

## Formulas and Equations

Name \_\_\_\_\_  
Date \_\_\_\_\_

### Assignment 1.4

Substitute the given value of  $x$  into the equation. Then solve the equation for  $y$ .

1.  $7x - 3y = 6$ ,  $x = 3$

2.  $6x + 5y = -7$ ,  $x = -2$

3.  $xy = 12 + 3x$ ,  $x = 4$

4.  $\frac{2}{3}x = 2y - \frac{2}{5}$ ,  $x = -9$

5.  $\frac{2}{3}y + \frac{1}{2}x = 1$ ,  $x = 12$

6.  $x - 2y = 3xy + 1$ ,  $x = -2$

**Solve the equation for  $y$ .** Then find the value of  $y$  for the given value of  $x$ .

7.  $3x - 6y = 6$ ,  $x = 2$

8.  $-2x + 2 = 5y - 1$ ,  $x = 5$

9.  $2xy + 1 = xy + 3$ ,  $x = 2$

10.  $\frac{1}{2}x - y = \frac{3}{2}x - 3$ ,  $x = 7$

Solve the formula for the indicated variable.

11. Fahrenheit to Celsius Solve for  $F$ :  $C = \frac{5}{9}(F - 32)$

12. Perimeter of a Parallelogram Solve for  $b$ :  $P = 2b + 2s$

13. Perimeter of a Triangle Solve for  $c$ :  $P = a + b + c$

14. Area of a Rhombus Solve for  $d_1$ :  $A = \frac{1}{2}d_1d_2$

15. Area of a Trapezoid Solve for  $b_1$ :  $A = \frac{1}{2}(b_1 + b_2)h$

16. Volume of a Right Circular Cylinder Solve for  $h$ :  $V = \pi r^2 h$

17. Lateral Surface Area of a Right Circular Cylinder Solve for  $h$ :  $S = 2\pi rh$

18. Volume of a Right Circular Cone Solve for  $h$ :  $V = \frac{\pi r^2 h}{3}$

Solve the formula for the indicated variable. Then use the given information to find the value of the variable. Include units of measure in the answer.

19. Area of a Parallelogram Solve for  $h$ :  $A = bh$ .  
Find  $h$  when  $A=81\text{cm}^2$  and  $b=9$  cm.

20. Celsius to Fahrenheit Solve for  $C$ :  $F = \frac{9}{5}C + 32$ .  
Find  $C$  when  $F=77^\circ\text{F}$ .