Physics Problem Set 5.3 You can use 10m/s/s for the value of g

$x = v_o t + \frac{1}{2} at^2$

$V_f = v_o + at$ which can be written as $a = (v_f - v_o)/t$

$V_{ave} = \frac{1}{2} (v_f + v_o)$

$V_f^2 = v_o^2 + 2ax$

1. Two tiny hamsters living on planet Muwanga (the home planet of hamsters) drop brightly colored balls to learn about falling objects. They record in their notes that it takes 3 seconds for a ball to fall 1 meter. The balls are released from rest.
   a. What is the initial velocity of the ball?

   b. What distance does the ball travel?

   c. How long does the ball fall? (Time)

   d. What is the average velocity of the ball?

   e. What is the final velocity of the ball just before landing?

   f. What is the acceleration of gravity on planet Muwanga?