

Mean Value Theorem

If f is continuous on $[a, b]$ and differentiable on (a, b) ,

then there is at least one number c

in (a, b) such that $\frac{f(b) - f(a)}{b - a} = f'(c)$

Mean Value Theorem

If f meets the conditions of Rolle's Theorem, then you can find ' c '.

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

$$f(b) = f(a) + (b - a)f'(c)$$

$$\text{Mean Value Thm Part 1: } f'(c) = \frac{f(b) - f(a)}{b - a}$$

$$\text{Mean Value Thm Part 2: } f(c) = \frac{\int_a^b f(x) dx}{b - a}$$

Mean Value Theorem

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