

## Practice: Skills

Name each operation modeled.

$$\begin{array}{c} \square \square \\ \square \end{array} + \begin{array}{c} \square \square \square \\ \square \square \end{array} = \begin{array}{c} \square \square \square \square \\ \square \square \square \square \end{array}$$

\_\_\_\_\_

$$\begin{array}{c} \square \square \square \square \\ \square \square \square \end{array} - \begin{array}{c} \square \square \\ \square \square \end{array} = \begin{array}{c} \square \square \\ \square \end{array}$$

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Name the operation needed to solve each problem. Write a number sentence to solve each problem.

- 3 **BANKING** Juan has \$75 in a bank account. Today he deposited \$12 in the account. How much money is in the account now?

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- 4 **MOVIES** A movie is 128 minutes long. Shari has watched the movie for 58 minutes. How many minutes of the movie are left?

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- 5 **KNITTING** Darla used 550 yards of yarn to knit a scarf. She used 300 yards of yarn to knit a hat. How many yards of yarn did she use in all?

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- 6 **FOOTBALL** The football team scored 14 points in the first half of the game. They scored 6 points in the second half of the game. How many points did the team score in all?

\_\_\_\_\_

- 7 **CAMERAS** A digital camera costs \$87. Next week the camera will be on sale for \$55. How much money will Carla save if she buys the camera when it is on sale?

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- 8 **CYCLING** Lance biked 28 miles last week and 37 miles this week. How many more miles did Lance bike this week than last week?

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## Practice: Skills

Name each operation modeled.

1  $\square \square \square \square \times \begin{matrix} \square \\ \square \end{matrix} = \begin{matrix} \square \square \square \square \\ \square \square \square \square \end{matrix}$

\_\_\_\_\_

2  $\begin{matrix} \square \square \square \square \\ \square \square \square \square \end{matrix} \div \begin{matrix} \square \square \\ \square \square \end{matrix} = \begin{matrix} \square \square \\ \square \square \end{matrix} \begin{matrix} \square \square \\ \square \square \end{matrix}$

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Name the operation needed to solve each problem. Write a number sentence to solve the problem.

- 3 **PACKAGING** Kelly bought 3 boxes of granola bars. There were 6 granola bars in each box. How many granola bars did Kelly buy?

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- 4 **MOVIES** Mr. Sanchez bought 5 movie tickets. Each ticket cost \$9. How much did Mr. Sanchez spend?

\_\_\_\_\_

- 5 **KNITTING** Sara has 80 yards of yarn to make bookmarks. Each bookmark uses 8 yards of yarn. How many bookmarks can Sara make?

\_\_\_\_\_

- 6 **DOGS** Leo's dog eats 8 ounces of food each day. How many ounces of food does his dog eat in 7 days?

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- 7 **AMUSEMENT PARKS** A Ferris wheel can hold 120 people. Each car can hold 6 people. How many cars are on the Ferris wheel?

\_\_\_\_\_

## Practice: Skills

- 1 Show that adding 4 to each side of  $(5 + 3) = (6 + 2)$  results in a true equation.



- 2 Show that multiplying by 3 on each side of  $(3 \cdot 2) = (6 \cdot 1)$  results in a true equation.



Show that adding or multiplying a number on each side results in a true equation.

3  $(8 + 6) + 3 = (10 + 4) + 3$

\_\_\_\_\_ + 3 = \_\_\_\_\_ + 3

\_\_\_\_\_ = \_\_\_\_\_

4  $(2 \cdot 5) \cdot 5 = (10 \cdot 1) \cdot 5$

\_\_\_\_\_  $\cdot$  5 = \_\_\_\_\_  $\cdot$  5

\_\_\_\_\_ = \_\_\_\_\_

5  $(2 \cdot 8) \cdot 2 = (4 \cdot 4) \cdot 2$

\_\_\_\_\_  $\cdot$  2 = \_\_\_\_\_  $\cdot$  2

\_\_\_\_\_ = \_\_\_\_\_

6  $(10 + 8) + 1 = (12 + 6) + 1$

\_\_\_\_\_ + 1 = \_\_\_\_\_ + 1

\_\_\_\_\_ = \_\_\_\_\_

7  $(5 + 2) + 6 = (3 + 4) + 6$

\_\_\_\_\_ + 6 = \_\_\_\_\_ + 6

\_\_\_\_\_ = \_\_\_\_\_

8  $(5 \cdot 4) \cdot 3 = (10 \cdot 2) \cdot 3$

\_\_\_\_\_  $\cdot$  3 = \_\_\_\_\_  $\cdot$  3

\_\_\_\_\_ = \_\_\_\_\_

## Practice: Skills

Find the value of the box or the variable by modeling the equation.

