Key terms to choose from for Questions 1 and 2:

A. average velocity  
B. position  
C. displacement  
D. scalar  
E. vector  
F. instantaneous speed  
G. motion  
H. instantaneous velocity  
I. average speed  
J. distance  
K. physics (intro)

1. (2 points) Fill in the letter that best fits each of the following statements.
   
a. Making a statement that one city is 75 miles northeast of another is an example of stating the __________ between the two cities.
   
b. If one makes a 50 mile trip in 2 hours, the quantity 50 miles/2 hours represents the __________.

2. (2 points) Write the letter corresponding to a key term from above that best matches each description below.
   
a. _____ actual path length
   
b. _____ has magnitude and direction

3. (2 points) Circle the best answer for each question below.
   
a. Which one of the following is always true about the magnitude of a displacement?
      
a. It is less than the distance traveled.
      b. It is less than or equal to the distance traveled.
      c. It is greater than the distance traveled.
      d. It is equal to the distance traveled.
   
b. Which one of the following does not have units of m/s?
      
a. average velocity  
b. average acceleration  
c. average speed  
d. instantaneous velocity
4. (2 points) Fill in the blanks.
   a. A car’s speedometer reads instantaneous ____________.
   b. Velocity is a(n) __________ quantity.

5. (2 points) A runner circles a 440-yard track in 50 s.
   a. Set up the expression to find the runner’s average speed around the track. You
don’t actually need to get the number unless you want to.

   b. From starting line to finish line, what is the runner’s average velocity?

Potentially helpful equation:
\[ v = \frac{d}{t} \]