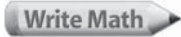
_____

_____

Mixed Models

Solve each problem.

1. Together, Tom and Max have 72 football cards. Tom has 2 more than 4 times as many cards as Max has. How many football cards does Tom have?

_____

2. Naomi has 50 red beads and white beads. The number of red beads is 1 more than 6 times the number of white beads. How many red beads does Naomi have?

_____

3. Javier rode his bike for a total of 41 minutes. Before lunch, he rode for 1 minute less than 5 times the number of minutes he rode after lunch. How many minutes did Javier ride before lunch?

_____

4. Marnie practiced her basketball dribbling. After two tries, she had bounced the ball 88 times. On the second try, she had 2 fewer bounces than 8 times the number of bounces she had on the first try. How many bounces did she have on the second try?

_____

5. **Write Math** How can a multiplication model help you solve Problem 1?

_____

_____

_____

_____

Name _____

Multiplication Inequalities

Write <, >, or = for each $\bigcirc$.

1. $7 \times 60 \bigcirc 400$

2. $700 \bigcirc 90 \times 8$

3. $3 \times 800 \bigcirc 2,500$

4. $2,000 \bigcirc 400 \times 5$

5. $8 \times 6,000 \bigcirc 40,000$

6. $3 \times 9,000 \bigcirc 39,000$

7. $6 \times 900 \bigcirc 700 \times 8$

8. $8 \times 3,000 \bigcirc 6,000 \times 4$

9. $9 \times 4,000 \bigcirc 6,000 \times 6$

10. $800 \times 9 \bigcirc 3,000 \times 3$

11. Write Math ➤ **Explain** how you found the answer in Exercise 10.

_____

_____

_____

Find the Unknown Factors

**Choose two factors from the box to make the estimated product.
You may use the factors more than once.**

3	5	624
9	126	957

1. 1,800 _____ × _____   2. 500 _____ × _____

3. 5,000 _____ × _____   4. 900 _____ × _____

8	7	435
6	899	273

5. 1,800 _____ × _____   6. 6,300 _____ × _____

7. 3,200 _____ × _____   8. 2,100 _____ × _____

5	6,149	3,044
2	3	8,756

9. 30,000 _____ × _____   10. 6,000 _____ × _____

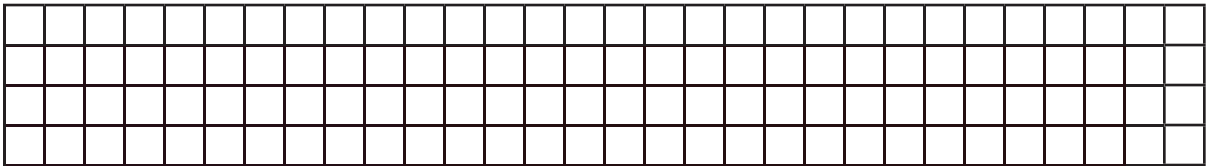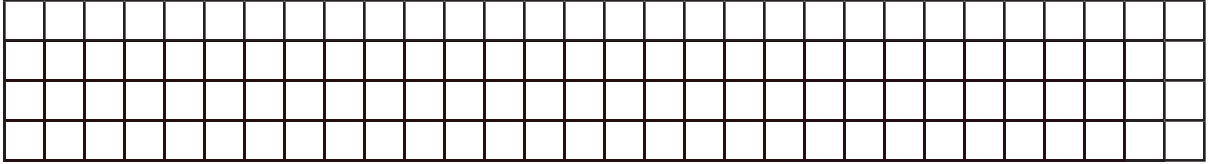11. 9,000 _____ × _____   12. 45,000 _____ × _____

13. **Stretch Your Thinking** Two factors have an estimated product
of 10,000. One of these factors is a single digit. What two factors could
they be? **Explain** your thinking.

