

APPM 1350

Name: _____

Fall 2021

Quiz 3

09/21/2021

Time Limit: 10 Minutes

Recitation Section: _____

1. A ball is thrown straight up into the air at a time $t = 0$. The height of the ball relative to the ground at any point in time is given by the function

$$p(t) = -t^2 + 2t + 3.$$

- (a) (6 points) For $t > 0$, find the instantaneous velocity of the object using the limit definition of the derivative.
- (b) (2 points) At what time does the ball first hit the ground?
- (c) (2 points) What is the instantaneous velocity of the ball when it hits the ground in part (b)?