Topic 4 Additional Practices

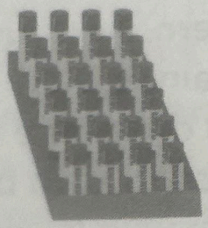
Name _____

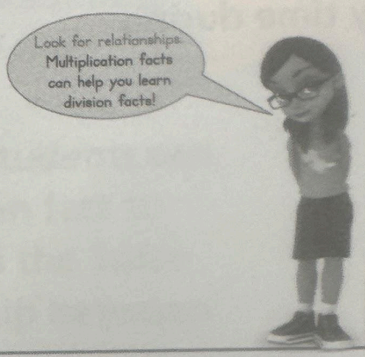
Additional Practice 4-1
Relate Multiplication and Division

Another Look!

Multiplication
6 rows of 4 glue sticks
$6 \times 4 = 24$
24 glue sticks

Division
24 glue sticks in 6 equal rows
$24 \div 6 = 4$
4 glue sticks in each row





Here is the fact family for 4, 6, and 24:

$4 \times 6 = 24$ $\quad 24 \div 4 = 6$

$6 \times 4 = 24$ $\quad 24 \div 6 = 4$

In **1** and **2**, use the relationship between multiplication and division to complete each equation.

1. $2 \times 7 = 14$
$14 \div 2 =$ 7

2. $81 \div 9 = 9$
$9 \times$ 9 $= 81$

In **3–6**, write the fact family.

3. Write the fact family for 4, 7, and 28.
$4 \times 7 = 28; 28 \div 4 = 7;$
$7 \times 4 = 28; 28 \div 7 = 4$

4. Write the fact family for 2, 10, and 20.
$2 \times 10 = 20; 20 \div 2 = 10;$
$10 \times 2 = 20; 20 \div 10 = 2$

5. Write the fact family for 2, 8, and 16.
$2 \times 8 = 16; 8 \times 2 = 16;$
$16 \div 2 = 8; 16 \div 8 = 2$

6. Write the fact family for 7, 8, and 56.
$7 \times 8 = 56; 8 \times 7 = 56;$
$56 \div 7 = 8; 56 \div 8 = 7$

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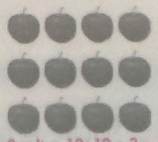
TIONAL PRACTICE

7–8, 10–13 (O) ITEMS 1, 3–7, 9–13 (A) ITEMS 2, 4–13

7. Use the array to write a multiplication equation and a division equation.



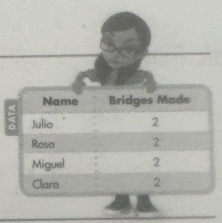
$3 \times 4 = 12$; $12 \div 3 = 4$

8. Higher Order Thinking For every row of objects in an array there are 2 columns. The total number of objects in the array is 18. How many rows and columns does the array have?

3 rows and 6 columns

9. enVision® STEM Julio's class was making bridges out of balsa wood to see which bridge could hold the most weight. Each of the 4 people in Julio's group made 2 bridges. What fact family represents the total bridges made by the group?

$4 \times 2 = 8$; $2 \times 4 = 8$; $8 \div 4 = 2$; $8 \div 2 = 4$



DATA

Name	Bridges Made
Julio	2
Rosa	2
Miguel	2
Clara	2

10. Reasoning There are 5 pairs of scissors in one package. Mrs. Hill bought 35 scissors for students in her art classes. How many packages did she buy?

7 packages

11. Serena has a set of toy trains. She has 3 passenger cars. What is the total length of her passenger cars?

DATA

Serena's Train Cars

Type	Length in Inches
Engine	4
Tender	3
Passenger Car	9
Caboose	7

27 inches

Assessment Practice

12. Select numbers to create a multiplication equation that could be used to solve $14 \div 2 = \square$.

2 3 4 7 14 20

$7 \times 2 = 14$

13. Select numbers to create a multiplication equation that could be used to solve $42 \div 7 = \square$.

2 3 6 7 24 42

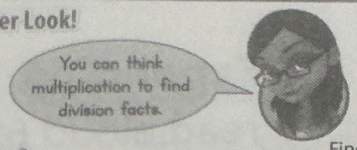
$6 \times 7 = 42$

Name _____ Practice Video Tools Games

Additional Practice 4-2

Use Multiplication to Divide with 2, 3, 4, and 5

Another Look!



Find $16 \div 2$.

What You Think	What You Write
$2 \times ? = 16$ ↑ 2 times what number equals 16? $2 \times 8 = 16$	$16 \div 2 = 8$

Find $12 \div 3$.