_____

_____
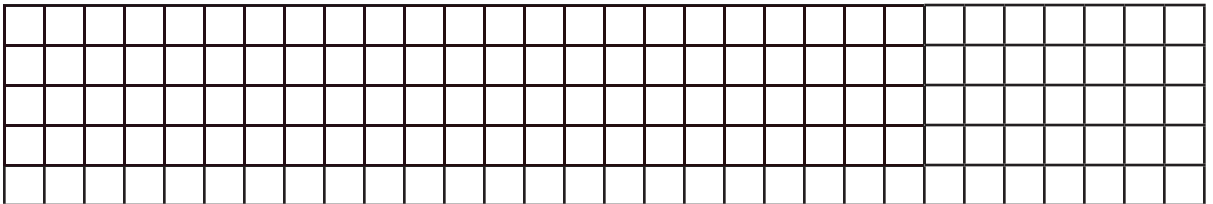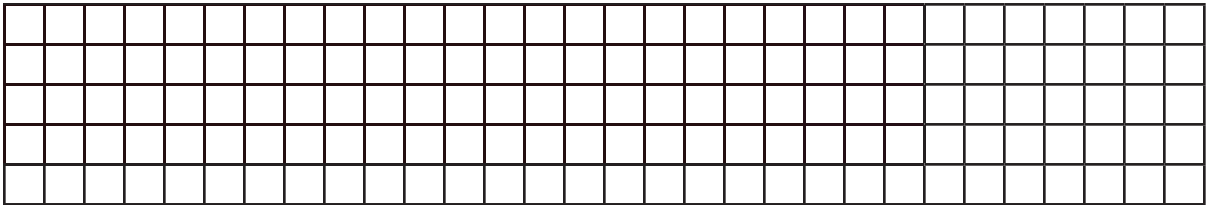
_____

Shading the Grids

Use the Distributive Property. Shade and label each grid.

1. Show 3 × 28 in two different ways.

2. Show 4 × 23 in two different ways.

3. **Stretch Your Thinking** Find the partial products for one of your grids in Exercise 1. Then use the Distributive Property to find the product 3 × 28.

_____

_____

Expanded Form Match-Up

Write the multiplication expression for each expanded form.
Then match the multiplication expression with its product.

1. $(7 \times 900) + (7 \times 80) + (7 \times 7)$

_____

A. 15,144

B. 7,065

2. $(3 \times 5,000) + (3 \times 40) + (3 \times 8)$

C. 15,720

_____

D. 6,909

3. $(8 \times 900) + (8 \times 2)$

E. 16,224

_____

4. $(4 \times 3,000) + (4 \times 900) + (4 \times 60) + (4 \times 2)$

F. 15,848

G. 7,360

_____

5. $(2 \times 7,000) + (2 \times 800) + (2 \times 6)$

H. 7,216

_____

I. 15,612

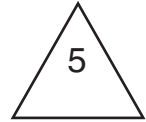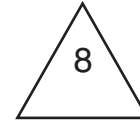**6.** $(9 \times 700) + (9 \times 80) + (9 \times 5)$

J. 14,172
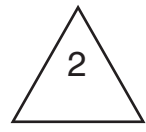
_____

Name _____

Shaping Factors

Choose one number from a circle and another number from a triangle. Then use these two numbers to write a number sentence that is true. You can use numbers more than once.

1. Find the least product.

_____

2. Find the greatest product.

_____

3. Find the product closest to 1,050.

_____

4. Find a product with an 8 in the ones place.

_____
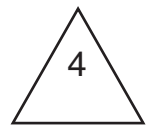
5. Find the greatest product ending in 25.

_____

6. Find a product between 1,500 and 1,700.

_____

7. Find a product that contains only the digits 2 and 9.

_____

8. Find the product with three zeros.

_____

9. Find the product closest to 500.

_____

10. Find the product closest to 2,000.

_____

8　　5

$421　　2

$583　　4

149　　125

9　　120

$374　　7

Multiply by 11 Mentally

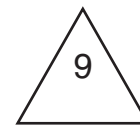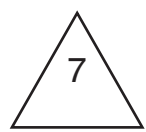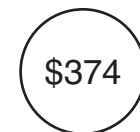**To find the product of a two-digit number and 11, add the digits in the two-digit number and write the sum between the two digits. If the sum is greater than 9, write the *last* digit of the sum between the two digits. Then add 1 to the *first* digit.**

Example 1: Multiply 25 × 11.	**Example 2:** Multiply 59 × 11.
Add the digits in 25: 2 + 5 = 7 Place the sum, 7, between 2 and 5. So, 25 × 11 = 275.	Add the digits in 59: 5 + 9 = 14 Place the last digit, 4, between 5 and 9. Add 1 to the first digit: 5 + 1 = 6 So, 59 × 11 = 649.

Find the product.

1. 17 × 11

2. 32 × 11

3. 45 × 11

_____

_____

_____

4. 39 × 11

5. 67 × 11

6. 89 × 11

_____

_____

_____

7. Stretch Your Thinking Find a way to multiply 354 × 11 mentally. Describe your method and show that it works.

_____

_____

_____

_____

_____

_____

2-Digit Roses

Draw a diagram to solve the problem.

A rose garden has 8 rows of 26 rose bushes each. In each of the first 5 rows, 7 bushes have pink roses. In each of the first 3 rows, 12 bushes have yellow roses. The rest of the bushes have red roses. How many bushes have red roses?

