

## Math 2250 Quiz 6.5 (Practice)

Name \_\_\_\_\_ Section \_\_\_\_\_

*Points will be deducted for untidy or disorganized answers*

1. (3 points) A light shines from the top of a pole 50 feet high. A ball is dropped from the same height from a point 30 feet away from the light. How fast is the shadow of the ball moving along the ground  $1/2$  second later? (Assume the ball falls a distance  $s = 16t^2$  feet in  $t$  seconds.)
2. (2 points) Find a cubic polynomial  $P$  such that  $P(1) = 1$ ,  $P'(1) = 3$ ,  $P''(1) = 6$ , and  $P'''(1) = 12$ .