Name _____ Date _____ Class _____

Name the operation you use to solve each equation.
Do not solve.

1. $x + 8 = 12$ **2.** $y - 2 = 8$ **3.** $4x = 16$ **4.** $\frac{x}{2} = -1$

_____   _____   _____   _____

5. $3 + x = 7$ **6.** $y - 1 = 1$ **7.** $-x = 12$ **8.** $\frac{x}{-4} = 5$

_____   _____   _____   _____

Solve.

9. $x + 4 = 6$ **10.** $y - 3 = 1$ **11.** $4x = 12$ **12.** $\frac{x}{2} = 3$

_____   _____   _____   _____

13. $-4 + b = 3$ **14.** $\frac{x}{2} = 4$ **15.** $k + 1 = 9$ **16.** $5x = 15$

_____   _____   _____   _____

17. $r - 2 = 7$ **18.** $\frac{m}{2} = 7$ **19.** $6 + r = 11$ **20.** $d - 1 = -2$

_____   _____   _____   _____

21. $3x = -9$ **22.** $\frac{a}{6} = -2$ **23.** $\frac{w}{3} = -6$ **24.** $-6x = -6$

_____   _____   _____   _____

25. Josef saves the same amount each week for one year. At the
end of that time, he has $624. How much did he save each
week? (Hint: 1 year = 52 weeks.)

_____

26. Michelle earns $800 a week. How much will she earn in sixteen
weeks?

_____

Problem Solving
Multiplying and Dividing Integers

Write the correct answer.

1. A submersible started at the surface of the water and was moving down at −12 meters per minute toward the ocean floor. The submersible traveled at this rate for 32 minutes before coming to rest on the ocean floor. What is the depth of the ocean floor?

   −384 m

2. For the first week in January, the daily high temperatures in Bismarck, North Dakota, were 7°F, −10°F, −10°F, −7°F, 8°F, 12°F, and 14°F. What was the average daily high temperature for the week?

   2°F

3. Sally went golfing and recorded her scores as −2 on the first hole, −2 on the second hole, and 1 on the third hole. What is her average for the first three holes?

   −1

4. The ocean floor is at −96 m. Tom has reached −15 m. If he continues to move down at −3 m per minute, how far will he be from the ocean floor after 7 minutes?

   60 m

Use the table below to answer Exercises 5–7. Choose the letter for the best answer.

5. What is the caloric impact of 2 hours of in-line skating?

   A −477 Cal   C −583 Cal
   B −479 Cal   (D) −954 Cal

Calories Consumed or Burned	
Food or Exercise	**Calories**
Apple	125
Pepperoni pizza (slice)	181
Hamburger	425
Basketball (1hr)	−545
In-line skating (1 hr)	−477
Frisbee (1 hr)	−205

6. What is the caloric impact of eating a hamburger and then playing Frisbee for 3 hours?

   F 220 Cal   H 190 Cal
   (G) −190 Cal   J −220 Cal

7. Tim plays basketball for 1 hour, skates for 5 hours, and plays Frisbee for 4 hours. What is the average amount of calories Tim burns per hour?

   (A) −375 Cal   C −545 Cal
   B −1250 Cal   D −409 Cal

Holt Pre-Algebra

Puzzles, Twisters & Teasers
Divide and Conquer!

Decide whether or not each equation is correct. Circle the letters above your answers. Then solve the riddle.

1. $\frac{32}{-8} = 8$ F (correct)   (I) incorrect

2. $6(-7) = -42$ (T) correct   L incorrect

3. $-6(-5) = -30$ G correct   (M) incorrect

4. $9(-3) = -39$ H correct   (A) incorrect

5. $\frac{18}{-6} = -3$ (D) correct   K incorrect

6. $-3(8) = 26$ J correct   (E) incorrect

7. $\frac{-45}{9} = -5$ (W) correct   V incorrect

8. $-12(-4) = 48$ (B) correct   U incorrect

9. $4(-9) = 38$ Q correct   (P) incorrect

10. $-2(-6) = 12$ (G) correct   Y incorrect

What did the spider do on the computer?

I	T		M	A	D	E		A
1	2		3		5			

W	E	B		P	A	G	E
7		8		9	4	10	6

Holt Pre-Algebra

Exploration Recording Sheet
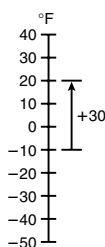*Solving Equations Containing Integers*

You can use a thermometer or a number line to model solving one-step equations with integers.

1. Suppose the temperature starts at −10°F and increases to 20°F during the day. Solve the equation −10 + x = 20 to find the temperature increase.
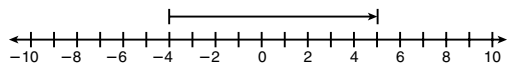
   x = 30

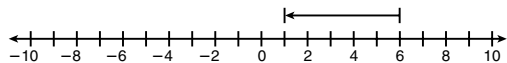2. Solve the equation −30 + x = 20 using the thermometer.

   x = 50

Use the number line to solve each equation.

3. −4 + x = 5   **x = 9**

4. 6 + x = 1   **x = −5**

Think and Discuss

5. **Explain** how you could use a number line to model the equations x + 9 = 5 and x + (−5) = 1.

   Possible answer: For x + 9 = 5, begin at 5 and go in a negative direction 9 units; for x + (−5) = 1, begin at 1 and go in a positive direction 5 units.

Holt Pre-Algebra

Practice A
Solving Equations Containing Integers

Name the operation you use to solve each equation. Do not solve.

1. $x + 8 = 12$ **subtract 8**
2. $y - 2 = 8$ **add 2**
3. $4x = 16$ **divide by 4**
4. $\frac{x}{2} = -1$ **multiply by 2**

5. $3 + x = 7$ **subtract 3**
6. $y - 1 = 1$ **add 1**
7. $-x = 12$ **multiply by −1**
8. $\frac{x}{-4} = 5$ **multiply by −4**

Solve.

9. $x + 4 = 6$ **x = 2**
10. $y - 3 = 1$ **y = 4**
11. $4x = 12$ **x = 3**
12. $\frac{x}{2} = 3$ **x = 6**

13. $-4 + b = 3$ **b = 7**
14. $\frac{x}{2} = 4$ **x = 8**
15. $k + 1 = 9$ **k = 8**
16. $5x = 15$ **x = 3**

17. $r - 2 = 7$ **r = 9**
18. $\frac{m}{2} = 7$ **m = 14**
19. $6 + r = 11$ **r = 5**
20. $d - 1 = -2$ **d = −1**

21. $3x = -9$ **x = −3**
22. $\frac{a}{6} = -2$ **a = −12**
23. $\frac{w}{3} = -6$ **w = −18**
24. $-6x = -6$ **x = 1**

25. Josef saves the same amount each week for one year. At the end of that time, he has $624. How much did he save each week? (Hint: 1 year = 52 weeks.)

   $12

26. Michelle earns $800 a week. How much will she earn in sixteen weeks?

   $12,800

Holt Pre-Algebra

Holt Pre-Algebra