Math 2A Worksheet: 2.7 Derivatives

Write your names and Student ID numbers at the top of the page

1. Find the derivative:

   (a) $f(t) = 2t^3 + t$

   (b) $f(x) = \sqrt{x}$

   (c) $f(s) = s^{-2}$

2. Find an equation for the line tangent to the curve $f(x) = 3x^2 - x^3$ at the point $x = 1$.

3. Find an equation for the line tangent to the curve $f(t) = 1/\sqrt{t}$ at the point $x = 4$.

4. If a ball is thrown in the air with a velocity of 40 ft/s its height (in feet) after t seconds is given by $h(t) = 40t - 16t^2$. Find the velocity when t=2.