NAME _____ DATE _____ PERIOD _____

3-8 Practice

Solving Equations and Formulas

Solve each equation or formula for the variable specified.

1. $d = rt$, for r
2. $6w - y = 2z$, for w
3. $mx + 4y = 3c$, for x
4. $9s - 5g = -4u$, for s
5. $ab + 3c = 2d$, for b
6. $2p = kx - q$, for x
7. $\frac{2}{3}m + a = a + c$, for m
8. $\frac{2}{5}h + g = d$, for h
9. $\frac{2}{3}y + v = s$, for y
10. $\frac{3}{4}a - q = k$, for a
11. $\frac{rx + 9}{5} = h$, for x
12. $\frac{3b - 4}{2} = c$, for b
13. $2w - y = 7w - 2$, for w
14. $3\ell + y = 5 + 5\ell$, for ℓ

Write an equation and solve for the variable specified.

15. Three times a number s plus 4 times a number y is 1 more than 6 times the number s. Solve for s.

16. Five times a number k minus 9 is two thirds of a number j. Solve for j.

ELECTRICITY For Exercises 17 and 18, use the following information.

The formula for Ohm's Law is $E = IR$, where E represents voltage measured in volts, I represents current measured in amperes, and R represents resistance measured in ohms.

17. Solve the formula for R.

18. Suppose a current of 0.25 ampere flows through a resistor connected to a 12-volt battery. What is the resistance in the circuit?

MOTION For Exercises 19 and 20, use the following information.

In *uniform circular motion*, the speed v of a point on the edge of a spinning disk is $v = \frac{2\pi}{T}r$, where r is the radius of the disk and T is the time it takes the point to travel once around the circle.

19. Solve the formula for r.

20. Suppose a merry-go-round is spinning once every 3 seconds. If a point on the outside edge has a speed of 12.56 feet per second, what is the radius of the merry-go-round? (Use 3.14 for π.)