1. A poorly tuned Yugo can accelerate from rest to a speed of 28.0 m/s in 20.0 s.

a. What is the average acceleration of the car?

b. What distance does it travel in this time?

2. At t = 0 a car has a speed of 30.0 m/s. At t = 6.00 s, its speed is 14.0 m/s.

a. What is its average acceleration during this time interval?

b. Sketch a velocity vs. time graph to describe the motion of the car.

3. A bear spies some honey and takes off from rest, accelerating at a rate of 2.00 m/s2.

If the honey is 16.0 m away, how fast will his snout be going at the moment of ecstasy?

4. A bus moving at 20 m/s (t = 0) slows at a rate of 4 m/s each second.

a. How long does it take the bus to stop?

b. How far does it travel while braking?

5. A physics student skis down a hill, accelerating at a constant 2.00 m/s2.

If it takes her 15.0 s to reach the bottom, what is the length of the slope?

6. A dog runs down his driveway with an initial speed of 5.00 m/s for 8.00 s, then uniformly

increases his speed to 10.0 m/s in 5.00 s.

a. What was his acceleration during the 2nd part of the motion?

b. How long is the driveway?

7. A mountain goat starts a rock slide and the rocks crash down the slope 100. m.

If the rocks reach the bottom in 5.00 s, what is their acceleration?

8. A car whose initial speed is 30.0 m/s slows uniformly to 10.0 m/s in 5.00 seconds.

a. Determine the acceleration of the car.

b. Determine the distance it travels in the 3rd second. (t = 2.00 s to t = 3.00s)