5•3 Exercises

Evaluate each expression for the given value.

1. $5x - 11$, for $x = 6$
2. $3a^2 + 7 - 2a$, for $a = 4$
3. $\frac{n}{6} - 2n + 8$, for $n = -6$
4. $3(2y - 1) - 4y + 6$, for $y = 4$

Use the formula $C = \frac{5}{9}(F - 32)$ to convert degrees Fahrenheit to Celsius.

5. $76°F$
6. $18°F$

Use the formula $F = \frac{9}{5}C + 32$ to convert degrees Celsius to Fahrenheit.

7. $3°C$
8. $69°C$

Use the formula $d = rt$ to answer Exercises 9–11.

9. Find the distance traveled by a walker who walks at 4 miles per hour for $1\frac{1}{2}$ hours.
10. A race car driver averaged 140 miles per hour. If the driver completed the race in $2\frac{1}{2}$ hours, how many miles was the race?
11. The speed of light is approximately 186,000 miles per second. About how far does light travel in 5 seconds?

5·5 Exercises

A basketball team has 15 wins and 5 losses. Write each ratio.

1. number of wins to number of losses

2. number of wins to number of games

3. number of losses to number of games

Write each ratio, and then write it in simplest form.

4. 36 phone calls to 42 text messages

5. 50 plastic bottles to 15 recyclable cans

6. 15 hits to 45 pitches

Express each rate as a unit rate.

7. 200 miles in 5 hours

8. $350 for 5 days

Determine whether a proportion is formed. Write *yes* or *no*.

9. $\frac{5}{7} \stackrel{?}{=} \frac{8}{11}$

10. $\frac{9}{6} \stackrel{?}{=} \frac{15}{10}$

11. $\frac{4}{9} \stackrel{?}{=} \frac{11}{24}$

Use a proportion to solve each exercise.

12. A gallon of gasoline costs $3.89. How much would it cost to fill a 13-gallon tank?

13. At Middleton High School, there are 324 students for every 12 teachers. How many teachers are there for 405 students?

14. Your weight on Earth's moon is $\frac{1}{6}$ your weight on Earth. If a person weighed 120 pounds on Earth, what would be his or her weight on the moon?