PHYS 201 Graphing Motion: Questions/Problems Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Due 9/10

\_\_\_\_1. What does a car speedometer measure?

\_\_\_\_2. What does a car odometer measure?

Answers for 1&2

a. average velocity b. average speed c. distance

d. instantaneous speed e. instantaneous velocity f. displacement

\_\_\_\_3. Which one of the following is a vector?

a. speed b. distance c. temperature d. mass e. velocity

\_\_\_\_4. What is given by the slope of the position *versus* time graph?

\_\_\_\_5. What is given by the slope of the velocity *versus* time graph?

\_\_\_\_6. What is represented by the area under the velocity versus time graph?
Answers for 4-6
a. time b. displacement c. acceleration d. velocity

7-13) The velocity of a snowmobile increases with time as shown below.



\_\_\_\_7. What is the instantaneous velocity of the snowmobile at 10 s?
a. 0 m/s b. 10 m/s c. 20 m/s d. 30 m/s e. 40 m/s

\_\_\_\_8. The snowmobile accelerates during which segment(s)?
a. A & B b. B & C c. A,B,&C d. A & C e. B

\_\_\_\_9. What is the instantaneous acceleration at 30 second?

\_\_\_\_10. What is the average acceleration between 0 and 20 seconds?
\_\_\_\_11. What is the instantaneous acceleration at 15 second?

\_\_\_\_12. What is the average acceleration between 0 and 60 seconds?

Answers for 9-12

a. 0 m/s2 b. 1.0 m/s2 c. 1.3 m/s2 d. 1.5 m/s2 e. 2.0 m/s2

\_\_\_\_13. Estimate how far the snowmobile travels during the 60 seconds?

a. 11 m b. 100 m c. 200 m d. 1100 m e. 2200 m