What You Think	What You Write
$3 \times ? = 12$ ↑ 3 times what number equals 12? $3 \times 4 = 12$	$12 \div 3 = 4$

Find $24 \div 4$.

What You Think	What You Write
$4 \times ? = 24$ ↑ 4 times what number equals 24? $4 \times 6 = 24$	$24 \div 4 = 6$

Find $40 \div 5$.

What You Think	What You Write
$5 \times ? = 40$ ↑ 5 times what number equals 40? $5 \times 8 = 40$	$40 \div 5 = 8$

In 1–16, find each quotient.

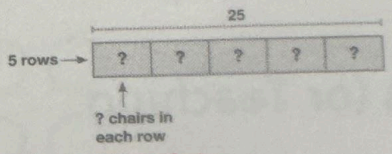
1. $14 \div 2 =$ 7
2. $35 \div 5 =$ 7
3. $15 \div 3 =$ 5
4. $32 \div 4 =$ 8
5. $9 \div 3 =$ 3
6. $18 \div 2 =$ 9
7. $16 \div 2 =$ 8
8. $21 \div 3 =$ 7
9. $2\overline{)12}$ 6
10. $3\overline{)27}$ 9
11. $5\overline{)25}$ 5
12. $4\overline{)20}$ 5
13. $5\overline{)30}$ 6
14. $5\overline{)45}$ 9
15. $2\overline{)10}$ 5
16. $4\overline{)28}$ 7

17. **Be Precise** You have 18 erasers and use 3 erasers each month. How many months will your erasers last? Identify the quotient, dividend, and divisor.
6 months; The quotient is 6, the dividend is 18, and the divisor is 3.

18. Write a fact family using the numbers 5, 6, and 30.
$5 \times 6 = 30$; $6 \times 5 = 30$; $30 \div 6 = 5$; $30 \div 5 = 6$

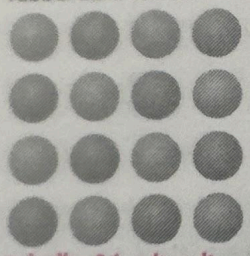
19. Paul drew two different polygons. One shape has 4 sides. The other shape has fewer than 4 sides. What could be the two shapes Paul drew?
Sample answer: Square and triangle

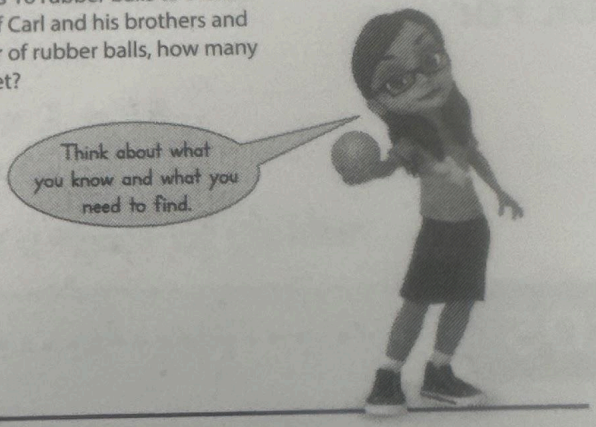
20. Megan arranges 25 chairs into 5 equal rows. Write and solve an equation to find how many chairs are in each row.



$25 \div 5 = 5$; 5 chairs

21. **Higher Order Thinking** Carl has 16 rubber balls to share with his 2 brothers and 1 sister. If Carl and his brothers and sister each get the same number of rubber balls, how many rubber balls will each of them get?





4 balls; $16 \div 4 = 4$

Assessment Practice

22. Which expression can help you divide $40 \div 5$?

- (A) 5×8
- (B) 5×7
- (C) 5×6
- (D) 5×5

23. Which expression can help you divide $16 \div 4$?

- (A) 4×3
- (B) 4×4
- (C) 4×5
- (D) 4×6

ASSIGNMENT I ITEMS 2–4, 7–8, 12

Name _____ Practice Video Tools Games

Additional Practice 4-3
Use Multiplication to Divide with 6 and 7

Another Look!

Martha has 42 pine trees to plant on a plot of land. If Martha plants the trees in 6 equal rows, how many trees will be in each row? If she plants 7 equals rows, how many trees will be in each row?

Find 42 ÷ 6.

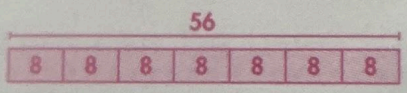
What You Think	What You Write
What number times 6 is 42? 7 × 6 = 42	42 ÷ 6 = 7 There will be 7 trees in each row.

