

MA 137 Worksheet #14

Sections 4.5 & 4.7

10/1/20

1. Find the derivative of the following functions:

1. $f(x) = (5x^2 + 6)^{-1/2}$
2. $g(x) = x(6x - 2)^5$
3. $F(x) = xf(x) + (g \circ f)(x)$

2. Find the second derivative of the function $f(x) = \frac{x^2 - 4}{x^2 + 4}$.

3. Find the velocity and acceleration equations based on the given position equation

$$p(t) = 23 + 3t - 9.8t^2.$$

4. Find the n th derivative of $f(x) = x^n$.