Name: Block:

Physics 11
Mr. Ali Bustanji

Uniform Motion

1. A ball is rolling on the ground at a speed of 2.5 m/s. After 5.0 seconds, how far does has it moved?

2. A student sprints at a constant speed of 8.10 m/s. How long will it take for him to run 100. m?

3. A woman jogs 1500 m west to the grocery store and walks 450 m east to the bus stop. If this takes her 1200 seconds, what is her…
   a) average speed?
   b) average velocity?

4. A bike travels with an average velocity of 8.0 m/s west for 30.0 minutes, then 10.0 m/s east for 20.0 minutes.
   a) What distance did the bike travel?
   b) What is the displacement of the bike?

5. A marathon runner completes the 42.0 km race in 2 hours and 57 minutes. What is his average speed?

6. A car travels east at 40.0 km/h for 30. minutes and east at 60.0 km/h for 15 minutes. How far does it travel in this time?

7. A race car circles 10 times around an 8.0 km track in 20.0 min.
   a) What is its average speed?
   b) What is its average velocity?

8. A motorist travels for 3.0 h at 80.0 km/h and 2.0 h at 100.0 km/h.
   a) How far does she travel in this time?
   b) What is her average speed?

9. A car drives 8.0 km at 10.0 m/s then 40.0 km at 25 m/s. What is the average speed?

10. In a 400 m relay race, the anchorman (the person who runs the last 100 m) for the Griffins can run 100. m in 9.8 s. His rival, the anchorman for the Jokers, can cover 100. m in 10.1 s. What is the largest lead the Joker runner can have when the Griffin runner starts the final leg of the race, in order for the Griffin runner not to lose the race?