Find 42 ÷ 7.

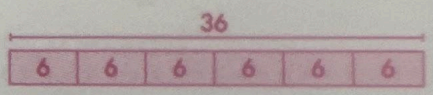
What You Think	What You Write
What number times 7 is 42? 6 × 7 = 42	42 ÷ 7 = 6 There will be 6 trees in each row.

In 1 and 2, draw a bar diagram to find the quotient.

1. Find 56 ÷ 7.
   8; Check students' drawings.



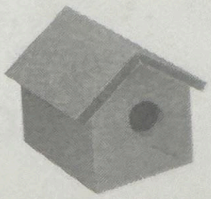
2. Find 36 ÷ 6.
   6; Check students' drawings.



In 3–13, find the quotient.

3. 30 ÷ 6 = **5**
4. 28 ÷ 7 = **4**
5. 42 ÷ 6 = **7**
6. 54 ÷ 6 = **9**
7. $6\overline{)48}$ = **8**
8. $7\overline{)56}$ = **8**
9. $7\overline{)70}$ = **10**
10. $7\overline{)49}$ = **7**
11. Divide 60 by 6. **10**
12. Divide 7 by 7. **1**
13. Find 21 divided by 7. **3**

In **14** and **15**, use the picture at the right.

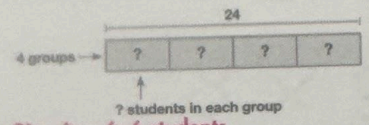


There are 7 sides on the birdhouse.

14. Each side of the birdhouse will need 9 nails. How many nails are needed for the whole birdhouse?
$9 \times 7 = 63$ nails

15. If only 7 nails are used on each side, how will the total number of nails needed change?
It will decrease. The number of sides stays the same, but there will be fewer nails on each side.

16. Twenty-four students are going to the zoo. They are going in 4 equal groups. Write and solve an equation to find how many students are in each group.



$24 \div 4 = 6$; 6 students

17. Make Sense and Persevere There are 42 roses in the garden. Diane picks 7 roses for each bouquet of flowers. How many bouquets can she make? How many more bouquets can Diane make if she uses 6 roses in each bouquet?
$42 \div 7 = 6$; Diane can make 6 bouquets. If she uses 6 roses in each, she can make 1 more bouquet.

18. Higher Order Thinking Juanita read 48 pages. She read more than 5 chapters, but less than 10 chapters. All chapters are the same length. How many chapters could Juanita have read? How many pages are in those chapters?
6 chapters with 8 pages in each chapter or 8 chapters with 6 pages in each chapter

19. Manny has 28 chapters in a book to read. He reads 7 chapters each week. How many weeks will it take for Manny to read the book?
4 weeks

Assessment Practice

20. Which multiplication fact can you use to help find the value of the unknown number in the equation $49 \div 7 = \square$?

Ⓐ 5×7
Ⓑ 6×7
● 7×7
Ⓓ 8×7

21. Which multiplication fact can you use to help find the value of the unknown number in the equation $48 \div 6 = \square$?

Ⓐ 5×6
Ⓑ 6×6
Ⓒ 7×6
● 8×6

ASSIGNMENT I ITEMS 1–4, 7–8, 11, 13–14, 18–19

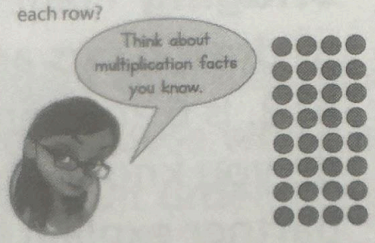
Name _____ Practice Video Tools Games

Additional Practice 4-4
Use Multiplication to Divide with 8 and 9

Another Look!

Multiplication facts can help you to find division facts when 8 or 9 is the divisor.

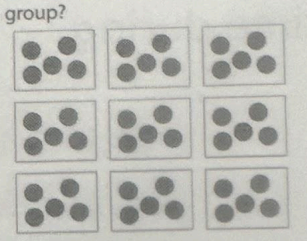
There are 32 counters. There are 8 rows of counters. How many counters are in each row?



Find 32 ÷ 8.

What You Think	What You Write
8 times what number equals 32? 8 × 4 = 32	32 ÷ 8 = 4 There are 4 counters in each row.

There are 45 counters. There are 9 equal groups. How many counters are in each group?



Find 45 ÷ 9.

What You Think	What You Write
9 times what number equals 45? 9 × 5 = 45	45 ÷ 9 = 5 There are 5 counters in each group.