1  $3 + \square = 8$

$\square = \underline{\hspace{2cm}}$



2  $15 - n = 9$

$n = \underline{\hspace{2cm}}$



Find the value for the box or the variable in each equation.

3  $\square + 12 = 19$

$\square = \underline{\hspace{2cm}}$

4  $8 \times y = 24$

$y = \underline{\hspace{2cm}}$

5  $20 - a = 14$

$a = \underline{\hspace{2cm}}$

6  $\frac{y}{3} = 5$

$y = \underline{\hspace{2cm}}$

7  $7 + \square = 32$

$\square = \underline{\hspace{2cm}}$

8  $a \times 20 = 100$

$a = \underline{\hspace{2cm}}$

9  $y - 14 = 16$

$y = \underline{\hspace{2cm}}$

10  $\frac{x}{5} = 8$

$x = \underline{\hspace{2cm}}$

## Practice: Skills

Draw a model to show each equation.

- 1  $4 + 2 = 2 + 4$ . Which property did you show?

\_\_\_\_\_

- 2  $3 \cdot 5 = 5 \cdot 3$ . Which property did you show?

\_\_\_\_\_

Use the Commutative Properties to fill in each blank.

Check your answer.

3  $8 + 7 = \underline{\hspace{1cm}} + 8$

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

4  $5 + \underline{\hspace{1cm}} = 4 + 5$

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

5  $\underline{\hspace{1cm}} \cdot 9 = 9 \cdot 4$

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

6  $9 + 22 = 22 + \underline{\hspace{1cm}}$

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

7  $3 \cdot 5 = 5 \cdot \underline{\hspace{1cm}}$

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

8  $15 + \underline{\hspace{1cm}} = 45 + 15$

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

9  $\underline{\hspace{1cm}} \cdot 7 = 7 \cdot 11$

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

10  $2 \cdot 8 = \underline{\hspace{1cm}} \cdot 2$

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

## Practice: Skills

Draw a model to show  $(2 + 4) + 4 = 2 + (4 + 4)$ . Which property did you show?

1

\_\_\_\_\_

Draw two different arrays to show the equation  $(3 \cdot 5) \cdot 2 = 3 \cdot (5 \cdot 2)$ . Which property did you show?

2

\_\_\_\_\_

Use the Associative Properties to find each sum or product mentally.

3  $4 + 5 + 8$

$= (\underline{\quad} + \underline{\quad}) + \underline{\quad}$

$= \underline{\quad} + \underline{\quad}$

$= \underline{\quad}$

4  $7 \cdot 2 \cdot 3$

$= (\underline{\quad} \cdot \underline{\quad}) \cdot \underline{\quad}$

$= \underline{\quad} \cdot \underline{\quad}$

$= \underline{\quad}$

5  $8 + 1 + 12$

$= (\underline{\quad} + \underline{\quad}) + \underline{\quad}$

$= \underline{\quad} + \underline{\quad}$

$= \underline{\quad}$

6  $6 \times 2 \times 5$

$= (\underline{\quad} \cdot \underline{\quad}) \cdot \underline{\quad}$

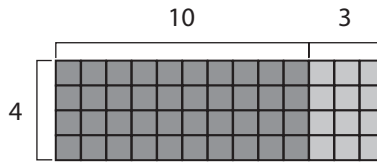
$= \underline{\quad} \cdot \underline{\quad}$

$= \underline{\quad}$

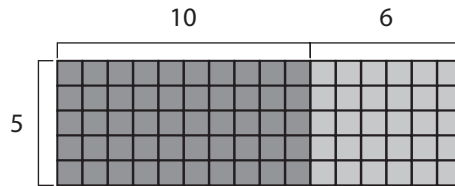
# Practice: Skills

Use the Distributive Property and a model to find each product.

1  $13 \cdot 4 = \underline{\hspace{2cm}}$



2  $16 \cdot 5 = \underline{\hspace{2cm}}$



Use the Distributive Property to find each product.

3  $3(4 + 8)$   
 $= \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$   
 $= \underline{\hspace{2cm}}$

4  $4(x + 7)$   
 $= \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$   
 $= \underline{\hspace{2cm}}$

5  $10(12 + 2)$   
 $= \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$   
 $= \underline{\hspace{2cm}}$

6  $9(3 - b)$   
 $= \underline{\hspace{2cm}} - \underline{\hspace{2cm}}$   
 $= \underline{\hspace{2cm}}$

7  $9(11 - 5)$   
 $= \underline{\hspace{2cm}} - \underline{\hspace{2cm}}$   
 $= \underline{\hspace{2cm}}$

8  $2(15 + 4)$   
 $= \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$   
 $= \underline{\hspace{2cm}}$

9  $8(z + 11)$   
 $= \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$   
 $= \underline{\hspace{2cm}}$

10  $7(14 - 9)$   
 $= \underline{\hspace{2cm}} - \underline{\hspace{2cm}}$   
 $= \underline{\hspace{2cm}}$

**Practice: Skills**

Name the step that should be performed first in each expression.

