

Quiz**Name**

1. Compute the derivative of the function $f(x) = ((x^2 + 1)^3 - 4)^{\frac{1}{2}}$.
2. You are given the function $f(x) = x^3 + 6x + 5$. What is the smallest slope that a tangent line to the graph of this function can have? Why?
3. The limit $\lim_{\Delta x \rightarrow 0} \frac{\sqrt{7+\Delta x} - \sqrt{7}}{\Delta x}$ is the derivative of a certain function at a certain point. What is the function and what is the point? Using your answer to this question, find the value of the limit.