In **1–3**, use the multiplication equation to help find each quotient.

1. 54 ÷ 9 = ?
9 × 6 = 54
So, 54 ÷ 9 = 6.

2. 24 ÷ 8 = ?
8 × 3 = 24
So, 24 ÷ 8 = 3.

3. 56 ÷ 8 = ?
8 × 7 = 56
So, 56 ÷ 8 = 7.

In **4–12**, find each quotient.

4. 36 ÷ 9 = 4

5. 63 ÷ 9 = 7

6. 80 ÷ 8 = 10

7. $9\overline{)72}$ = 8

8. $8\overline{)48}$ = 6

9. $9\overline{)81}$ = 9

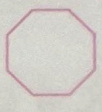
10. $8\overline{)8}$ = 1

11. $9\overline{)90}$ = 10

12. $9\overline{)27}$ = 3

13. Maluwa has 9 identical tiles. When she counts the total number of sides on the tiles, she gets 72. Draw a picture of what her tile could look like, and name that shape.

Octagon; Sample answer:



14. Each month Bailey deposits money in her savings account. Over 8 months, she has added $48. If Bailey deposited the same amount every month, how much is one deposit?

$6

15. **Construct Arguments** The table at the right shows prices for matinee and evening movies. With $63, would you be able to buy more matinee tickets or evening tickets? Explain.

More matinee tickets; 63 ÷ 7 = 9, but 63 ÷ 9 = 7. So I could buy 9 matinee tickets, but only 7 evening tickets.

DATA

Movie Prices	
Matinee	$7
Evening Movie	$9

16. Teri scored 64 points in the first 8 basketball games she played in. She scored the same number of points in each game. Write and solve an equation to find the number of points Teri scored in each game.

64 ÷ 8 = 8; 8 points

17. **Higher Order Thinking** Adam made 19 paper cranes on Monday and 8 more on Tuesday. He gave all the cranes away to 9 friends so that each friend had the same number of cranes. How many cranes did each friend receive? Explain your answer.

Each friend got 3 cranes; 19 + 8 = 27; 27 ÷ 9 = 3

Assessment Practice

18. Find 72 ÷ 8 by selecting numbers to complete the following equations. Numbers may be selected more than once.

2	3	6	8	9

$8 \times \boxed{9} = 72$

$72 \div 8 = \boxed{9}$

19. Find 27 ÷ 9 by selecting numbers to complete the following equations. Numbers may be selected more than once.

2	3	4	8	9

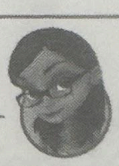
$9 \times \boxed{3} = 27$

$27 \div 9 = \boxed{3}$

Name _____ Practice Video Tools Games

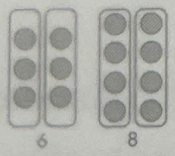
Additional Practice 4-5
Multiplication Patterns: Even and Odd Numbers

Another Look!



Even numbers have 0, 2, 4, 6, or 8 in the ones place. Odd numbers have 1, 3, 5, 7, or 9 in the ones place.

Think about the numbers 0, 2, 4, 6, and 8. When you divide these numbers by 2, nothing is left over.
These numbers are even.

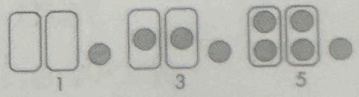


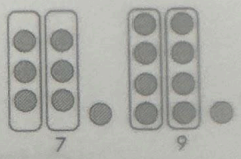
All even numbers can be shown as two equal groups. When multiplying, if at least one factor is even, the product will be even.

$4 \times 5 = (2 \times 2) \times 5$
$4 \times 5 = 2 \times (2 \times 5)$.

So, $4 \times 5 = 2 \times 10$.
The product is 2 equal groups of 10.

Think about the numbers 1, 3, 5, 7, and 9. When you divide these numbers by 2, there is 1 left over.
These numbers are odd.





You cannot think of odd numbers as 2 equal groups with none left over. When multiplying, if both factors are odd, the product will be odd.

$7 \times 5 = 35$
$1 \times 9 = 9$

In **1–4**, circle the digit in the ones place. Then write *even* or *odd*.

1. 3(6) is **even**.
2. 1(8) is **even**.
3. 8(3) is **odd**.
4. 4(0) is **even**.

In **5–7**, circle the factors that can be divided by 2. Then write *even* or *odd* to describe the product and solve.

