

## Vocabulary and Concept Check

- VOCABULARY** Is  $-2x = \frac{3}{8}$  a literal equation? Explain.
- DIFFERENT WORDS, SAME QUESTION** Which is different? Find “both” answers.

Solve  $4x - 2y = 6$  for  $y$ .

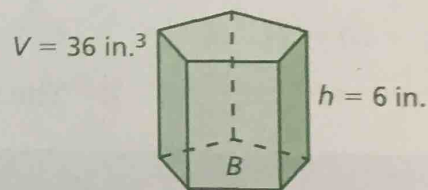
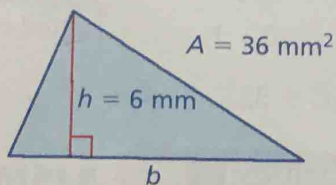
Solve  $6 = 4x - 2y$  for  $y$ .

Solve  $4x - 2y = 6$  for  $y$  in terms of  $x$ .

Solve  $4x - 2y = 6$  for  $x$  in terms of  $y$ .

## Practice and Problem Solving

- Write a formula for the area  $A$  of a triangle.
  - Solve the formula for  $b$ .
  - Use the new formula to find the base of the triangle.
- Write a formula for the volume  $V$  of a prism.
  - Solve the formula for  $B$ .
  - Use the new formula to find the area of the base of the prism.



Solve the equation for  $y$ .

1 5.  $\frac{1}{3}x + y = 4$

6.  $3x + \frac{1}{5}y = 7$

7.  $6 = 4x + 9y$

8.  $\pi = 7x - 2y$

9.  $4.2x - 1.4y = 2.1$

10.  $6y - 1.5x = 8$

11. **ERROR ANALYSIS** Describe and correct the error in rewriting the equation.

**X**  $2x - y = 5$   
 $y = -2x + 5$

12. **TEMPERATURE** The formula  $K = C + 273.15$  converts temperatures from Celsius  $C$  to Kelvin  $K$ .

- Solve the formula for  $C$ .
- Convert 300  $K$  to Celsius.

13. **INTEREST** The formula for simple interest is  $I = Prt$ .

- Solve the formula for  $t$ .
- Use the new formula to find the value of  $t$  in the table.

$I$	\$75
$P$	\$500
$r$	5%
$t$	

Solve the equation for the red variable.

2 14.  $d = rt$

15.  $e = mc^2$

16.  $R - C = P$

17.  $A = \frac{1}{2}\pi w^2 + 2lw$

18.  $B = 3\frac{V}{h}$

19.  $g = \frac{1}{6}(w + 40)$

20. **WRITING** Why is it useful to rewrite a formula in terms of another variable?

21. **TEMPERATURE** The formula  $K = \frac{5}{9}(F - 32) + 273.15$  converts temperatures from Fahrenheit  $F$  to Kelvin  $K$ .

- Solve the formula for  $F$ .
- The freezing point of water is 273.15 Kelvin. What is this temperature in Fahrenheit?
- The temperature of dry ice is  $-78.5^\circ\text{C}$ . Which is colder, dry ice or liquid nitrogen?



Navy Pier Ferris Wheel



22. **FERRIS WHEEL** The Navy Pier Ferris Wheel in Chicago has a circumference that is 56% of the circumference of the first Ferris wheel built in 1893.

- What is the radius of the Navy Pier Ferris Wheel?
- What was the radius of the first Ferris wheel?
- The first Ferris wheel took 9 minutes to make a complete revolution. How fast was the wheel moving?

23. **Geometry** The formula for the volume of a sphere is  $V = \frac{4}{3}\pi r^3$ . Solve the formula for  $r^3$ . Use guess, check, and revise to find the radius of the sphere.



$V = 381.51 \text{ in.}^3$  |—  $r$  —|



## Fair Game Review

What you learned in previous grades & lessons

**Multiply.** (Skills Review Handbook)

24.  $5 \times \frac{3}{4}$

25.  $2.4 \times \frac{8}{3}$

26.  $\frac{1}{4} \times \frac{3}{2} \times \frac{8}{9}$

27.  $25 \times \frac{3}{5} \times \frac{1}{12}$

28. **MULTIPLE CHOICE** Which of the following is not equivalent to  $\frac{3}{4}$ ? (Skills Review Handbook)

(A) 0.75

(B) 3:4

(C) 75%

(D) 4:3