Name_____

# Homework 3-11

*Copy and complete the chart below. If the left column is blank, give the correct term. If the right column is blank, give a brief description.*

| Term | Description |
|---|---|
| 1. | speed in a specific direction |
| 2. | a change of position over time |
| 3. speed | |
| 4. | an object's location |
| 5. reference point | |
| 6. | the rate at which velocity changes over time |
| 7. | a quantity that has both size and direction |

**Multiple Choice** *Choose the letter of the best answer.*

**8.** A position describes an object's location compared to
   **a.** its motion
   **b.** a reference point
   **c.** its speed
   **d.** a vector
**9.** Maria walked 2 km in half an hour. What was her average speed during her walk?
   **a.** 1 km/h
   **b.** 2 km/h
   **c.** 4 km/h
   **d.** 6 km/h
**10.** A vector is a quantity that has
   **a.** speed
   **b.** acceleration
   **c.** size and direction
   **d.** position and distance
**11.** Mary and Keisha run with the same constant speed but in opposite directions. The girls have
   **a.** the same position
   **b.** different accelerations
   **c.** different speeds
   **d.** different velocities
**12.** A swimmer increases her speed as she approaches the end of the pool. Her acceleration is
   **a.** in the same direction as her motion
   **b.** in the opposite direction of her motion
   **c.** at right angles to her motion
   **d.** zero
**13.** A cheetah can go from 0 m/s to 20 m/s in 2 s. What is the cheetah's acceleration?
   **a.** 5 m/s$^2$
   **b.** 10 m/s$^2$
   **c.** 20 m/s$^2$
   **d.** 40 m/s$^2$
**14.** Jon walks for a few minutes, then runs for a few minutes. During this time, his average speed is
   **a.** the same as his final speed
   **b.** greater than his final speed
   **c.** less than his final speed
   **d.** zero

**15.** A car traveling at 40 m/s slows down to 20 m/s. During this time, the car has
   **a.** no acceleration
   **b.** positive acceleration
   **c.** negative acceleration
   **d.** constant velocity

*Use the following graph to answer the next three questions.*
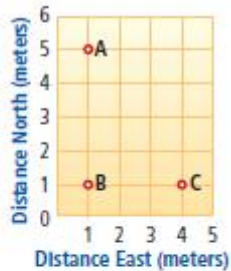


**19. OBSERVE** Describe the location of point A. Explain what you used as a reference point for your location.

**20. COMPARE** Copy the graph into your notebook. Draw two different paths an object could take when moving from point B to point C. How do the lengths of these two paths compare?

**21. ANALYZE** An object moves from point A to point C in the same amount of time that another object moves from point B to point C. If both objects traveled in a straight line, which one had the greater speed?