

Homework #5
Due Monday, September 22
No late papers accepted! No excuses!

1. Find each derivative. Simplify your answers.

a) $y = x^7 + \sqrt{7}x - \frac{1}{\pi + 1}$

b) $y = \frac{2x + 3}{3x - 1}$

c) $y = (2x + 3)(4x^2 - 3x + 1)$

d) $y = \frac{\sqrt{t}}{1 + \sqrt{t}}$

e) $y = x^2 \cot x$

2. Find the x - and y -intercepts of the line that is tangent to the curve $y = x^3$ at the point $(-2, -8)$.

3. Are there any points on the curve $y = \frac{x}{2} + \frac{1}{2x-4}$ where the slope is $-\frac{3}{2}$? If so, find them.