1  $8 \cdot 6 \div (4 + 2) - 4^2$

\_\_\_\_\_

2  $3 \cdot 6 + 3^2 + 9 \div 3$

\_\_\_\_\_

3  $1 \div 5 - 3 + 2 \cdot 6$

\_\_\_\_\_

4  $9 - 2 + (12 \cdot 6) + 9$

\_\_\_\_\_

5  $8 \cdot 6^2 \div 12 - 2 \cdot 6$

\_\_\_\_\_

6  $10 \div 2 \cdot 5 - 1 + 4$

\_\_\_\_\_

Find the value of each expression.

7  $4 \cdot (2 + 6) - 30 + 4^2$

parentheses:  $4 \cdot \underline{\hspace{1cm}} - 30 + 4^2$ exponents:  $4 \cdot \underline{\hspace{1cm}} - 30 + \underline{\hspace{1cm}}$ multiply/divide:  $\underline{\hspace{1cm}} - 30 + \underline{\hspace{1cm}}$ add/subtract:  $\underline{\hspace{1cm}} + \underline{\hspace{1cm}}$ 

\_\_\_\_\_

8  $9 + 7 \cdot 2 - 3^2 + (1 \cdot 8)$

parentheses:  $9 + 7 \cdot 2 - 3^2 + \underline{\hspace{1cm}}$ exponents:  $9 + 7 \cdot 2 - \underline{\hspace{1cm}} + \underline{\hspace{1cm}}$ multiply/divide:  $9 + \underline{\hspace{1cm}} - \underline{\hspace{1cm}} + \underline{\hspace{1cm}}$ add/subtract:  $\underline{\hspace{1cm}} - \underline{\hspace{1cm}} + \underline{\hspace{1cm}}$ 

\_\_\_\_\_

9  $7 - 4 \div 2 + 5^2$

\_\_\_\_\_

10  $12 \div 4 \cdot 2^2 - (3 + 2)$

\_\_\_\_\_

11  $14 \cdot 2 \div (8 - 4) + 9$

\_\_\_\_\_

12  $10 - (2 + 4) + 2 \cdot 5$

\_\_\_\_\_



## Practice: Skills

Write three different expressions for each constant term and variable.

- 1 Constant term: 7 Variable:  $f$  \_\_\_\_\_  
 2 Constant term: 3 Variable:  $g$  \_\_\_\_\_

List the variable, constant, and coefficient in each expression.

- |    |                     |                    |    |                     |                    |
|----|---------------------|--------------------|----|---------------------|--------------------|
| 3  | $3x + 4$            | variable: _____    | 4  | $7p - 12$           | variable: _____    |
|    |                     | constant: _____    |    |                     | constant: _____    |
|    |                     | coefficient: _____ |    |                     | coefficient: _____ |
| 5  | $\frac{r}{5} + 8$   | variable: _____    | 6  | $13 - 9b$           | variable: _____    |
|    |                     | constant: _____    |    |                     | constant: _____    |
|    |                     | coefficient: _____ |    |                     | coefficient: _____ |
| 7  | $2t + 1$            | variable: _____    | 8  | $m - 3$             | variable: _____    |
|    |                     | constant: _____    |    |                     | constant: _____    |
|    |                     | coefficient: _____ |    |                     | coefficient: _____ |
| 9  | $-4l + 20$          | variable: _____    | 10 | $\frac{-s}{8} - 14$ | variable: _____    |
|    |                     | constant: _____    |    |                     | constant: _____    |
|    |                     | coefficient: _____ |    |                     | coefficient: _____ |
| 11 | $-11 - \frac{q}{6}$ | variable: _____    | 12 | $\frac{i}{4} + 2$   | variable: _____    |
|    |                     | constant: _____    |    |                     | constant: _____    |
|    |                     | coefficient: _____ |    |                     | coefficient: _____ |

Write an expression for each set of terms.

- |    |                     |       |    |                       |       |
|----|---------------------|-------|----|-----------------------|-------|
| 13 | $5r$ and 17         | _____ | 14 | $6t$ and 1            | _____ |
| 15 | $\frac{x}{3}$ and 2 | _____ | 16 | $9u$ and 11           | _____ |
| 17 | $n$ and 4           | _____ | 18 | 6 and $8a$            | _____ |
| 19 | $7l$ and 5          | _____ | 20 | $\frac{p}{10}$ and 12 | _____ |

## Practice: Skills

For each phrase, name the operation.

- |                                      |   |
|--------------------------------------|---|
| 1 the sum of $b$ and 8 _____         | 2 $r$ divided by 10 _____                     |
| 3 the difference of 22 and $p$ _____ | 4 5 times $y$ _____                           |
| 5 100 decreased by $m$ _____         | 6 24 separated into $c$ equal groups<br>_____ |

Translate each phrase to an expression.