5. $7 \times (4) = ?$
   7×4 is **even**.
   $7 \times 4 = 28$
6. $(6) \times (6) = ?$
   6×6 is **even**.
   $6 \times 6 = 36$
7. $5 \times 9 = ?$
   5×9 is **odd**.
   $5 \times 9 = 45$

8. Ted bought 1 box of whistles, 1 box of streamers, and 1 box of stickers. How many party favors did he buy in all? Show your work.

12 + 48 = 60; 60 + 36 = 96;
96 party favors

DATA

Party Favors

Item	Number per Box
Whistles	12
Hats	24
Streamers	48
Stickers	36

9. Don says that 9 × 9 is even. Is he correct? Explain.

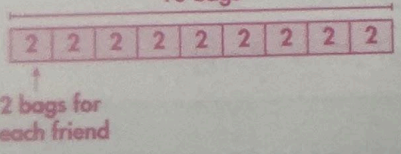
No; Sample answer: Both factors are odd, so the product is odd. 81 is an odd number.

10. Generalize Explain why the product of 2 times any number is an even number.

Sample answer: Two is an even number. Multiplying by an even number always produces an even product because there are equal multiples of an even number.

11. Sandra has 18 bags of peanuts to equally share among 9 friends. How many bags can she give each friend? Draw a bar diagram to help solve.

Each friend can get 2 bags of peanuts.



12. Higher Order Thinking Explain whether the product of an **even number** × **odd number** × **odd number** is even or odd.

Sample answer: The product is even. If at least one of the factors is even, the product will be even. For example, 2 × 3 × 3 = 18.

Assessment Practice

13. Select all of the equations where you can use properties of operations to show that the product will be even.

- ☐ 1 × 3 = ?
- ☐ 3 × 5 = ?
- ☐ 7 × 1 = ?
- ■ 8 × 2 = ?
- ■ 6 × 6 = ?

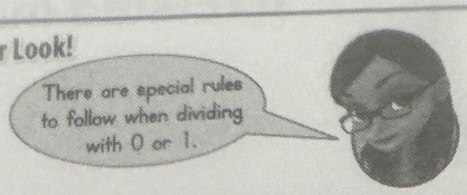
14. Select all of the equations that do **NOT** have even products.

- ■ 7 × 3 = ?
- ☐ 6 × 2 = ?
- ■ 1 × 3 = ?
- ■ 5 × 7 = ?
- ☐ 9 × 6 = ?

Name _____

Additional Practice 4-6
Division Involving 0 and 1

Another Look!

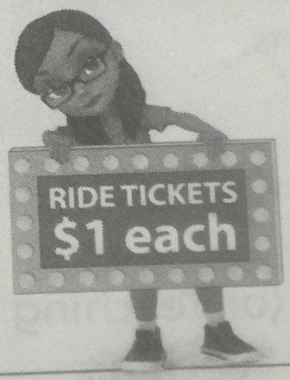


Rule	Example	What You Think	What You Write
When any number is divided by 1, the quotient is that number.	$7 \div 1 = ?$	1 times what number is 7? $1 \times 7 = 7$ So, $7 \div 1 = 7$.	$7 \div 1 = 7$ or $1\overline{)7}$
When any number (except 0) is divided by itself, the quotient is 1.	$8 \div 8 = ?$	8 times what number is 8? $8 \times 1 = 8$ So, $8 \div 8 = 1$.	$8 \div 8 = 1$ or $8\overline{)8}$
When zero is divided by a number (except 0), the quotient is 0.	$0 \div 5 = ?$	5 times what number is 0? $5 \times 0 = 0$ So, $0 \div 5 = 0$.	$0 \div 5 = 0$ or $5\overline{)0}$
You cannot divide a number by 0.	$9 \div 0 = ?$	0 times what number is 9? There is no number that works, so $9 \div 0$ cannot be done.	$9 \div 0$ cannot be done.

In 1–8, write the quotient.

1. $5 \div 1 =$ 5
2. $9 \div 9 =$ 1
3. $0 \div 8 =$ 0
4. $6 \div 6 =$ 1
5. $4 \div 1 =$ 4
6. $1\overline{)7}$ 7
7. $8\overline{)8}$ 1
8. $7\overline{)0}$ 0

In **9** and **10**, use the sign at the right.



9. **Be Precise** Aiden has $20. He spends all of his money on ride tickets. How many ride tickets does Aiden buy?
20 tickets

10. Tanji spends $8 on ride tickets and gives an equal number of tickets to each of 8 friends. How many tickets does each friend get?
$8 \times 1 = 8$; $8 \div 8 = 1$ ticket

11. Which of these has the greatest quotient: $6 \div 6$, $5 \div 1$, $0 \div 3$, or $8 \div 8$? Explain.
$5 \div 1$; Sample answer: A number divided by itself has a quotient of 1, so $6 \div 6$ and $8 \div 8 = 1$. Zero divided by a number besides zero is zero. $0 \div 3 = 0$. A number divided by 1 is that number. So, $5 \div 1$ is 5.

