Practice 11-3

Constant Speed

1. A delivery truck drove 32 miles per hour. It took 2 hours to travel between two towns. What is the distance between the two towns? Use the equation $d = rt$, where d is distance, r is rate, and t is time.

2. Every morning Jenna runs for 20 minutes. If Jenna runs 6 miles per hour, how far does she travel? Use the equation $d = rt$, where d is distance, r is rate, and t is time.

3. An airplane flies 2,951 miles in 6.5 hours. What is the speed of the airplane in miles per hour? Use the equation $d = rt$, where d is distance, r is rate, and t is time.

4. On a school field trip, the bus travels 23 miles in 30 minutes. Find the speed of the bus in miles per hour. Use the equation $d = rt$, where d is distance, r is rate, and t is time.

5. Ian and his brother are driving from city A to city B. The two cities are 330 miles apart. Ian drives at 55 miles per hour. How long does it take them to make the trip? Use the equation $d = rt$, where d is distance, r is rate, and t is time.

6. A horseback rider travels 2 miles in 12 minutes. At this speed, how long does it take to travel 5 miles? Use the equation $d = rt$, where d is distance, r is rate, and t is time.

7. **Writing** One lap of a high-speed automobile race is 2.60 miles. A driver completes 35 laps traveling at 182 miles per hour.
   a) Explain how you can use the equation $d = rt$ to find the time it takes to complete 35 laps.

   b) How long does it take to complete 35 laps?
   - ○ A. 2 hours
   - ○ B. 0.5 hour
   - ○ C. 1 hour
   - ○ D. 0.25 hour

8. **Reasoning** Cheryl biked two days in a row. On the first day, Cheryl biked 7 miles at a steady pace for 15 minutes. On the second day, she biked 14 miles in 30 minutes. Cheryl claims that she rode at the same speed on both days. Is it possible to have the same speed with different distances and times?
   - ○ A. It is not possible. There is only one speed that corresponds to each distance and time.
   - ○ B. It is not possible. Cheryl was faster on the second day.
   - ○ C. It is possible. For both days, Cheryl's speed was 28 miles per hour.
   - ○ D. It is possible. For both days, Cheryl's speed was 16 miles per hour.

9. **Error Analysis** At soccer training, the team ran for 30 minutes at 6 miles per hour. Your friend incorrectly says that the team ran a distance of 180 miles.

   a) What is the correct distance?

   b) What error did your friend most likely make?
      ○ A. Your friend divided the rate by the time.
      ○ B. Your friend did not rewrite the rate in terms of miles per hour.
      ○ C. Your friend divided the time by the rate.
      ○ D. Your friend did not rewrite the time in terms of hours.

10. **Snakes** A black racer snake travels 6.9 kilometers in 3 hours. What is the snake's speed in kilometers per hour? Use the equation $d = rt$.

11. a) **Open-Ended** Write a problem using the values 10 meters per second and 50 seconds. Require that the solver use the equation $d = rt$.

    b) What is the correct unit for the value the solver will find?
       ○ A. meters per second   ○ C. seconds
       ○ B. meters   ○ D. hours

12. Nancy merges onto the highway at 8 A.M. and drives 110 miles. She takes a 1-hour break and then drives 165 miles. For both drives, the cruise control is set on 55 miles per hour. How long does the trip take? Use the equation $d = rt$.

13. The table shows distances and travel times of three high-speed trains. Which train is the fastest?

Train	Distance	Time
Train A	800 miles	4 hours
Train B	1,260 miles	7 hours
Train C	1,350 miles	9 hours

    ○ A. Train A   ○ B. Train B   ○ C. Train C

14. **Think About the Process** You are in an airplane traveling 496 miles per hour. What information do you need to find the distance the airplane has traveled so far?
    ○ A. The number of hours the airplane has been in the air
    ○ B. The speed of the airplane in miles per minute
    ○ C. The height of the airplane in miles
    ○ D. The distance from takeoff to landing

15. **Think About the Process** You are in the car on your way to a friend's house 24 miles away. You know that the trip takes 30 minutes. How would you find how fast you are traveling, in miles per hour?
    ○ A. Multiply 24 miles by $\frac{1}{2}$ hour.   ○ C. Divide 24 miles by $\frac{1}{2}$ hour.
    ○ B. Divide $\frac{1}{2}$ hour by 24 miles.   ○ D. Divide 30 minutes by 24 miles.

1. 64 mi
2. 2 mph
3. 454
4. 46
5. 6 hr
6. 30 min
7. **a)** Answers will vary
   b) B
8. C
9. **a)** 3 mi
   b) D
10. 2.3
11. **a)** Answers will vary
    b) B
12. 6 hours
13. A
14. A
15. C