Write the situation: equal groups, array, area, or combination. Then write an equation and solve the problem.

1. A chessboard has 8 rows of squares. There are 64 squares total. How many columns are on a chessboard?

Situation: \_\_\_\_\_

Equation: \_\_\_\_\_

2. A sandbox is 9 feet long and 6 feet wide. How many square feet of ground does the sandbox cover?

Situation:

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3. The Ferris wheel in Paradise Park has 10 seats. Each seat can hold 3 people. How many people can ride the Ferris wheel at the same time?

Situation: \_\_\_\_\_\_

Equation:

4. Dan makes invitations out of red. white, and blue paper. Each has a star or a flag pattern. How many kinds of invitations can he make?

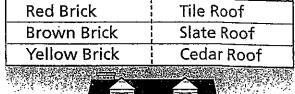
Situation:

Equation:

5. Mr. Caruso is a builder who always builds the same kind of house. Only the materials are different. How many different houses can Mr. Caruso build?

Situation: \_\_\_\_\_

Equation:





Find the unknown number in each equation.

**6.** 
$$a = 6 \times 7$$

7. 
$$b = 81 \div 9$$

8. 
$$5 \cdot 8 = c$$
 9.  $7e = 21$ 

**9.** 
$$7e = 21$$

**10.** 
$$10f = 50$$

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 **11.**  $42 \div 6 = g$  **12.**  $72 = 9k$  **13.**  $54 = 9p$ 

12. 
$$72 = 9k$$

13. 
$$54 = 9p$$

Solve for the unknown.

1. 
$$5 \cdot 6 = a$$

**2.** 
$$b = 64 \div 8$$

3. 
$$c = 7 \times 8$$

3. 
$$c = 7 \times 8$$
 4.  $40 \div 5 = d$ 

5. 
$$7e = 49$$

9.45 = 5k

6. 
$$50 \cdot f = 100$$

k = \_\_\_\_

a = \_\_\_\_\_

10. 6l = 36

7. 
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$$4h = 28$$

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Identify the kind of situation and write an equation. Then solve the problem.

13. Isabel earned 42 dollars mowing lawns last month. Her sister earned only  $\frac{1}{6}$  as much. How much money did Isabel's sister earn?

Situation:

Equation: \_\_\_\_\_

14. Daniel packed black, tan, and blue shorts in his suitcase. He also packed 6 different T-shirts. How many different outfits will Daniel have?

Situation: \_\_\_\_\_

Equation: \_\_\_\_\_

15. A large muffin tray holds 5 muffins across and 7 muffins down. How many muffins can the tray hold?

Situation:

Equation: \_\_\_\_\_\_

16. The Richardson family has a tent that covers 54 square feet of ground. It is 9 feet long. How wide is the tent?

Situation:

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17. Farmer O'Malley bought new horseshoes for all of his horses today. He bought 36 horseshoes. How many horses does Farmer O'Malley have?

Situation: \_\_\_\_\_

Equation:

18. Mrs. Pinckett planted 8 rose bushes in her garden. She planted 3 times as many azalea bushes. How many azalea bushes did she plant?

Situation: \_\_\_\_\_

Equation: \_\_\_\_\_

For each table, write the rule and complete the table. Then write an equation.

1. Rule:

Input	Output
0	
.4	2
8	
12	6 .
16	

2.

Rule:	
Input	Output
6	1
9	1
11	
14	9
8	

Equation: \_\_

Equation: \_

For each table, write a rule using words and an equation with two variables. Then complete the table.

Rule in Words					
Equation					<u> </u>
Hours (h)	1		3		5
Distance in miles (d)	4	8	<u></u>	16	20

Rule in Words					
Equation				<u></u>	<u> </u>
Number of insects (i)	<del></del>	2	3	4	. 5
Number of legs (/)	6	12	18		<u> </u>

5.

Rule in Words					<u> </u>	· · · · · · · · · · · · · · · · · · ·	
Equation	·		<del></del> .	<u> </u>			<u> </u>
Number of trees (t)	1	2	3	5 .	8		10
Number of shrubs (s)	4	8			32	36	

6.

<del></del> -					
			<u></u>		
					<del></del>
5	10	14	17		27
3	8			17	25
	5 3	5 10 3 8	5 10 14 3 8	5 10 14 17 3 8	5     10     14     17       3     8     17

Solve each problem.

Show your work.

