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Quiz: Describing Motion
Matching

- B 1. Motion
 - D 2. Distance
 - E 3. Displacement
 - C 4. Instantaneous speed
 - A 5. Constant speed
- a. speed that does not vary
 - b. when an object changes position
 - c. speed at any given point in time
 - d. how far an object has moved
 - e. distance and direction of an object's change in position

6. To skate 100 meters in 20 seconds, a skater must skate at a speed of 5 mps (meters per second)
7. If a runner maintains a constant speed of 12 miles/hour, how long will it take to complete a half marathon race of 13.1 miles? 1.1 hours (rounded)
8. If Johnny won a 300 meter race in 40 seconds, his speed would be 7 1/2 mps (meters per second)

$$\frac{100 \text{ m}}{20 \text{ s}} = 20 \overline{) \begin{array}{r} 5 \\ 100 \\ \underline{0} \end{array}} = 5 \text{ mps}$$

$$\frac{13.1 \text{ m}}{12 \text{ mph}} = 12 \overline{) \begin{array}{r} 1.1 \\ 13.1 \\ \underline{12} \\ 11 \end{array}} = 1.1 \text{ hours}$$

$$\frac{300 \text{ m}}{40 \text{ s}} = 40 \overline{) \begin{array}{r} 7 \\ 300 \\ \underline{280} \\ 20 \end{array}} = 7 \frac{20}{40} \rightarrow 7 \frac{1}{2}$$

= 7.5 mps or 7 1/2