- |                                    |  |
|------------------------------------|--|
| 7 a number minus 9 _____           | 8 7 times a number _____                 |
| 9 product of 15 and a number _____ | 10 a number divided by 2 _____           |
| 11 42 minus a number _____         | 12 sum of a number and 33 _____          |
| 13 48 divided by a number _____    | 14 8 added to a number _____             |
| 15 twice a number _____            | 16 14 less than a number _____           |
| 17 22 more than a number _____     | 18 the quotient of a number and 64 _____ |
| 19 take away 1 from a number _____ | 20 a number divided by 3 _____           |

Write an expression to represent each situation.

- 21 Lisa found 15 more shells today.  
\_\_\_\_\_
- 22 Dario earned \$6 for each hour of work.  
\_\_\_\_\_
- 23 Tyra gave 3 dolls to her little sister.  
\_\_\_\_\_
- 24 Ting ran 5 miles each day.  
\_\_\_\_\_
- 25 Odina drove 2,000 miles in equal shifts.  
\_\_\_\_\_
- 26 Rajeev bought some CDs that were \$16 each.  
\_\_\_\_\_

## Practice: Skills

Name the like terms in each expression.

- 1  $5n + 2 + 13 + n$  \_\_\_\_\_
- 2  $12 + 9s^2 - 1 + 8s^2$  \_\_\_\_\_
- 3  $4z + 20 - 3z + 10z$  \_\_\_\_\_
- 4  $7l + 3l^2 + 8l + l^2 - 6$  \_\_\_\_\_
- 5  $3f^2 + 11f + 2 - 4f - 1 + 7f^2$  \_\_\_\_\_
- 6  $6g^2 + 15g - 9 + 9g^2$  \_\_\_\_\_
- 7  $14y + 9 - 2 + y$  \_\_\_\_\_
- 8  $12w + 4 - 2 + 8 + 3$  \_\_\_\_\_
- 9  $8h + h + 16 - 6$  \_\_\_\_\_
- 10  $12p^2 + 5p - 3p^2 + 18 + 4p - 9$  \_\_\_\_\_

Combine each pair of terms, if possible.

- |                             |                              |
|-----------------------------|------------------------------|
| 11 $3x$ and $8x$ _____      | 12 $18l^2$ and $15j^2$ _____ |
| 13 $4y^2$ and $11x^2$ _____ | 14 $19$ and $52$ _____       |
| 15 $5$ and $100$ _____      | 16 $2r^2$ and $22r^2$ _____  |
| 17 $9n$ and $n$ _____       | 18 $31$ and $7b$ _____       |

Simplify each expression.

- |                                   |  |
|-----------------------------------|--|
| 19 $4t + 18 + 10t - 3 + 8$ _____  | 20 $3d + 17d$ _____                      |
| 21 $8a + 15 - 6 + 3a$ _____       | 22 $12u^2 + 5u + u - 4 + 3u^2 - 4$ _____ |
| 23 $3y^2 + 5y - 2 + 5y + 3$ _____ | 24 $c^2 + 10c + 7 - 3c + 4c^2 + 3$ _____ |
| 25 $9k + 6k + 14 - 3k - 7$ _____  | 26 $2g + 5g^2 + 6 + 2g - 9$ _____        |
| 27 $7r + 8 - 2r - 15$ _____       | 28 $8m^2 + 4m - m^2 + 6m + 5 - 1$ _____  |

## Practice: Skills

Identify the operation to be done first.

- 1  $70 \div 10 \cdot 8$  \_\_\_\_\_
- 2  $(31 - 17) \cdot 4 + 9$  \_\_\_\_\_
- 3  $18 - 6 + 27$  \_\_\_\_\_
- 4  $3 + 5^2 + 1 - 6$  \_\_\_\_\_
- 5  $13 \cdot (3 + 22)$  \_\_\_\_\_
- 6  $5 + 8 + 7 + 12 - 4$  \_\_\_\_\_
- 7  $19 - 4 + 9 \div 3$  \_\_\_\_\_
- 8  $9 + 2 + 3 + 11 \cdot 2$  \_\_\_\_\_

Write each expression after replacing the  $\square$  with 8. Evaluate.

- |                                     |  |
|-------------------------------------|--|
| 9 $21 + \square$ _____              | 10 $64 \div \square$ _____                   |
| 11 $5 \cdot \square$ _____          | 12 $\square + 14$ _____                      |
| 13 $\square \div 2$ _____           | 14 $36 - \square$ _____                      |
| 15 $2 \cdot \square + 17$ _____     | 16 $56 - 4 \cdot \square$ _____              |
| 17 $80 - 3 \cdot \square + 5$ _____ | 18 $3 \cdot \square + 24 \div \square$ _____ |

Evaluate each expression when  $a = 3$ ,  $b = 4$ ,  $c = 5$ , and  $d = 7$ .

