

**Activity**  
**7.3****Start Thinking!**  
For use before Activity 7.3

Write a problem that can be modeled with the equation  $x + 4 = 12$ . Be sure to provide all the necessary information.

**Activity**  
**7.3****Warm Up**  
For use before Activity 7.3

**Solve the equation. Check your solution.**

1.  $x + 7 = 10$

2.  $y + 13 = 21$

3.  $z + 3 = 27$

4.  $a - 12 = 16$

5.  $b - 9 = 4$

6.  $15 = c - 1$

**Lesson  
7.3****Start Thinking!**

For use before Lesson 7.3

Explain how to use the distance formula ( $d = rt$ ) to find your average rate getting to school in the morning. Be sure to include units in your explanation.

**Lesson  
7.3****Warm Up**

For use before Lesson 7.3

**Solve the equation. Check your solution.**

1.  $5x = 205$

2.  $16 = 8w$

3.  $77 = 7b$

4.  $7 = v \div 6$

5.  $30 = p \div 2$

6.  $k \div 4 = 26$

## 7.3 Practice A

Solve the equation. Check your solution.

1.  $\frac{x}{2} = 9$
2.  $4 = \frac{t}{4}$
3.  $\frac{3w}{20} = 12$
4.  $5s \div 7 = 30$
5.  $5a = 15$
6.  $8 \cdot d = 40$
7.  $60 = 20m$
8.  $7g = 14$
9.  $9y = 72$
10.  $3 \cdot n = 63$
11.  $4 = \frac{v}{11}$
12.  $\frac{c}{7} = 5$
13.  $\frac{5b}{2} = 27.5$
14.  $2h \div 15 = 20$
15.  $24k = 60$
16.  $210 = 7r$

Describe and correct the error in solving the equation.

17.  $\times$

$$\frac{x}{9} = 3$$

$$9 \cdot \frac{x}{9} = 3$$

$$x = 3$$

18.  $\times$

$$4 \cdot z = 32$$

$$\frac{4 \cdot z}{4} = 4 \cdot 32$$

$$z = 128$$

19. A teacher tells 36 students to form 4 equal groups. Write and solve a multiplication equation to find how many students  $s$  there should be in each group.
20. You have been saving \$12 each week for many weeks. One day, you decide to count your savings and find that you have \$384. Write and solve a multiplication equation to find how many weeks  $w$  you have been saving.
21. A 14-inch pepperoni pizza is sliced into 8 equal pieces. One slice contains 352 calories. Write and solve a division equation to find how many calories  $c$  there are in the whole pizza.
22. In a cheerleading competition, each team receives scores in eight categories. One team has a mean score of 7.25 in the eight categories. Write and solve an equation to find the team's total score  $s$ .
23. Write and solve an equation to find the width  $w$  of the rectangle. Explain how you know what units to use with the answer.

$$\text{Area} = 576 \text{ cm}^2$$



36 cm

# 7.3

## Practice B

Solve the equation. Check your solution.

1.  $6a = 78$

2.  $7 = \frac{s}{20}$

3.  $96 = 24p$

4.  $5g \div 18 = 30$

5.  $\frac{4v}{27} = 16$

6.  $13 \cdot x = 84.5$

7.  $\frac{3c}{8.1} = 22.8$

8.  $12.4b = 117.8$

Solve for  $x$ . Check your answer.

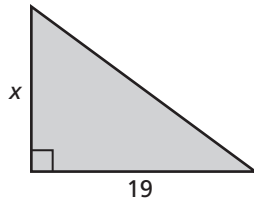
9. Rectangle

Area = 84 square units



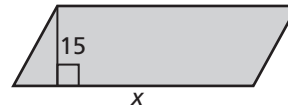
10. Triangle

Area = 133 square units



11. Parallelogram

Area = 75 square units

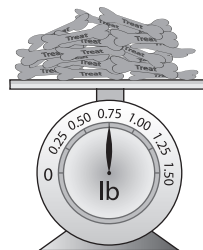


12. You want to know the side length of the square swimming pool. Explain how you can use the perimeter. Then find the side length to the nearest yard.

Perimeter = 100 yards



13. Your family has a car with a 15-gallon gas tank. Find the price of one gallon of gas in your area. Then write and solve a division equation to find the price  $p$  to fill the car's gas tank when it is empty.
14. Using a special discount, you download 15 songs for \$10.68. The regular price of each song is \$0.89. What is the percent of the discount?
15. In a cranberry punch recipe, four cups of cranberry juice and one quart of pineapple juice make up half of the punch. How many cups of punch does the recipe make?
16. You buy dog biscuits at the bulk rate price of \$2.25 per pound. The scale shows the weight of 25 biscuits. Find the cost of 40 biscuits. Explain how you found your answer.



## 7.3 Enrichment and Extension

### Writing Repeating Decimals as Fractions

**Example:** Write  $0.\overline{21}$  as a fraction.

**Step 1:** Let  $x = 0.\overline{21}$  or  $0.212121\dots$

**Step 2:** Because the decimal has 2 repeating digits, multiply each side of  $x = 0.212121\dots$  by  $10^2$ , or 100.

$$x = 0.212121\dots \quad \text{Write equation.}$$

$$100x = 21.212121\dots \quad \text{Multiply each side by 100.}$$

**Step 3:** Subtract  $x$  from  $100x$ .

$$100x = 21.212121\dots \quad \text{Write equation.}$$

$$\underline{-x = 0.212121\dots} \quad \text{Subtract } x.$$

$$99x = 21 \quad \text{Simplify.}$$

**Step 4:** Solve for  $x$ .

$$99x = 21 \quad \text{Write equation.}$$

$$\frac{99x}{99} = \frac{21}{99} \quad \text{Divide each side by 99.}$$

$$x = \frac{21}{99}, \text{ or } \frac{7}{33} \quad \text{Simplify.}$$

So,  $0.\overline{21}$  is equivalent to  $\frac{7}{33}$ .

**Write the decimal as a fraction or mixed number.**

1.  $0.\overline{7}$

2.  $0.\overline{6}$

3.  $0.\overline{36}$

4.  $0.\overline{51}$

5.  $0.\overline{43}$

6.  $0.\overline{09}$

7.  $4.\overline{89}$

8.  $0.\overline{735}$

9.  $0.\overline{029}$

10. How can you use the method shown above to write the decimal  $0.\overline{23}$  as a fraction? Explain.

# 7.3 Puzzle Time

## What Did The Dirt Say When It Began To Rain?

A	B	C	D	E	F
G	H	I	J	K	L
M	N	O	P		

Complete each exercise. Find the answer in the answer column. Write the word under the answer in the box containing the exercise letter.

7 NAME
56 WILL
54 IF
9 MUD
10 MY
13 WILL
2 CALLED
40 HEAVY

Solve the equation. Check your solution.

A.  $\frac{a}{9} = 6$

B.  $7 = \frac{z}{6}$

C.  $y \div 4 = 10$

D.  $25 = \frac{k}{5}$

E.  $2s = 16$

F.  $8 \cdot t = 96$

G.  $50 = 5x$

H.  $56 = 8k$

I.  $4b = 52$

J.  $39 = 6 \cdot c$

K.  $14 = n \div 5$

L.  $10 = v \div 6$

M.  $x \div 16 = 3.5$

N.  $\frac{w}{25} = 4.4$

O.  $11.5 \cdot d = 23$

P.  $4.5v = 40.5$

12 UP
6.5 CHANGE
125 RAIN
110 BE
42 THIS
8 KEEPS
60 I
70 AND