12. **Number Sense** Place the numbers 0, 1, 3, and 3 in the blanks so that the number sentence is true.

____ ÷ ____ > ____ ÷ ____

Sample answer: $3 \div 3 > 0 \div 1$; $3 \div 1 > 0 \div 3$

13. The number of students at Netherwood Elementary School is an odd number between 280 and 300. List all the possible numbers of students there could be.
281, 283, 285, 287, 289, 291, 293, 295, 297, 299

14. **Higher Order Thinking** Write and solve a story problem that goes with $6 \div 6$.
Check students' stories; Sample answer: Six tokens were shared equally among 6 children. How many tokens did each child receive? $6 \div 6 = 1$ token

Assessment Practice

15. Use division properties to match each equation to its quotient.

	0	1
$9 \div 9 = ?$	☐	☑
$0 \div 6 = ?$	☑	☐
$2 \div 2 = ?$	☐	☑

16. Use division properties to match each equation to its quotient.

	0	1
$7 \div 7 = ?$	☐	☑
$0 \div 1 = ?$	☑	☐
$0 \div 4 = ?$	☑	☐

Name _____ Practice Video Tools Games

Additional Practice 4-7
Practice Multiplication and Division Facts

Another Look!

A class made popcorn for a carnival. Ten students each made 3 cups of popcorn. The students put the popcorn in bags that hold 6 cups each. Find the total number of cups. Then find how many bags of popcorn the students made.

You can solve the problems using multiplication and division.

Multiplication

How many total cups of popcorn did they make?

$10 \times 3 = ?$

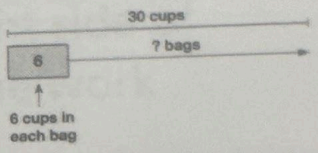
Number of students · Cups each student made · Total number of cups

$10 \times 3 = 30$

The students made a total of 30 cups of popcorn.

Division

How many groups of 6 are in 30?



Divide the total number of cups by the number of cups in each bag:

$30 \div 6 = 5$ ← Number of bags

The students made 5 bags of popcorn.

In 1–9, use multiplication and division to complete the fact family.

1. $21 \div 3 = \underline{7}$
   $3 \times \underline{7} = 21$
   $21 \div \underline{7} = 3$
   $\underline{7} \times 3 = 21$

2. $\underline{6} = 36 \div 6$
   $36 = 6 \times \underline{6}$

3. $2 = \underline{18} \div 9$
   $\underline{18} = 2 \times 9$
   $9 = \underline{18} \div 2$
   $\underline{18} = 9 \times 2$

4. $\underline{6} = 54 \div 9$
   $54 = 9 \times \underline{6}$
   $9 = 54 \div \underline{6}$
   $54 = \underline{6} \times 9$

5. $18 \div 6 = \underline{3}$
   $6 \times \underline{3} = 18$
   $18 \div \underline{3} = 6$
   $\underline{3} \times 6 = 18$

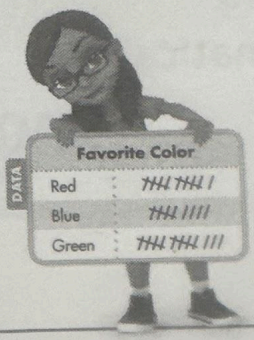
6. $40 \div 5 = \underline{8}$
   $5 \times \underline{8} = 40$
   $40 \div \underline{8} = 5$
   $\underline{8} \times 5 = 40$

7. $14 \div 2 = \underline{7}$
   $2 \times \underline{7} = 14$
   $14 \div \underline{7} = 2$
   $\underline{7} \times 2 = 14$

8. $25 \div 5 = \underline{5}$
   $5 \times \underline{5} = 25$

9. $\underline{8} = 32 \div 4$
   $32 = 4 \times \underline{8}$
   $4 = 32 \div \underline{8}$
   $32 = \underline{8} \times 4$

In **10** and **11**, use the chart at the right.