- |  |  |
|--|--|
| 19 $8a + b^2 - (55 \div c)$ _____      | 20 $3d - b + 6 - a^2$ _____                      |
| 21 $(18 + d) + 12 \cdot (c - b)$ _____ | 22 $10b + c^2 - (16 - 7)$ _____                  |
| 23 $12 - b \div 2 + (b + c)^2$ _____   | 24 $9b \div 6 + 15 + (a \cdot b)^2$ _____        |
| 25 $(11c - 10a) \div c + 42$ _____     | 26 $b + 6d - (a \cdot b) + a^2$ _____            |
| 27 $10 - c + 12 - b + 9d$ _____        | 28 $14 + a^2 \cdot d - 6 + (b \div 2) - 8$ _____ |

# 4-1 Practice: Skills

Write the operation in each sentence.

- 1 The product of 5 and a number is 45.
- 2 The difference between 23 and a number is 12.
- 3 Six more than a number is 30.
- 4 The quotient of 40 and a number is 8.

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Who is correct?

- 5 There are a total of 36 pieces of fruit.  
There are 6 more apples than oranges.

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*Andrew*

$$a + 0 = 36$$

$$a = 0 + 6$$

*Edgar*

$$a + 36 = 0$$

$$a = 0 + 6$$

- 6 There are 10 more boys than girls in the band.  
Altogether there are 56 band members.

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*Sara*

$$g + b = 56$$

$$g = b + 10$$

*Paka*

$$g + b = 56$$

$$b = g + 10$$

Translate each sentence into an equation.

- 7 Three less than a number is 8.
- 8 A number increased by 15 is 27.
- 9 Forty-eight divided by a number is 16.
- 10 Seven less than twice a number is 9.
- 11 Twenty-eight divided into  $y$  equal groups is 7.

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# 4-2 Practice: Skills

Draw a model to represent the equation. Solve the equation.

1  $x + 4 = 9$

$x = \underline{\hspace{2cm}}$



Find four solutions of each equation. Show each solution in a table of ordered pairs.

2  $y = x + 1$

x	$y = x + 1$	y	(x, y)
-1	$y = -1 + 1$	0	(-1, 0)
0			
1			
2			

3  $y = x - 2$

x	$y = x - 2$	y	(x, y)
-1	$y = -1 - 2$	-3	(-1, -3)
0			
1			
2			

Solve.

4  $t - 10 = 6$

$t = \underline{\hspace{2cm}}$

6  $9 = h - 2$

$h = \underline{\hspace{2cm}}$

8  $x + 3 = 7$

$x = \underline{\hspace{2cm}}$

5  $n + 5 = 17$

$n = \underline{\hspace{2cm}}$

7  $14 = y + 1$

$y = \underline{\hspace{2cm}}$

9  $8 = u - 1$

$u = \underline{\hspace{2cm}}$

Who Is Correct?

- 10  $h - 5 = 6$ ; if  $h = 11$ , show how to check the answer using inverse operations. Who is correct?

\_\_\_\_\_

- 11  $x + 7 = 20$ ; if  $x = 13$ , show how to check the answer using inverse operations. Who is correct?

\_\_\_\_\_

Maria

$$\begin{aligned} h - 5 &= 6 \\ h - 5 &= 6 + 11 \end{aligned}$$

Galine

$$\begin{aligned} h - 5 &= 6 \\ 11 - 5 &= 6, \\ \text{so } 6 + 5 &= 11 \end{aligned}$$

Elle

$$\begin{aligned} h - 5 &= 6 \\ 11 - 5 &= 6 \end{aligned}$$

Peyton

$$\begin{aligned} x + 7 &= 20 \\ 13 + 7 &= 20, \\ \text{so } 20 - 7 &= 13 \end{aligned}$$

Hunter

$$\begin{aligned} x + 7 &= 20 \\ 13 + 7 &= 20 \end{aligned}$$

Shiro

$$\begin{aligned} x + 7 &= 20 \\ x + 7 &= 20 - 13 \end{aligned}$$

# 4-3 Practice: Skills

Solve each equation.

1  $\frac{k}{7} = 3$

$k =$  \_\_\_\_\_

2  $8z = 24$

$z =$  \_\_\_\_\_

3  $9w = 54$

$w =$  \_\_\_\_\_

4  $\frac{x}{2} = 8$

$x =$  \_\_\_\_\_

Find four solutions of each equation. Show each solution in a table of ordered pairs.

