

Problem 21

Assume that the conditions are as in Problem 20 except that there is a force due to air resistance of magnitude $|v|/30$ directed opposite to the velocity, where the velocity v is measured in m/s.

- (a) Find the maximum height above the ground that the ball reaches.
- (b) Find the time that the ball hits the ground.
- (c) Plot the graphs of velocity and position versus time. Compare these graphs with the corresponding ones in Problem 20.