Name: _____   _____/ 13
Chapter 1.3 Homework
Conceptual Physics   Parent Signature: _____

Reviewing Concepts

20. Write the form of the speed equation that you would use in each of the following scenarios. Let v = speed, t = time, and d = distance. (1)

      a. You know distance and speed and want to find the time.

      b. You know time and distance and want to find the speed.

      c. You know speed and time and want to find the distance.

21. What is the speed of an object that is standing still? (1)

22. Your friend rides her bicycle across town at a constant speed. Describe how you could determine her speed. (1)

23. Fill in the missing information in the table showing common units for speed below: (1)

Distance	Time	Speed	Abbreviation
meters	seconds		
			km/ h
		centimeters per second	

24. Summarize the four steps for solving physics problems as described in the text. (1)

Solving Problems

8. Use the data from Luis's bike ride in question 7 to answer the following:

Position (m)	0.00	105	270	400	540	600
Time (s)	0.00	30	60	90	120	150

      a. What was Luis's speed (in meters per second) for the entire ride from 0 to 150 s? (1)

      b. What was Luis's speed (in meters per second) between 60 and 90 s? (1)

      c. During which 30 s interval did Luis have the greatest speed? Calculate his speed during this interval. (1)

9. A bicyclist, traveling at 22 mph, rides a total of 44 mi. How much time (in hours) did it take? (1)

10. A mouse travels in a straight line at a steady speed of 2 m/s for 10 seconds. How far (in meters) did the mouse travel? (1)

11. The gray wolf is a threatened animal that is native to the United States. A wildlife biologist observes an adult wolf traveling 250 m in 100 s. What is the average speed (in meters per second) of the gray wolf over this interval? (1)

12. It takes Brooke 10 min to walk 1 mi. What is her speed in miles per second? (1)

13. If it takes 500 s for the light from the Sun to reach Earth, what is the distance to the Sun in meters? (*Note*: The speed of light is 300,000,000 m/s). (1)