5  $y = 2x$

$x$	$y = 2x$	$y$	$(x, y)$
-1	$y = 2(-1)$	-2	$(-1, -2)$
0			
1			
2			

6  $y = \frac{x}{2}$

$x$	$y = \frac{x}{2}$	$y$	$(x, y)$
-1	$y = -1 \div 2$	-0.5	$(-1, -0.5)$
0			
1			
2			

Who Is Correct?

- 7 Solve the equation  $9x = 18$ .  
Who is correct?

\_\_\_\_\_

- 8 Solve the equation  $\frac{f}{2} = 6$ .  
Who is correct?

\_\_\_\_\_

Alaina

$$\begin{aligned} 9x &= 18 \\ 9x \cdot 9 &= 18 \cdot 9 \\ x &= 162 \end{aligned}$$

Michael

$$\begin{aligned} 9x &= 18 \\ 9x - 9 &= 18 - 9 \\ x &= 9 \end{aligned}$$

Christopher

$$\begin{aligned} 9x &= 18 \\ 9x \div 9 &= 18 \div 9 \\ x &= 2 \end{aligned}$$

Amber

$$\begin{aligned} \frac{f}{2} &= 6 \\ \frac{f}{2} \div 2 &= 6 \div 2 \\ f &= 3 \end{aligned}$$

Ramiro

$$\begin{aligned} \frac{f}{2} &= 6 \\ \frac{f}{2} \times 2 &= 6 \times 2 \\ f &= 12 \end{aligned}$$

Maurice

$$\begin{aligned} \frac{f}{2} &= 6 \\ \frac{f}{2} + 2 &= 6 + 2 \\ f &= 8 \end{aligned}$$

# 4-4 Practice: Skills

Write the operations in the order that should be used to solve each equation.

1  $5x - 4 = 42$

\_\_\_\_\_

2  $3k + 2 = 23$

\_\_\_\_\_

3  $\frac{v}{2} + 6 = 11$

\_\_\_\_\_

4  $\frac{n}{4} - 1 = 2$

\_\_\_\_\_

## Who Is Correct?

- 5 Solve the equation  $3n - 7 = 17$ .  
Who is correct?

\_\_\_\_\_

Ima
$3n - 7 = 17$
$3n - 7 + 7 = 17 + 7$
$3n = 24$
$3n/3 = 24/3$
$n = 8$

George
$3n - 7 = 17$
$3n - 7 - 7 = 17 - 7$
$3n = 10$
$3n - 3 = 10 - 3$
$n = 7$

Carol
$3n - 7 = 17$
$3n - 7 + 7 = 17 + 7$
$3n = 24$
$3n - 3 = 24 - 3$
$n = 21$

- 6 Solve the equation  $\frac{x}{2} + 1 = 7$ .  
Who is correct?

\_\_\_\_\_

Phillip
$\frac{x}{2} + 1 = 7$
$\frac{x}{2} + 1 + 1 = 7 + 1$
$\frac{x}{2} = 8$
$\frac{x}{2} \times 2 = 8 \times 2$
$x = 16$

Monica
$\frac{x}{2} + 1 = 7$
$\frac{x}{2} + 1 - 1 = 7 - 1$
$\frac{x}{2} = 6$
$\frac{x}{2} \div 2 = 6 \div 2$
$x = 3$

Cho
$\frac{x}{2} + 1 = 7$
$\frac{x}{2} + 1 - 1 = 7 - 1$
$\frac{x}{2} = 6$
$\frac{x}{2} \times 2 = 6 \times 2$
$x = 12$

## Solve.

7  $7y + 5 = 33$

$y =$  \_\_\_\_\_

9  $\frac{b}{8} + 7 = 9$

$b =$  \_\_\_\_\_

11  $2m + 3 = 17$

$m =$  \_\_\_\_\_

8  $3a - 8 = 7$

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

10  $\frac{n}{5} + 3 = 5$

$n =$  \_\_\_\_\_

12  $\frac{v}{2} - 1 = 6$

$v =$  \_\_\_\_\_



**4-5 Practice: Skills**

Write each fraction as a decimal.

1  $\frac{7}{10} =$  \_\_\_\_\_

2  $\frac{3}{5} =$  \_\_\_\_\_

3  $\frac{4}{5} =$  \_\_\_\_\_

4  $\frac{41}{100} =$  \_\_\_\_\_

5  $\frac{33}{100} =$  \_\_\_\_\_

6  $\frac{5}{8} =$  \_\_\_\_\_

Write each percent as a decimal.

7  $24\% =$  \_\_\_\_\_

8  $90\% =$  \_\_\_\_\_

9  $11.5\% =$  \_\_\_\_\_

10  $75\% =$  \_\_\_\_\_

11  $68\% =$  \_\_\_\_\_

12  $8\% =$  \_\_\_\_\_

13  $50\% =$  \_\_\_\_\_

14  $43\% =$  \_\_\_\_\_

Write each fraction as a percent. Round to the nearest hundredth.

