

**Quiz #2A**

**Clearly indicate (with a box) your answers to the following questions. SHOW ALL WORK.**

1. A car drives along a straight road for 35 minutes with an average velocity of 57 miles/hour. The driver stops for a rest break for 11 minutes and finishes the trip with another 41 minute drive. The average velocity for the total trip is 53 miles/hour. What was the average velocity of the driver (in miles/hour) for the last part of the drive?

2. A car sees a traffic light turn red and tries to come to stop without entering the intersection, 55 meters away. The initial speed of the car is 47 miles/hour, and the car's acceleration is  $-3.5$  meters/sec<sup>2</sup>. Does the car stop before reaching the intersection?

3. A hot air balloon is descending at a rate of 7.0 meters/sec. A small ball is dropped from the balloon, hitting the ground 3.2 seconds later. How far above the ground is the balloon at the moment the ball is dropped?