

QUIZ 4 - MATH 112

Thursday, February 22

YOUR NAME: _____

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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. [4 points] Suppose the distance function covered by a moving object in time t in seconds is given by

$$s(t) = 5\sqrt[5]{t^3} \text{ in meters.}$$

Compute the velocity and the acceleration of the object at $t = 32$ seconds.

2. [4 points] Find an equation for the tangent line to $f(x) = \sqrt[3]{x^2 + 1}$ at $x = 1$.

3. [4 points] Compute the derivative

$$\left[\left(\frac{x^2}{x+1} \right)^7 \right]' =$$