PHYSICS 112 SCIENCE 10 – MOTION UNIT REVIEW MRS. LOGAN

Name: Answer Key Date: Spring 2017

1. *Match each term to its definition by writing the letter in the space provided.*

G	How fast an object is moving at a single moment in time	**A.**	Non-uniform Motion
A	Speed or velocity is changing	**B.**	Displacement
E	Constant speed or velocity; not speeding up or slowing down	**C.**	Average Speed
F	A measure of how fast an object is going & its direction	**D.**	Distance
B	The difference measured between start and end positions	**E.**	Uniform Motion
C	Total change in distance divided by total change in time	**F.**	Velocity
D	The total measure of how far an object has moved	**G.**	Instantaneous Speed

2. How long does it take Mrs Logan to canoe 1050 m, from her parents' house across the Kennebecasis River to Darling's Island, if she averages a speed of 0.84 km/h?

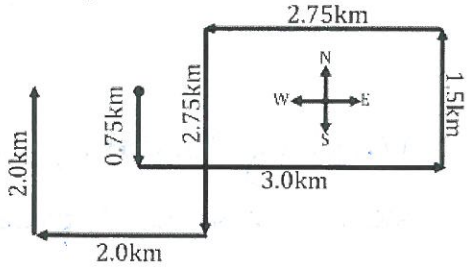
$t = 1.25h$ or $1h\ 15min$

3. Friends throw a football back and forth. Jonny gives the ball an initial velocity of 7.5m/s [forward], but when Sammy catches it 2.6s later, the ball is only moving 5.2m/s [forward]. What is the acceleration of the ball, including direction?

$a = -0.88 m/s^2$ [backward]

4. A runner follows the route shown on the right. It takes her 1.75h to complete this route.
   a. What total distance does she travel?

$d = 14.75km$



   b. What is her displacement?

$\vec{d} = 1.75km$ [W]

   c. What is her average speed?

$v = 8.43km/h$

   d. What is her average velocity?

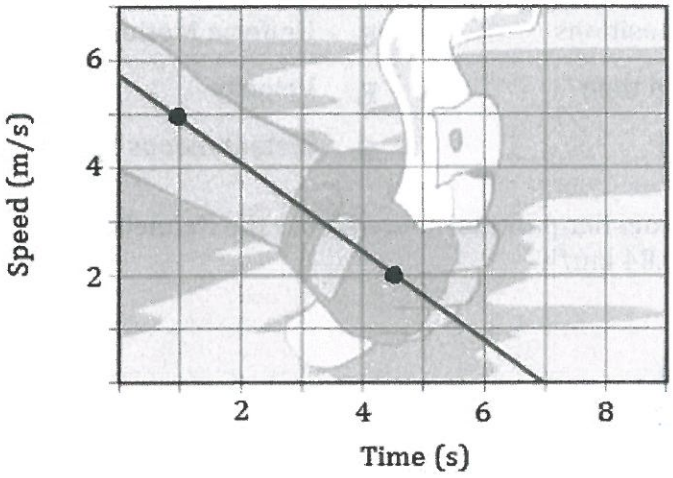
$\vec{v} = 1km/h$ [W]

5. *Match each vector diagram to the correct description of its motion. Write the letter beside the plane.*

D  F  E  C 

A.	Moving West, constant velocity	**D.**	Moving East, constant velocity
B.	Moving West, speeding up	**E.**	Moving East, speeding up
C.	Moving West, slowing down	**F.**	Moving East, slowing down

6. *Find the slope of the line shown in the graph below using the 2 points chosen for you.*

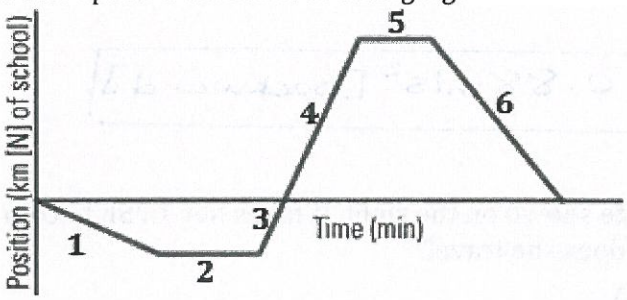


Slope = $-0.86 m/s^2$

7. What quantity does the slope in #6 represent? Circle the correct answer.

a. Distance b. Velocity c. Speed d. Acceleration e. Displacement

8. *Describe the motion of each line segment shown in the graph below. Include direction of motion, a description of speed, and whether speed is constant or changing.*



1 Moving South, slowly, with constant velocity/speed

2 Not moving (position is staying the same)

3 Moving North, quickly, with constant v, back to school

4 " " " away fr. school

5 Not moving

6 Moving South, quickly, with constant v, back to school