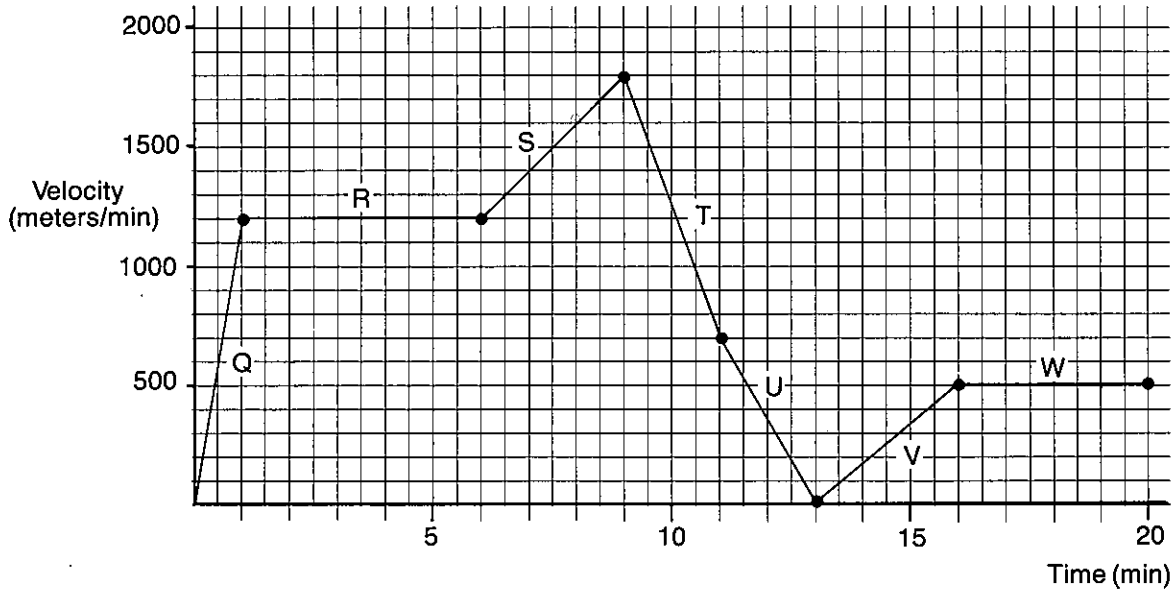


Name _____ Date _____ Class _____

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.



$$\text{velocity} = \frac{\text{distance}}{\text{time}}$$

$$\text{average velocity} = \frac{\text{final velocity} + \text{initial velocity}}{2}$$

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

- _____ 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/min²

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

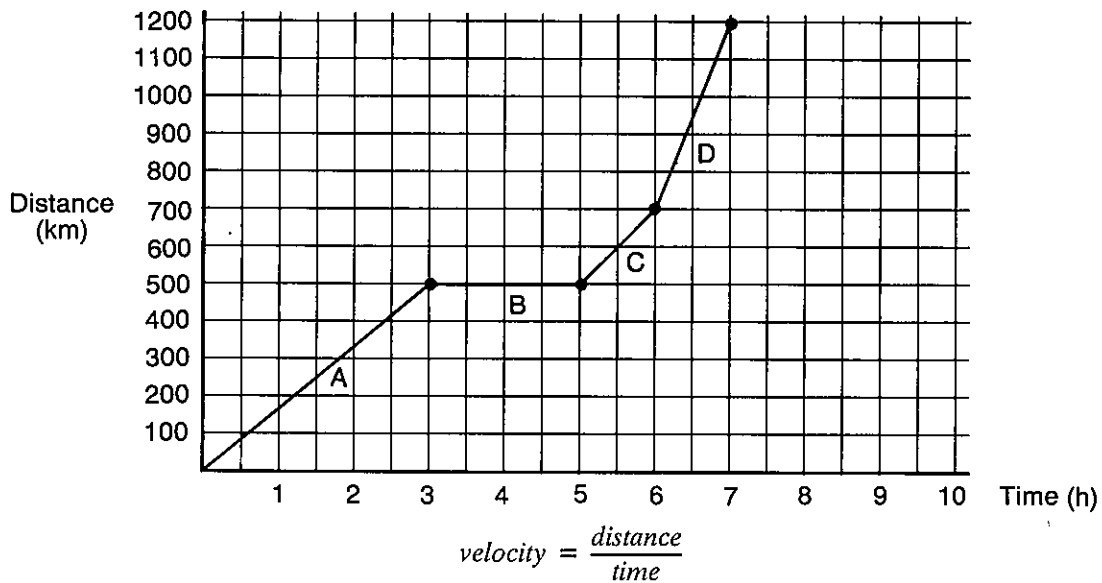
- _____ 7. The rate of acceleration of the car at 8 minutes is
 - a. 1500 m/min²
 - b. 170 m/min²
 - c. 120 m/min²
 - d. 200 m/min²

- _____ 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

- _____ 9. The *average* velocity of the car during trip portion U is
 - a. 700 m/min
 - b. 350 m/min
 - c. 200 m/min
 - d. 0 m/min
- _____ 10. The car is at rest at
 - a. 2 min
 - b. 9 min
 - c. 13 min
 - d. 16 min
- _____ 11. The distance traveled by the car during trip portion W is
 - a. 2000 m
 - b. 6000 m
 - c. 1000 m
 - d. 800 m
- _____ 12. The distance traveled by the car during trip portion R is
 - a. 700 m
 - b. 600 m
 - c. 1.2 km
 - d. 6 km
- _____ 13. The acceleration of the car at the start of the trip is
 - a. 1200 m/min²
 - b. 120 km/min²
 - c. 500 m/min²
 - d. 1000 m/min²

During a 7-hour trip, a plane travels at different velocities. Figure 2 is a graph of these different velocities. Use the graph and the formula that follows to answer questions 14 through 18.

FIGURE 2.



- _____ 14. The plane is traveling fastest during trip portion
 - a. A
 - b. B
 - c. C
 - d. D
- _____ 15. The distance traveled during trip portion B is
 - a. 100 km
 - b. 0 km
 - c. 500 km
 - d. 700 km
- _____ 16. The distance traveled by the plane after 5 hours is
 - a. 300 km
 - b. 400 km
 - c. 500 km
 - d. 0 km
- _____ 17. The velocity of the plane 5½ hours after take-off is
 - a. 200 km/h
 - b. 0 km/h
 - c. 700 km/h
 - d. 1200 km/h
- _____ 18. Three and one-half hours after take-off, the plane is most likely
 - a. at its maximum cruising speed
 - b. picking up new passengers
 - c. moving at 500 km/hr
 - d. flying at a constant velocity