

HW5

Please give complete, well written solutions to the following exercises.

Exercise 1. (2.4.48) Find equations of the tangent lines to the curve $y = \frac{x-1}{x+1}$ that are parallel to the line $x - 2y = 2$.

Exercise 2. (2.5.74) Suppose $y = f(x)$ is a curve that always lies above the x -axis and never has a horizontal tangent, where f is differentiable everywhere. For what value of y is the rate of change of y^5 with respect to x eighty times the rate of change of y with respect to x ?

Exercise 3. (2.5.76) If $F(x) = f(xf(xf(x)))$, where $f(1) = 2$, $f(2) = 3$, $f'(1) = 4$, $f'(2) = 5$, and $f'(3) = 6$. Find $F'(1)$.