Motion Definitions Worksheet

1. _____ is how far you travel when you change position.

2. _____ is the net change in position of an object.

3. To calculate average _____, divide the distance by the time.

4. _____ is a measure of motion that tells how fast and in which direction an object moves.

5. _____ is the rate at which one's velocity is changing.

6. You walk all the way around a lake. Your _____ will be zero because you ended at the same place you started.

7. You walk 25 meters west, and then reverse your direction and walk 15 meters east. This movement requires 10 seconds. Calculate

   (a) the distance travelled.

   (b) your displacement.

   (c) your average speed.

   (d) your average velocity.

8. John rides his bike over the top of a hill at a speed of 4.0 m/s. Four seconds later his speed is 24 m/s. Calculate John's acceleration.

9. A girl rides her bicycle with a speed of 10 m/s. How long will it take her to travel 3000 m?

10. On a walk through the woods, your average speed is 1.5 m/s. How far have you travelled after walking for one hour?

11. A race car's top acceleration is 60 m/s^2. If it accelerates for 3 seconds from the starting line, how fast will it be going?