Critical points occur when:

- f'(x) = 0 or f'(x) does not exist
- f(x) exists (important!!!)

Rolle's Theorem

If f is differentiable and continuous on (a,b) where f(a) = f(b), then f'(x) = 0 for some $a \leq x \leq b$

Mean Value Theorem

If f is differentiable and continuous on [a,b], then there exists a c in (a,b) such that

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