Math 1525	Calculus I	Quiz 4	Name:
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Problem 1. Let $f(x) = x^3 - 18x + 31$. Use the Intermediate Value Theorem to show that there exists $c \in \mathbb{R}$ such that $f(c) = \pi$.

Problem 2. Let $f(x) = \frac{1}{x}$. Directly apply the definition of derivative to find f'(x).

Problem 3 (Extra Credit). Find a function f(x) such that $f'(x) = \frac{x}{|x|}$.