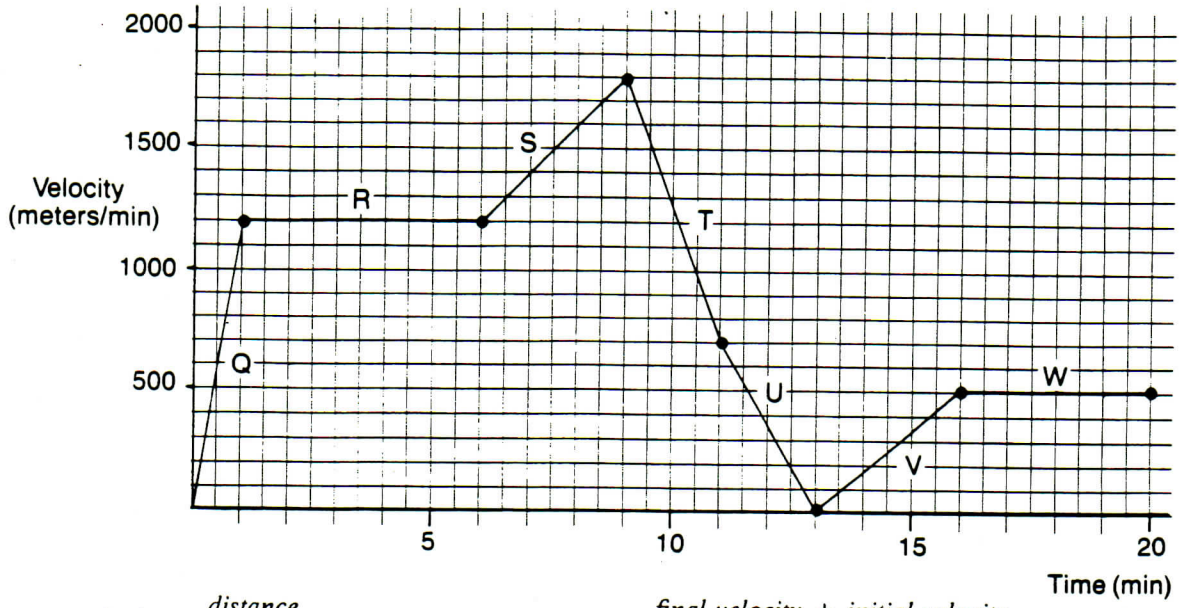
Name _____ Date _____ Class _____

During a 20-minute trip, a car travels at various velocities. Figure 1 is a graph of these different velocities. Use the graph and the formulas that follow to answer questions 1 through 13.

**FIGURE 1.**




$$velocity = \frac{distance}{time} \qquad average\ velocity = \frac{final\ velocity + initial\ velocity}{2}$$

$$acceleration = \frac{final\ velocity - initial\ velocity}{time}$$

_____ **1.** The graph compares
a. distance and time
b. speed and distance
c. velocity and distance
d. velocity and time

_____ **2.** During the trip portion labeled R, the car is
a. not moving
b. accelerating
c. decelerating
d. not changing in velocity

_____ **3.** The car is accelerating during portions
a. R and W b. Q, S, and T c. Q, S, and V d. V and W

_____ **4.** Acceleration and deceleration are shown by
a. the letters on the graph
b. the slope of the lines
c. the vertical line labeled "Velocity"
d. the length of each labeled line

_____ **5.** The velocity of the car at 5 minutes is
a. 800 m/min b. 1200 m/min c. 1800 m/min d. 400 $m/min^2$

_____ **6.** The highest rate of deceleration occurs during trip portion
a. T b. U c. S d. Q

_____ **7.** The rate of acceleration of the car at 8 minutes is
a. 1500 $m/min^2$ b. 170 $m/min^2$ c. 120 $m/min^2$ d. 200 $m/min^2$

_____ **8.** The velocity of the car at 12 minutes is
a. 0 m/min b. 700 m/min c. 350 m/min d. 300 m/min