- 1. Michael has 21 T-shirts. One third of them are blue. How many of Michael's T-shirts are blue?
- 2. A gift-wrapping department has 4 colors of ribbon, 2 kinds of bows, and 7 kinds of wrapping paper. How many different gift-wrap styles are possible?
- 3. Anne-Marie has saved 9 dollars for a new coat. That is  $\frac{1}{6}$  as much money as she needs. How much does the coat cost?
- 4. Last year it rained on 63 days in Mudville. There were 7 times as many days of rain in Mudville as in Desert Hills. How many days did it rain in Desert Hills last year?
- 5. Mrs. Ricardo makes toy cars to sell at craft fairs. She has 8 colors of paint, 5 body styles, and 2 kinds of wheels. How many different kinds of cars can she make?
- 6. At a country-music concert, 48 people played guitars. That number is 6 times as many as the number of people who played banjos. How many people at the concert played banjos?
- 7. There are 8 apples left on the table. There are  $\frac{1}{4}$  as many apples as bananas left on the table. How many bananas are there?

Solve.

Show your work.

- 1. A fruit company makes two gift boxes of oranges—the Ruby Box and the Emerald Box. The Ruby Box has 8 rows and 6 columns of oranges. The Emerald Box has 7 rows and 7 columns of oranges. Which box has more oranges? How many more?
- 2. On his camping trip, Gus saw 18 hawks. He saw 6 times as many hawks as owls. How many owls did Gus see?
- 3. Melissa collected three kinds of autumn leaves when she was out walking today—elm, maple, and oak. She has 2 times as many maple leaves as elm leaves and 5 times as many oak leaves as elm leaves. Altogether, she has 32 leaves. How many of each kind does she have?
- 4. Everyone at Luke's party has 2 balloons except Ashley, because one of her balloons popped. There are 17 balloons at the party. How many people are at the party?
- 5. Patty bought 5 harmonicas for 3 dollars each and 4 whistles for 3 dollars each. How much money did Patty spend?

Find the unknown number in each equation. Write a 1 in front of an unknown that is alone if it will help you.

6. 
$$c + 3c = 32$$

7. 
$$6d - 3d + 2d = 35$$

#### 1. Connections

Jill has four of her five game scores:

8, 6, 6, 3

Her average score for the five games is 6 points. What is the fifth game score? Write an equation to help solve the problem.

2. Representa	atior
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Tyler is looking at a map. He wants to stop at three towns, Town A, Town B, and Town C. Town A is 15 miles from Town B. Town A is 26 miles from Town C. How many miles are between Towns B and C? Draw a picture to support your answer.

#### 3. Communication

The students are selling tickets to the School Fair. All tickets cost the same amount. Carly sold 3 tickets for a total of \$9. Karen sold 6 tickets for a total of \$18. Brendan sold 4 tickets for a total of \$12. Use a function table to find the price per ticket and the total cost of 9 tickets. Show the rule and the equation you used to find the costs.

#### 4. Reasoning and Proof

Lilly wrote the equation below to demonstrate the Commutative Property. .

$$(2+3)+(3+4)=(3+4)+(2+3)$$

Does her equation demonstrate the Commutative Property? Explain why or why not.

Write the situation: equal groups, array, area, or combination. Then write an equation and solve the problem.

1. A chessboard has 8 rows of squares. There are 64 squares total. How many columns are on a chessboard?

Situation:

Equation: \_\_\_\_\_

3. The Ferris wheel in Paradise Park has 10 seats. Each seat can hold 3 people.

Situation: \_\_\_\_\_

wheel at the same time?

How many people can ride the Ferris

Equation: \_\_\_\_\_

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Situation: \_\_\_\_\_

Equation: \_\_\_\_\_

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Situation:

Equation: \_\_\_\_\_

4. Dan makes invitations out of red. white, and blue paper. Each has a star or a flag pattern. How many kinds of invitations can he make?

Situation:

Equation: \_\_\_\_\_

Red Brick	Tile Roof
Brown Brick	Slate Roof
Yellow Brick	Cedar Roof



Find the unknown number in each equation.

**6.** 
$$a = 6 \times 7$$

**7.** 
$$b = 81 \div 9$$

8. 
$$5 \cdot 8 = c$$
 9.  $7e = 21$ 

$$9.7e = 21$$

10. 
$$10f = 50$$

**10.** 
$$10f = 50$$
 **11.**  $42 \div 6 = g$  **12.**  $72 = 9k$  **13.**  $54 = 9p$ 

12. 
$$72 = 9k$$

13. 
$$54 = 90$$

$$f = \underline{\hspace{1cm}}$$

The graph below shows the number of planes arriving in River City today.



Key: → = 1 Plane

- 1. There were \_\_\_\_\_ times as many planes in the morning as in the afternoon.
- 2. There were \_\_\_\_\_ as many planes in the afternoon as in the morning.

Tell what situation is shown, write an equation, and solve the problem.

3. Amanda has 63 bracelets. She decides to divide the bracelets equally among 7 friends. How many bracelets does she give each friend?

