Name: _____ Academic Integrity Signature: _____

I have abided by the UNCG Academic Integrity Policy.

Note: Correct numerical answers without justification will receive little or no credit.

1. (5 points) State *The Extreme Value Theorem.* If f is [ ] on a closed interval $[a, b]$, then

   Solution: If f is [continuous] on a closed interval $[a, b]$, then f attains an absolute maximum and an absolute minimum on $[a, b]$.

2. (5 points) State the *Mean Value Theorem.* If f is [ ] on a closed interval $[a, b]$ and [ ] on the interval's interior (a, b) then there is at least one point c in (a, b) at which

   Solution: If f is [continuous] on a closed interval $[a, b]$ and [differentiable] on the interval's interior (a, b) then there is at least one point c in (a, b) at which

$$f'(c) = \frac{f(b) - f(a)}{b - a}.$$

Points earned: _____ out of 10.