15  $\frac{2}{5}$  \_\_\_\_\_

16  $\frac{2}{8}$  \_\_\_\_\_

17  $\frac{2}{6}$  \_\_\_\_\_

18  $\frac{2}{3}$  \_\_\_\_\_

19  $\frac{3}{15}$  \_\_\_\_\_

20  $\frac{4}{9}$  \_\_\_\_\_

## Practice: Skills

Write the symbol that should be used for each inequality.

- 1 Twenty is less than a number. \_\_\_\_\_
- 2 A number is less than or equal to 15. \_\_\_\_\_
- 3 Three times a number minus 6 is not equal to 9. \_\_\_\_\_
- 4 The quotient of a number and 9 is greater than 3. \_\_\_\_\_

Who is Correct?

- 5 A class is asked to write an inequality for the following sentence. \_\_\_\_\_  
A number divided by 4 is not equal to 5. Who is correct?

Igor	Arnold	Owen
$\frac{n}{4} \leq 5$	$\frac{n}{4} > 5$	$\frac{n}{4} \neq 5$

- 6 A class is asked to write an inequality for the following sentence. \_\_\_\_\_  
Twelve is less than the product of a number and three. Who is correct?

Daphne	Ben	Gene
$12 < 3n$	$12 < n + 3$	$12 \leq 3n$

Translate each sentence to an inequality.

- 7 The quotient of 12 and a number is less than 3. \_\_\_\_\_
- 8 Six is greater than or equal to a number. \_\_\_\_\_
- 9 A number plus 8 is not equal to 10. \_\_\_\_\_
- 10 A number times 5 minus 1 is less than or equal to 9. \_\_\_\_\_
- 11 A number divided by 2 plus 7 is more than 15. \_\_\_\_\_
- 12 The product of 4 and a number plus 12 is not equal to 40. \_\_\_\_\_

# Practice: Skills

Write the operation that should be used for each inequality.

- 1  $n - 4 \leq 23$  \_\_\_\_\_      2  $x + 8 > 12$  \_\_\_\_\_  
 3  $31 < h + 9$  \_\_\_\_\_      4  $2 \geq p - 11$  \_\_\_\_\_

**Who is Correct?**

- 5 Solve the inequality  $x - 1 < 12$ . Who is correct? \_\_\_\_\_

Edgar

$$x - 1 < 12$$

$$x - 1 - 1 < 12 - 1$$

$$x < 11$$

Debra

$$x - 1 < 12$$

$$x - 1 + 1 < 12 + 1$$

$$x < 13$$

Patricia

$$x - 1 < 12$$

$$x < 12$$

- 6 Solve the inequality  $6 \geq y - 5$ . Who is correct? \_\_\_\_\_

Stella

$$6 \geq y - 5$$

$$y \geq 6 - 5$$

$$y \geq 1$$

Tamera

$$6 \geq y - 5$$

$$6 - 5 \geq y$$

$$1 \geq y$$

Vlad

$$6 \geq y - 5$$

$$6 + 5 \geq y - 5 + 5$$

$$11 \geq y$$

- 7 Solve the inequality  $n + 1 > 7$ . Who is correct? \_\_\_\_\_

Faith

$$n + 1 > 7$$

$$n + 1 - 1 > 7$$

$$n > 7$$

Akio

$$n + 1 > 7$$

$$n + 1 + 1 > 7 + 1$$

$$n > 8$$

Deshi

$$n + 1 > 7$$

$$n + 1 - 1 > 7 - 1$$

$$n > 6$$

**Solve.**

- 8  $m + 7 < 24$       9  $x - 10 \geq 14$       10  $7 \leq n + 2$   
 $m < \underline{\hspace{2cm}}$        $x \geq \underline{\hspace{2cm}}$        $\underline{\hspace{2cm}} \leq n$   
 11  $h + 3 < 15$       12  $x + 6 > 6$       13  $5 \geq k - 7$   
 $h < \underline{\hspace{2cm}}$        $x > \underline{\hspace{2cm}}$        $\underline{\hspace{2cm}} \geq k$

# Practice: Skills

Write the operation that should be used to solve each inequality.

