Math 182 Quiz 1 Version A

1. State the mean value theorem for derivatives. Be careful to include the hypotheses as well as the conclusion.

2. Let f be a differentiable function on the interval $[a, b]$. Show that if $f'(t) \geq 0$ for every $t \in [a, b]$, then f is an increasing function on $[a, b]$.

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3. Use the derivative rules to find $\dfrac{d}{dx}\sqrt{x^2+1}$.

4. Find the partial fractions decomposition of $\dfrac{2x-3}{(x+1)(x-2)}$.