

Name:

Section 3.1 - In class example

Math 151 – Spring 2018

1. Find the derivative for each of the following

(a) $y = 3t^5 - 5\sqrt{t} + \frac{7}{t}$

(b) $y = \sqrt{x}(x + 1)$

2. Find the equation to the tangent line to the graph of $f(x) = 2x^3 - 5x^2 + 3x - 5$ at $x = 1$.

3. The demand for a product is given, for $p, q \geq 0$, by $p = f(q) = 50 - 0.03q^2$.

(a) Find the p - and q - *intercepts* for this function and interpret them in terms of demand for this product.

(b) Find $f(20)$ and give units with your answer. Explain what it tells you in terms of demand.

(c) Find $f'(20)$ and give units with your answer. Explain what it tells you in terms of demand.