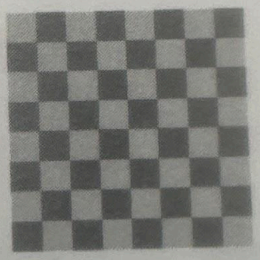
10. **Make Sense and Persevere** Ellis asked some classmates to name their favorite color. He recorded the information in this chart. How many classmates answered the question?
33 classmates

11. Suppose Ellis asked more classmates to name their favorite color. If 4 more classmates named blue this time, how many classmates named blue in all?
13 classmates

12. At a music recital, there are 30 chairs. They are set up in 6 equal rows. Find the number of columns.
5 columns; $30 \div 6 = 5$

13. A music teacher has 4 drum kits. Each kit has 2 drumsticks. Each drumstick costs $3. How many drumsticks does she have? What is the cost to replace them all?
8 drumsticks; $24

14. **Higher Order Thinking** A chessboard has 8 rows of squares with 8 squares in each row. Two players each put 16 chess pieces on the board, with each piece on its own square. How many squares are empty now? Explain your answer.
32; $8 \times 8 = 64$; There are 64 squares.
$16 + 16 = 32$; 32 squares are covered.
$64 - 32 = 32$; 32 squares are uncovered.



Assessment Practice

15. Use the relationship between multiplication and division to find the value of each unknown.

Equation	Value of Unknown
$24 \div 4 = ?$	6
$4 \times ? = 24$	6
$8 = 56 \div ?$	7
$8 \times ? = 56$	7

16. Use properties of operations to find the value of each unknown.

Equation	Value of Unknown
$7 \div 1 = ?$	7
$? = 3 \div 3$	1
$? = 9 \times 1$	9
$4 \times 0 = ?$	0

Name _____ Practice Video Tools Games

Additional Practice 4-8
Solve Multiplication and Division Equations

Another Look!

Remember that an equation uses an equal sign (=) to show the value on the left is the same as the value on the right.

Equations have unknown numbers. These numbers may be represented by question marks.

$10 = 40 \div ?$

This equation means 10 is equal to 40 divided by some number. You know $40 \div 4 = 10$, so $? = 4$.

1. Frankie has some nickels. His nickels have a value of 45 cents. How many nickels does Frankie have? Complete the table to write an equation to represent the problem.

Use a ? to represent the number of nickels Frankie has.	?
Nickels are worth 5 cents. You can multiply the number of nickels by 5 to find the total value of the coins.	? × 5
Frankie's nickels are worth 45 cents.	? × 5 = 45

To solve the problem, find the value of ? that makes the equation true: 9 × 5 = 45. Frankie has 9 nickels.

In **2–5**, find the value of ? that makes the equation true.

2. $? \div 5 = 6$
$? = 30$

3. $36 = 6 \times ?$
$? = 6$

4. $14 = ? \times 2$
$? = 7$

5. $81 \div ? = 9$
$? = 9$

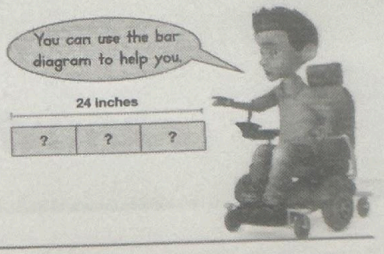
In **6** and **7**, write and solve an equation for each problem.

6. A restaurant has 24 chairs and some tables. There are 4 chairs at each table. How many tables are there?
Sample answer: $? \times 4 = 24$;
$? = 6$ tables

7. Suzanne buys 6 paint sets. Each set contains the same number of brushes. She has 18 brushes. How many brushes are in each paint set?
Sample answer: $18 \div 6 = ?$;
$? = 3$ brushes

8. Carlos has a string that is 24 inches long. He wants to divide it into 3 equal parts. Write an equation to find how long each part will be. Use a ? to represent the unknown number. Then solve your equation.

Sample answer: $24 \div 3 = ?$; $? = 8$ inches



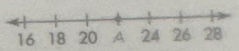
9. Higher Order Thinking Hector spent from Sunday to the following Saturday at the beach. Each day he found an equal number of shells. If Hector found 63 shells, how many shells did he find on Tuesday? Explain your answer.

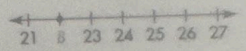
9 shells; There are 7 days in a week, so I can use the equation $7 \times ? = 63$, and I know $7 \times 9 = 63$.

10. Make Sense and Persevere Ella solves the equation $32 \div ? = 8$. She says the value of ? is 4. Does Ella's answer make sense? Explain.

Yes; Sample answer: $8 \times 4 = 32$, so 32 divided by 4 must equal 8.

11. Reasoning Do points *A* and *B* represent the same number, or do they represent different numbers? Explain.





They represent the same number; Sample answer: The top number line is counting by twos, so *A* is 2 more than 20, or 22. The bottom number line is counting by ones, so *B* is 1 more than 21, which is also 22.