Situation:

Equation: \_\_\_\_\_\_

4. Mr. Gordon is planting a garden. He plans to make his garden 12 feet by 3 feet. How many square feet will his garden be?

Situation: \_\_\_\_\_

Equation: \_\_\_\_\_\_

Find the unknown number in each equation.

**5.** 
$$8a = 56$$

**6.** 
$$b = 63 \div 9$$

$$.49 \div / = e$$

7. 
$$5 \cdot 6 = c$$

**8.** 
$$6d = 54$$

**9.** 
$$49 \div 7 = e$$

10. 
$$7f = 63$$

11. 
$$5g = 45$$

12. 
$$64 = 8h$$

13. 
$$36 / 6 = j$$

Use your Target to practice multiplications and divisions.

Solve for the unknown.

1. 
$$5 \cdot 6 = a$$

**2.** 
$$b = 64 \div 8$$

$$5.7e = 49$$

**9.** 
$$45 = 5k$$

2. 
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6. 
$$50 \cdot f = 100$$

10. 
$$6l = 36$$

3. 
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 4.  $40 \div 5 = d$ 

7. 
$$54 \div 9 = q$$

11. 
$$9n = 0$$
 12.  $72 = 8p$ 

$$n = .$$

8. 4h = 28

h = \_\_\_\_

Identify the kind of situation and write an equation. Then solve the problem.

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Equation: \_\_\_\_\_

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Situation: \_\_\_\_\_

Equation: \_\_\_\_\_

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Situation: \_\_\_\_\_

Equation: \_\_\_\_\_

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Situation: \_\_\_\_\_

Equation: \_\_\_\_\_

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Situation: \_\_\_\_\_

Equation: \_\_\_\_\_

18. Mrs. Pinckett planted 8 rose bushes in her garden. She planted 3 times as many azalea bushes. How many azalea bushes did she plant?

Situation: \_\_\_\_\_

Equation: \_\_\_\_

1. Write the next two numbers in this sequence:

9 18 27 36 45 \_\_\_\_\_

- 3. If  $35 \times 25$  is 875, then what is 875 ÷ 25?
- 4. What is *n* in this equation:  $18 \times 3 = 9 \times n$ ?
- 5. What is *n* in this equation:  $7 \times 6 = 5 \times 6 + n \times 6$ ?
- 6. If one person counts by 3 to 60 and another person counts by 6 to 60, will any of those numbers be the same? Explain.
- 7. Complete the Scrambled Multiplication Table.

×	1.5	***		3,		*	ā.	#	5	
明	20					70			ş.	
	14			63	21	49		28		35
***			80		<u> </u>		64		48	
				81	27			-	54	
450 *** ***	8				12	28				20
		1		9						
ŝ		<u>.</u>			9			12	18	
. S			60		18	42			36	
4.		5		45			40			
-			20	18				8		10

Solve.

- 8. At the dog show there are 56 retrievers. There are only  $\frac{1}{8}$  as many collies. How many collies are at the show?
- 9. A small track has 9 rows of bleachers. Each row holds 8 people. How many people can sit in the bleachers?

For each table, write the rule and complete the table. Then write an equation.

Rule:	
Input	Output
0	
4	2
8	
12	6
1.5	<del>                                     </del>

Rule:	···
Input	Output
6	1
9	,
11	
14	9
8	

Equation: \_\_\_\_\_

Equation: \_\_\_\_\_

For each table, write a rule using words and an equation with two variables. Then complete the table.

 Equation
 3
 5

 Distance in miles (d)
 4
 8
 16
 20

4. Rule in Words

Equation

Number of insects (i) 2 3 4 5

Number of legs (/) 6 12 18

5. Rule in Words

Equation

Number of trees (t) 1 2 3 5 8 10

Number of shrubs (s) 4 8 32 36

6. Rule in Words

Equation

Sue's age (s) 5 10 14 17 27

Ted's age (t) 3 8 17 25

Find the unknown number in each equation.

1. 
$$p = 3 + (4 \times 5)$$

3. 
$$5 \times (6 + 3) = m$$

**5.** 
$$(12 - 8) \times 7 = b$$
 \_\_\_\_\_

**9.** 
$$7d + 5 = 26$$

**2.** 
$$4t + 1 = 25$$

6. 
$$n = 16 - (3 \times 4)$$

**8.** 
$$5 + (8 \times 6) = c$$

**10.** 
$$(6 \times 5) - (4 \times 5) = h$$

Write an equation. Then solve the problem.

Show your work.

1. Mr. Corelli made a tray of cookies that held 5 across and 7 down. There are 38 students in Mr. Corelli's class. How many more cookies does he need if each student is to get one cookie?

