QUIZ 4 - MATH 112

YOUR NAME:_____

Read each problem **very carefully** before starting to solve it and do only what is asked. Each problem is worth around 5 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

1. [6 points] Use the **limit definition** of the derivative to compute $f'(x)$ if $f(x) = \sqrt{x^2 + 3}$.

2. [4 points] Compute

$$\left(7x^3 - 9\sqrt[3]{x^7} + \frac{5}{\sqrt[5]{x}}\right)' =$$

3. [4 points] Find an equation for the tangent line to

$$f(x) = x^3 - 2x^2 + 7x$$

at the point with $x = -1$.