Read the Problem	Solve the Problem
What do I need to find? I need to find the number of bushes with _____ roses.	**Draw a diagram and do your work here.**
What information do I need to use? In the entire garden, there are _____ rows with _____ bushes in each row. There are _____ rows with _____ pink bushes in each row. There are _____ rows with _____ yellow bushes in each row.	I found the total number of rose bushes. _____ I found the number of pink rose bushes. _____ I found the number of yellow rose bushes. _____
How will I use the information? I can _____ to find the total number of bushes, the number of pink rose bushes, and the number of yellow rose bushes.	

1. What else do you need to do to solve the problem?

_____

_____

_____

2. Stretch Your Thinking Give at least two reasons why drawing a diagram is helpful when solving a problem.

_____

_____

Regrouping Review

Each multiplication problem below was solved using partial products. Some errors were made. Multiply using regrouping to check each answer. Describe any errors that you find.

1. Partial product	Regrouping	**2.** Partial product	Regrouping
72 × 8 —— 26 + 560 —— 586	72 × 8 ——	65 × 9 —— 54 + 540 —— 594	65 × 9 ——
Did you find any errors? If so, describe. _____ _____ _____		Did you find any errors? If so, describe. _____ _____ _____	
3. Partial product	Regrouping	**4.** Partial product	Regrouping
36 × 5 —— 11 + 150 —— 161	36 × 5 ——	47 × 4 —— 28 + 16 —— 44	47 × 4 ——
Did you find any errors? If so, describe. _____ _____ _____		Did you find any errors? If so, describe. _____ _____ _____	

5. Stretch Your Thinking Compare the factors and the product in Exercise 4. What information does this give you?

_____

6. Write Math ▶ **Explain** how you can use partial products to check products you found with regrouping.

_____

Name _____

Multiplication Mystery

There's something mysterious in the water off the coast of Florida.
To discover what it is, find the products and use the decoder below.
The first letter has been done for you.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z

1. Letter 1: $2 \times 6{,}532$

Answer: <u>13,064</u>

Code: Use the ten thousands digit and the thousands digit.
<u>13</u> Letter: <u>M</u>

2. Letter 2: 5×245

Answer: _____

Code: Use the thousands digit.

___ Letter: ___

3. Letter 3: $3 \times 4{,}893$

Answer: _____

Code: Use the ten thousands digit and the thousands digit.
___ Letter: ___

4. Letter 4: 7×198

Answer: _____

Code: Use the thousands digit.

___ Letter: ___

5. Letter 5: $6 \times 3{,}411$

Answer: _____

Code: Use the ten thousands digit and the thousands digit.
___ Letter: ___

6. Letter 6: 4×129

Answer: _____

Code: Use the hundreds digit.

___ Letter: ___

7. Letter 7: 8×730

Answer: _____

Code: Use the thousands digit.

___ Letter: ___

IT'S A <u>M</u> __ __ __ __ __ __ !

8. The product of 5 and another number has the code for E in its ones place. What digit could be in the ones place of the other number? **Explain**.

_____

_____

9. [Write Math] Is the product of a 4-digit number and a 1-digit number always a 5-digit number? **Explain**.

_____

_____

Same Answer Multistep

**Find the value of *n* for each exercise. Then identify the exercises
that have the same answer.**

1. $6 \times 36 + 3 \times 37 + 57 = n$

_____ $= n$

2. $8 \times 47 + 2 \times 29 - 80 = n$

_____ $= n$

3. $7 \times 45 + 4 \times 19 - 17 = n$

_____ $= n$

4. $7 \times 56 + 2 \times 12 - 52 = n$

_____ $= n$

5. $5 \times 52 + 6 \times 12 + 42 = n$

_____ $= n$

6. $9 \times 32 + 4 \times 28 - 16 = n$

_____ $= n$

7. $4 \times 46 + 3 \times 61 + 17 = n$

_____ $= n$

8. $9 \times 39 + 2 \times 19 - 15 = n$

_____ $= n$

9. $2 \times 98 + 8 \times 16 + 30 = n$

_____ $= n$

10. $3 \times 75 + 4 \times 23 + 47 = n$

_____ $= n$

11. Which exercise(s) have the same answer as Exercise 1? _____

12. Which exercise(s) have the same answer as Exercise 2? _____

13. Which exercise(s) have the same answer as Exercise 3? _____

14. **Stretch Your Thinking** What statement can you make about
the equations in Exercise 4 and Exercise 10? **Explain**.

_____

_____