Honors Physics Kinematic Problem Set 2 Mr. McMullen

Name _____ Date _____ Period_____

Answer the following questions on a separate sheet of paper. Remember the steps in solving physics problems.

1. A motorist travels 60.0 km at 30.0 km/hr and 60.0 km at 60.0 km/hr. What is her average speed for the trip?
2. A motorist wishes to average 60.0 km/hr for a trip. She finds that halfway through the trip she has averaged only 40.0 km/hr. What average speed would she have to maintain for the remainder of the trip in order to achieve an overall average speed of 60.0 km/hr?
3. A person making a 200. km trip drives the first 100. km at a steady 40.0 km/hr. How fast must he drive the remaining 100. km if he is to average 50.0 km/hr for the total trip?
4. A world class sprinter can run 100. meters in 10.2 seconds. What is his average speed in miles per hour?
5. A motorist drives north on Route 1 at 70.0 km/hr for one hour. She spends $^1/_3$ an hour cutting down a Christmas tree and then returns home driving 90.0 km/hr. For the entire, what are
   a. the average speed,
   b. the average velocity,
   c. the total distance travelled?
   d. If the stopping distance had been $\frac{1}{2}$ an hour , how fast would the motorist have had to drive to achieve the same average speed for the entire trip?