Assessment Practice

12. What is the value of the unknown in the equation $32 \div ? = 4$?

Ⓐ 6
Ⓑ 7
● 8
Ⓓ 9

13. What is the value of the unknown in the equation $10 \times ? = 80$?

Ⓐ 5
Ⓑ 6
Ⓒ 7
● 8

Name _____ Practice Video Tools Games

Additional Practice 4-9
Make Sense and Persevere

Another Look!

To solve a two-step problem, you may need to find the answer to a hidden question first. Then you can use that answer to solve the problem.

Sandra has $22 to spend on school supplies. She buys a backpack and spends the rest of her money on notebooks. How many notebooks does Sandra buy?

Tell how to make sense of the problem.

- I can identify what is known from the problem.
- I can look for and answer any hidden questions.
- I can make a plan to solve the problem.

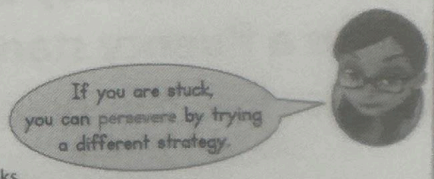
Tell which operations you will use. Then solve the problem.

I will use subtraction and division.

A backpack costs $10. $22 − $10 = $12.

Sandra now has $12 to spend on notebooks. Each notebook costs $3.

$12 ÷ $3 = 4. Sandra can buy 4 notebooks.



Make Sense and Persevere **Sample answers given.**
There are 5 players on a basketball team. In a game, 4 players scored 6 points each. The team scored a total of 34 points. How many points did the other player score?

1. Tell how to make sense of the problem.
   I can use the number of players and the number of points. I can look for any hidden questions and plan which strategy to use to solve.
2. Tell the quantities you know. Then explain what you need to find first to solve the problem.
   I know there are 5 players on a team; 4 players scored 6 points each. The team scored a total of 34 points. First I need to find how many points the 4 players scored in all.
3. Tell which operations you will use. Then solve the problem.
   Multiplication and subtraction; 4 × 6 = 24; 34 − 24 = 10. The other player scored 10 points.

Performance Task

Zoo Field Trip

The third-grade class at Thomas Elementary School goes on a trip to the zoo. Students are in groups of 6. Mr. Bell's and Ms. Ridley's classes are combined.

DATA

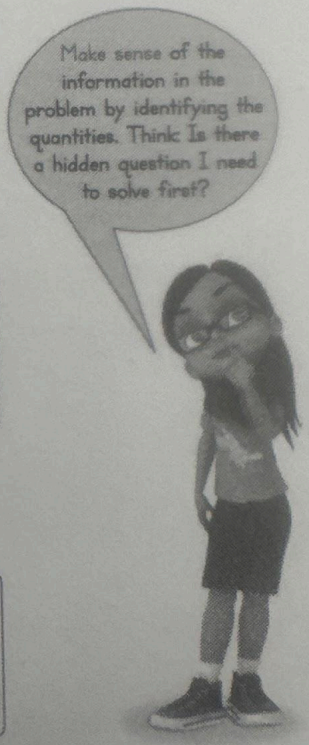
Classroom Teacher	Number of Students
Mr. Bell	18
Ms. Ridley	24
Ms. Holtz	17

4. **Make Sense and Persevere** The teachers want to know how many groups will be in the combined classes. What do you need to know to solve?

Students will be in groups of 6. There are 18 students in Mr. Bell's class and 24 students in Ms. Ridley's class.

5. **Use Reasoning** Find the number of groups in the combined classes. Write an equation for each step. Explain how the quantities are related.

7 groups; Sample answer: $18 + 24 = 42$; $42 \div 6 = 7$ groups. The sum of 42 in the first equation is the total number of students. It is divided by the number of students in each group in the second equation.



6. **Critique Reasoning** Ryan solved the problem above. He says there are 6 groups of 6 students and 1 group of 5 students. What did Ryan do wrong?

Sample answer: Ryan did not add the correct number of students. Instead of adding the 18 students in Mr. Bell's class, he added the 17 students in Ms. Holtz's class.

7. **Generalize** If you wanted to find the number of groups of 6 students if Mr. Bell's and Ms. Holtz's classes were combined, could you use the same strategy you used in Exercise 5? Explain.

Yes; Sample answer: I could add the numbers of students in Mr. Bell's class and Ms. Holtz's class and then divide the sum by 6 to find the number of groups.