Physics Problem Set 5.7 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 $a = (v_f - v_o)/t$

$V_{ave} = \frac{1}{2} (v_f + v_o)$ also $V_{ave} = x/t$ $X = V_{ave} t$

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

If an object starts from rest, then it's final velocity is twice its average velocity

1. Peter Cotton Tail is driving down the road with an initial velocity of 15 m/s. He puts on the brakes and slows down and stops his car. The car moves 100 meters while slowing down.
    a. What was Peter's initial velocity?

    b. What distance did the car travel while slowing down?

    c. What was Peter's average speed?

    d. How <u>long does it take the car to stop?</u>

    e. What was the car's acceleration while slowing down?