Equation:

2. Leah bought 2 boxes of cookies. She ate 3 cookies and found that she had 21 left. How many cookies were in each box?

Equation: \_\_\_\_\_\_

3. Arturo built 3 sandcastles with 6 towers each. Paco built 5 sandcastles with 4 towers each. Who built more towers? How many more?

Equation:

4. Ashley has 35 dollars. She wants to buy 4 bags of peanuts at 2 dollars each. How much money will she have left?

Equation:

Solve each problem.

Show your work.

- 1. Michael has 21 T-shirts. One third of them are blue. How many of Michael's T-shirts are blue?
- 2. A gift-wrapping department has 4 colors of ribbon, 2 kinds of bows, and 7 kinds of wrapping paper. How many different gift-wrap styles are possible?
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- 6. At a country-music concert, 48 people played guitars. That number is 6 times as many as the number of people who played banjos. How many people at the concert played banjos?
- 7. There are 8 apples left on the table. There are  $\frac{1}{4}$  as many apples as bananas left on the table. How many bananas are there?

Solve each problem. Label your answer.

- 1. Rachel has 4 times as many markers as Polly has. Rachel has 36 markers. How many markers does Polly have?
- 2. Sean sold 63 balloons at the fair.

  That is 7 times as many as Oscar sold.

  How many balloons did Oscar sell?
- 3. Ramon scored 72 points in basketball games this year. His friend Paco scored  $\frac{1}{8}$  as many points as Ramon. How many points did Paco score?
- 4. Chris has 6 different cookie cutters, 4 kinds of frosting, and 2 kinds of sprinkles. How many different kinds of cookies can she make?
- 5. Meg and Kurt are building a tree house. They have 3 kinds of roofing material, 4 colors of paint, and 2 doors to choose from. How many different ways could they build the tree house?
- 6. Mrs. Grant's garden is a square that is 5 yards on each side. Mrs. Diego's garden is a square that is 10 yards on each side. The area of Mrs. Diego's garden is how many times as large as the area of Mrs. Grant's garden?

Solve each Factor Puzzle.

7.

	2	10	
_		15	

8.

	27
35	45

9.

10.

	27	24
Γ		40

11.

	•
6	9
8	

12.

ſ	15	
	9	6

13.

	12	
•	24	32

14.

25	50
	30

15. On a separate sheet of paper, write a Factor Puzzle for your classmates to solve. You may use a Multiplication Table.

Solve.

Show your work.

- 1. A fruit company makes two gift boxes of oranges—the Ruby Box and the Emerald Box. The Ruby Box has 8 rows and 6 columns of oranges. The Emerald Box has 7 rows and 7 columns of oranges. Which box has more oranges? How many more?
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- 3. Melissa collected three kinds of autumn leaves when she was out walking today—elm, maple, and oak. She has 2 times as many maple leaves as elm leaves and 5 times as many oak leaves as elm leaves. Altogether, she has 32 leaves. How many of each kind does she have?
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$$6d - 3d + 2d = 35$$

Use the Commutative Property to solve for n in these equations.

1. 
$$45 \times 7 = 7 \times n$$

**2.** 
$$n \times 8 = 8 \times 29$$

$$3.36 \times n = 9 \times 36$$

Use the Associative Property to solve each problem.

4. 
$$(9 \times 3) \times 3 =$$
 \_\_\_\_\_

5. 
$$2 \times (5 \times 7) =$$
 \_\_\_\_\_

6. 
$$(8 \times 4) \times 2 =$$

Use the Distributive Property to write each problem with only two factors. Then solve the problems.

7. 
$$(7 \times 3) + (7 \times 5) =$$
 \_\_\_\_\_\_

8. 
$$(3 \times 9) + (4 \times 9) =$$
 \_\_\_\_\_

9. 
$$(8 \times 5) + (8 \times 4) =$$

**10.** 
$$(2 \times 6) + (8 \times 6) =$$

Solve.

- 11. For Fall Festival, Mrs. Marco bought 6 bags of Golden Delicious apples. She handed out 43 apples and had 5 left over. How many apples were in each bag?
- 12. Juice boxes are sold in packs of 6.

  Tony brought 5 packs of juice boxes to a party, and Victor brought 4 packs. How many juice boxes are there at the party altogether?
- 13. Everyone in Mrs. Bowman's art class has 8 jars of paint except Jerome, who has 10. There are 74 jars of paint in the room. How many students are there in Mrs. Bowman's art class?
- 14. Lisa needs to make 2 times as many tuna as cheese sandwiches and 4 times as many ham as cheese sandwiches. If Lisa makes 56 sandwiches, how many of each of the 3 kinds will she make?

#### 1. Connections

Jill has four of her five game scores:

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Her average score for the five games is 6 points. What is the fifth game score? Write an equation to help solve the problem.

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