

2-5**Practice**

Form K

Literal Equations and Formulas

Solve each equation for y . Then find the value of y for each value of x .

1. $y + 5x = 6; x = -1, 0, 1$
 $y = -5x + 6; 11, 6, 1$

2. $8x - 4y = -12; x = -3, -1, 1$
 $y = 2x + 3; -3, 1, 5$

3. $-3y = 2x - 9; x = -3, 0, 3$
 $y = -\frac{2}{3}x + 3; 5, 3, 1$

4. $5x = -y + 6; x = 1, 2, 3$
 $y = -5x + 6; 1, -4, -9$

5. $6y = -3x + 12; x = -4, -2, 0$
 $y = -\frac{1}{2}x + 2; 4, 3, 2$

6. $-5y + 10x = 5; x = -2, 0, 2$
 $y = 2x - 1; -5, -1, 3$

Solve each equation for p .

7. $xp + yp = z$ $\frac{z}{x+y}$

8. $n = \frac{p-k}{j}$ $nj + k$

9. $a = b + cp$ $\frac{a-b}{c}$

10. $\frac{p+3}{m} = -1$ $-m-3$

Solve each problem. Round to the nearest tenth, if necessary. Use 3.14 for π .

11. What is the width of a rectangle with length 25 in. and area 375 in.²? **15 in.**

12. What is the radius of a circle with circumference 5 cm? **0.8 cm**

13. A triangle has base 15 ft and area 60 ft². What is the height? **8 ft**

2-5

Practice (continued)

Form K

Literal Equations and Formulas

Solve each problem. Round to the nearest tenth, if necessary.

14. In baseball, a player's batting average is calculated by using the formula

$$\text{Average} = \frac{\text{Hits}}{\text{At Bats}}.$$
 Find the number of times a player has batted if he has

24 hits and a batting average of approximately 0.320. **75 at bats**

15. Dan drove 512 miles in 8 hours. What was his average speed for the trip? **64 mph**

Solve each equation for the given variable.

16. $-2z - xy = x + 7$ for x

$$x = \frac{2z + 7}{-y - 1}$$

17. $\frac{a}{b} - 8 = \frac{c}{d}$ for a

$$a = b\left(\frac{c}{d} + 8\right)$$

18. $6qr + 7rs - 2st = -9$ for r

$$r = \frac{-9 + 2st}{6q + 7s}$$

19. $p = \left(\frac{m + n}{-5}\right)$ for n

$$n = -5p - m$$

20. A large box shaped like a rectangular prism needs to be painted.

a. Write a formula for the area A to paint in terms of length l , width w , and height h . **$A = 2lw + 2lh + 2wh$**

b. Rewrite the formula to find l in terms of A , h , and w . **$l = \frac{A - 2wh}{2w + 2h}$**

c. If h is 36 in., w is 28 in. and A is 6112 in.², what is the length of the prism? **32 in.**