1  $9a \geq 45$  \_\_\_\_\_

2  $\frac{f}{2} \leq 7$  \_\_\_\_\_

3  $\frac{a}{6} > 24$  \_\_\_\_\_

4  $10n < 50$  \_\_\_\_\_

## Who is Correct?

5 Solve the inequality  $2p \leq 10$ . Who is correct? \_\_\_\_\_

Julie  
 $2p \leq 10$   
 $\frac{2p}{10} \leq \frac{10}{10}$   
 $p \leq 1$

Raymond  
 $2p \leq 10$   
 $\frac{2p}{2} \leq \frac{10}{2}$   
 $p \leq 5$

Tipene  
 $2p \leq 10$   
 $2p \cdot 2 \leq 10 \cdot 2$   
 $p \leq 20$

6 Solve the inequality  $\frac{c}{11} > 8$ . Who is correct? \_\_\_\_\_

Nadia  
 $\frac{c}{11} > 8$   
 $\frac{c}{11} \cdot 11 > 8 \cdot 11$   
 $c > 88$

Mandy  
 $\frac{c}{11} > 8$   
 $\frac{c}{11} \cdot 8 > 8 \cdot 8$   
 $c > 64$

Vincent  
 $\frac{c}{11} > 8$   
 $\frac{c}{11} \div 11 > 8 \div 11$   
 $c > \frac{8}{11}$

## Solve.

7  $\frac{x}{12} \geq 3$   
 $x \geq$  \_\_\_\_\_

8  $11h < 22$   
 $h <$  \_\_\_\_\_

9  $5n < 15$   
 $n <$  \_\_\_\_\_

10  $\frac{y}{3} \leq 6$   
 $y \leq$  \_\_\_\_\_

11  $3y \geq 27$   
 $y \geq$  \_\_\_\_\_

12  $\frac{h}{7} < 12$   
 $h <$  \_\_\_\_\_

# Practice: Skills

Write the operations in the order that should be used to solve each inequality.

- 1  $5n - 7 < 8$  \_\_\_\_\_
- 2  $19 \geq 3q + 4$  \_\_\_\_\_
- 3  $\frac{x}{2} + 1 \leq 6$  \_\_\_\_\_
- 4  $\frac{f}{6} > -23$  \_\_\_\_\_

## Who is Correct?

- 5 Solve the inequality  $7n - 4 \geq 10$ . Who is correct? \_\_\_\_\_

Tito	Robert	Miranda
$7n - 4 \geq 10$	$7n - 4 \geq 10$	$7n - 4 \geq 10$
$7n - 4 + 4 \geq 10 + 4$	$7n - 4 - 4 \geq 10 - 4$	$7n - 4 + 4 \geq 10 + 4$
$7n \geq 14$	$7n \geq 6$	$7n \geq 14$
$7n \div 7 \geq 14 \div 7$	$7n \cdot 7 \geq 6 \cdot 7$	$7n \div 7 \geq 14$
$n \geq 2$	$n \geq 42$	$n \geq 14$

- 6 Solve the inequality  $\frac{m}{3} + 2 > 6$ . Who is correct? \_\_\_\_\_

Serena	Ben	Sally
$\frac{m}{3} + 2 > 6$	$\frac{m}{3} + 2 > 6$	$\frac{m}{3} + 2 > 6$
$\frac{m}{3} + 2 + 2 > 6 + 2$	$\frac{m}{3} + 2 - 2 > 6 - 2$	$\frac{m}{3} \cdot 3 + 2 > 6 \cdot 3$
$\frac{m}{3} > 8$	$\frac{m}{3} > 4$	$\frac{m}{3} + 2 > 18$
$\frac{m}{3} \cdot 8 > 8 \cdot 3$	$\frac{m}{3} \cdot 3 > 4 \cdot 3$	$\frac{m}{3} + 2 - 2 > 18 - 2$
$m > 24$	$m > 12$	$m > 16$

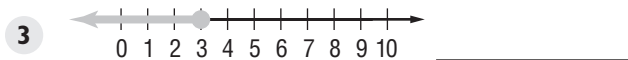
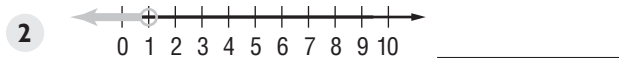
## Solve.

- 7  $8m + 5 \leq 29$   
 $m \leq$  \_\_\_\_\_
- 8  $2n - 7 > 11$   
 $n >$  \_\_\_\_\_
- 9  $\frac{x}{4} - 1 > 6$   
 $x \geq$  \_\_\_\_\_
- 10  $6 \leq 5 + \frac{q}{8}$   
\_\_\_\_\_  $\leq q$

**Lesson**  
**5-5**

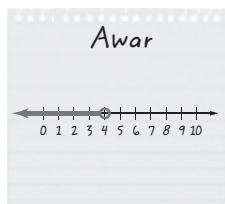
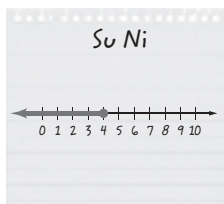
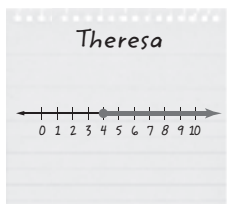
# Practice: Skills

Write an inequality for each graph.



Who is Correct?

5 Graph the inequality  $t \leq 4$ . Who is correct?



Graph each inequality.

