Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Period:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Page 49 - Practice Problems B – Average Acceleration Equation:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. As the shuttle bus comes to a sudden stop to avoid hitting a dog, it accelerated uniformly at -4.1 m/s2 as it slows from 9.0 m/s to 0.0 m/s. Find the time interval of acceleration for the bus.
2. A car traveling at 7.0 m/s accelerates uniformly at 2.5 m/s2 to reach a speed of 12.0 m/s. How long does it take for this acceleration to occur?
3. With an average acceleration of -1.2 m/s2, how long will it take a cyclist to bring a bicycle with an initial speed of 6.5 m/s to a complete stop?
4. Turner’s treadmill runs with a velocity of -1.2 m/s and speeds up at regular intervals during a half-hour workout. After 25 min, the treadmill has a velocity of -6.5 m/s. What is the average acceleration of the treadmill during this period?
5. Suppose a treadmill has an average acceleration of 4.7 x 10-3 m/s2.
6. How much does it speed change after 5.0 minutes?
7. If the treadmill’s initial speed is 1.7 m/s, what will its final speed be?