QUIZ 5 - MATH 112 Friday, February 23

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

1. Compute the following derivatives. Make sure to **mention which rules you are applying** over the equality sign, e.g., $\stackrel{\text{product}}{=}$. You do not have to simplify at the end.

   (a) $\left[\dfrac{1}{\sqrt[5]{(10x+1)^3}}\right]'$

   (b) $\left[x^4\ \sqrt{x^2+1}\right]'$

   (c) $\left[\left(\dfrac{x}{x+7}\right)^5\right]'$

2. Find an equation for the tangent line to the graph of

$$f(x) = \sqrt{(x^3+1)^2 + x^2}$$

at the point $x = 0$.