LESSON PRACTICE

Use the distance formula to solve these motion problems.

1. Shane drove at 45 miles per hour for 4 hours. How far did he drive?

2. The tortoise covered a distance of 36 yards in 72 minutes. What was his rate of travel?

3. The hare could travel at a rate of 12 yards a minute. How long would it have taken him to cover the 36-yard course if he had not stopped to rest?

Draw diagrams for #4-6 before solving.

4. Bob and Sue both left at 6:00 a.m. to drive to Pennsylvania. Bob drove at an average speed of 60 mph and arrived at 3:00 p.m. Sue's speed averaged 10 miles an hour slower. When did Sue arrive?

5. Two trains were scheduled between Lancaster and Philadelphia. One train averaged 45 mph and the other made more stops and averaged only 35 mph. The second train took .4 of an hour longer to make the run. How far is it between the stations?

6. Gerry left at 4:00 p.m. traveling at 55 mph. Joe left one hour later and passed Gerry at 9:00 p.m. How fast was Joe traveling?

Answer the questions.

1. Mark made a go-cart for Caitlyn. On her first ride, she went 15 yards per minute for 180 yards. How long did that ride take?

2. The second ride was better. Caitlyn rode for 15 minutes at 18 yards per minute, or 18 ypm. How far did she go this time?

3. On the third day, Caitlyn went 525 yards in 21 minutes. How fast was she driving?

4-5. Frank and Glenda took different flights to New England. Frank left at 8:30 a.m. and Glenda left at 7:00 a.m. They both arrived at the airport at noon. Frank's jet averaged 500 mph. How far was the trip, and how fast did Glenda travel?

6-7. On the way back, Frank took a bus, and Glenda took the train. The bus averaged 50 miles per hour, including all the stops. The train, however, arrived home 10 hours before the bus and traveled 20 mph faster. What was the rate of the train, and how long did it take Frank to get home?

Use unit multipliers to change the units of measure.

8. 17 gal = _____ pt

9. 1 qt = _____ pt

10. 2 yd^3 = _____ in^3

11. 5.6 cm^3 = _____ mm^3

Use unit multipliers to convert from imperial to metric or metric to imperial measure.

12. 18 oz = _____ g

13. 17 liters = _____ qt

For #14-16: Nitrogen and fluorine are present in 2,059 grams of NF_3.

14. List all the possible equations.

15. What is the mass of the nitrogen?

16. What is the mass of the fluorine?

17. Solve for C: $F = \frac{9}{5}C - 32$

For #18–19, use the atomic weight table.

18. Find the percentage of carbon in CF_2Cl_2.

19. Find the percentage of chlorine in CF_2Cl_2.

Follow the directions.

20. Find the conjugate of (7 + 5i).