

Name _____

You have 10 minutes for this quiz.

1. (3 points) Carefully write down the content of *The Mean Value Theorem*.

2. (3 points) A function f has the following second derivative. Determine the x -value for each inflection point on the graph of f .

$$f''(x) = 4e^x(x - 3)(x - 5)^2$$

3. (4 points) Upon which interval is the graph of $f(x) = 2 + 3xe^{-4x}$ increasing?