

Name: _____

Physics 201 Quiz 1

Jan 14, 2013

Word Problems

Show all your work and circle your final answer. (Ten points each.)

1. A VW Beetle goes from 0 to 60.0 mph with an acceleration of 2.35 m/s^2 . (a) How much time does it take for the Beetle to reach this speed? (b) A top-fuel dragster can go from 0 to 60.0 mph in 0.600 seconds. Find the acceleration (in m/s^2) of the dragster.

2. A fire hose ejects a stream of water at an angle of 35.0° above the horizontal. The water leaves the nozzle with a speed of 25.0 m/s. Assuming that the water behaves like a projectile, how far from a building should the fire hose be located to hit the highest possible fire?