

Math 151 Quiz #4
October 21, 2008

Name: _____

Show all work.

1. (6 pts.) Consider the function $f(x) = -\frac{2}{x^2} + 8$.

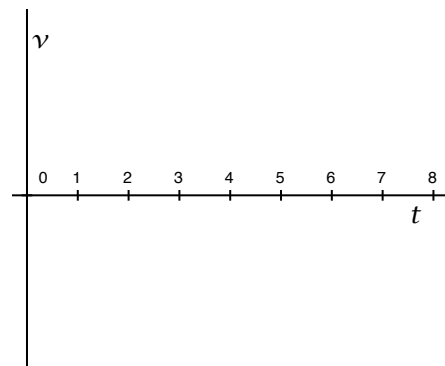
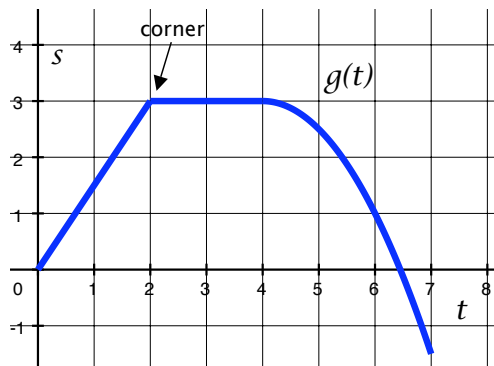
(a) (2 pts.) Find the derivative of $f(x)$ using the differentiation rules from §3.1 (Power Rule, etc.)

(b) (2 pts.) Find the derivative of $f(x)$ using the limit definition of the derivative.

(c) (2 pt.) Find the slope of the tangent line to $f(x)$ at $x = 1$.

2. (4 pts.) The following is a graph of the position function $s = g(t)$ (in meters) of a llama from 0 to 7 seconds.

(a) (2 pts.) Sketch a graph of the velocity of the llama on the axes to the right.



(b) (2 pts.) What is the velocity of the llama at 1 second? Include units in your answer.