

Name: _____

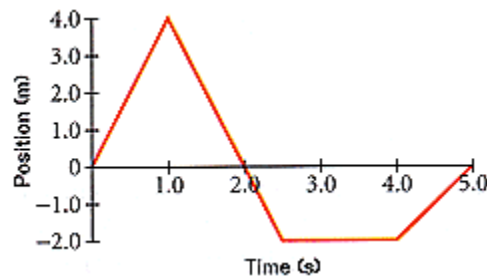
Date: _____

Section C D F

Position and Velocity I

1. If you live 20.0 km from your school and the bus takes 0.77 h to reach the school driving due east, what is the average velocity of the bus? (in m/s)

2. The graph below gives the position-time graph for a squirrel running along a clothesline.



- a. What is the squirrel's displacement during the time interval from $t = 0$ to $t = 3.0$ s?
- b. What is the squirrel's average velocity during this interval?
- c. What is the squirrel's velocity at $t = 2$ seconds?
3. A car traveling in a straight line has a velocity of +6.5 m/s. After 4.5 s, its velocity is +5.0 m/s. What is the car's average acceleration in this time interval? Make sure to give correct units!

4. Emily takes a trip, driving with a constant velocity of 89.5 km/h to the north except for a 22 min rest stop. If Emily's average velocity is 74.8 km/h to the north, how long does the trip take, in hours? Give the answer to 2 decimal places; your answer should be between 2.10 and 2.30 hours.