

# Calculus AB

3-2

Rolle's Theorem, Mean Value Theorem

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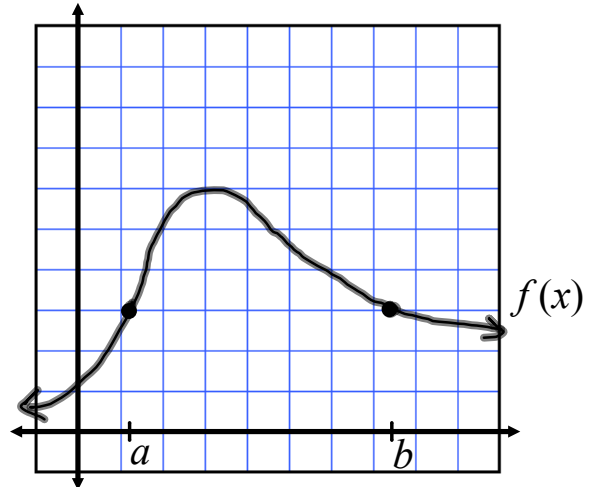
## Rolle's Theorem-

If 1)

2)

3)

Then



Determine whether Rolle's Theorem can be applied to  $f$  on the closed interval  $[a,b]$ . IF Rolle's Theorem can be applied, find all values of  $c$  in the open interval  $(a,b)$  such that  $f'(c) = 0$ . (pg 176)

12)  $f(x) = x^2 - 5x + 4, [1,4]$

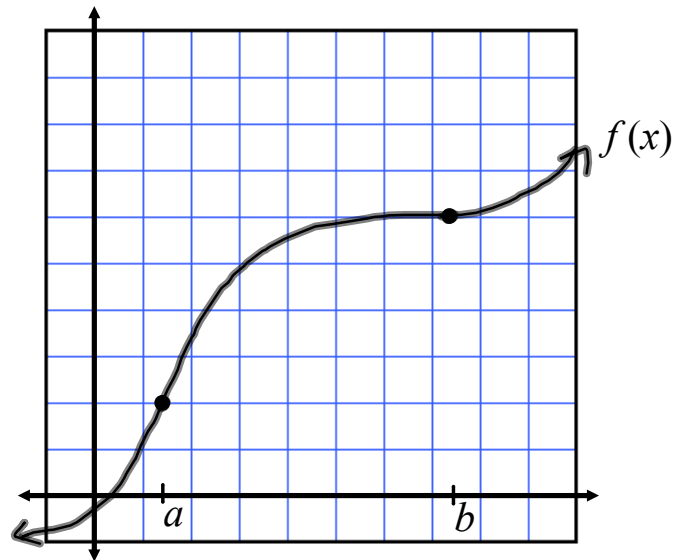
25)  $f(x) = |x| - 1, [-1,1]$

## Mean Value Theorem -

If 1)

2)

Then



Determine whether the Mean Value Theorem can be applied to  $f$  on the closed interval  $[a,b]$ . If the Mean Value Theorem can be applied, find all values of  $c$  in the open interval  $(a,b)$  such that  $f'(c) = \frac{f(b) - f(a)}{b - a}$ .

$$44) f(x) = \frac{x+1}{x}, \quad [-1, 2]$$

Assignment:

Pg. 176

1-23 odd,  
39-47 odd

59, 65