

Math 157 - Quiz 6

October 7, 2015

Name _____

Score _____

Show all work to receive full credit. Supply explanations when necessary.

1. (4 points) Determine the derivative of each function.

(a) $f(x) = 5x^3 - 6x^2 + 7x - 13$

(b) $g(x) = x - \sqrt[5]{x} + \frac{7}{x^4}$

2. (4 points) Find an equation of the line tangent to the graph of $y = 1 + \sqrt{x}$ at the point where $x = 4$.

3. (2 points) Let $h(x) = x^3 - 3x^2 + 7x$. Find $h''(x)$. Then determine whether the graph of h is concave up or down at $x = -1$.