Ch5 MVT

Tuesday, 5 November 2024 9:50 PM

Mean Value Theorem, and APPLICATION: Let I be an open interval

Let f be a function defined on I.

If $\forall x \in I$, $f'(x) = 0$

THEN f is constant.

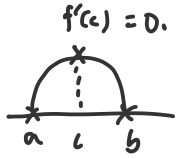
Rolle's Theorem,

If. 1. f is continuous on $[a,b]$

2. f is differentiable on (a,b)

3. $f(a) = f(b)$

Then $\exists c \in (a,b)$ s.t. $f'(c) = 0$



zeros of a function.

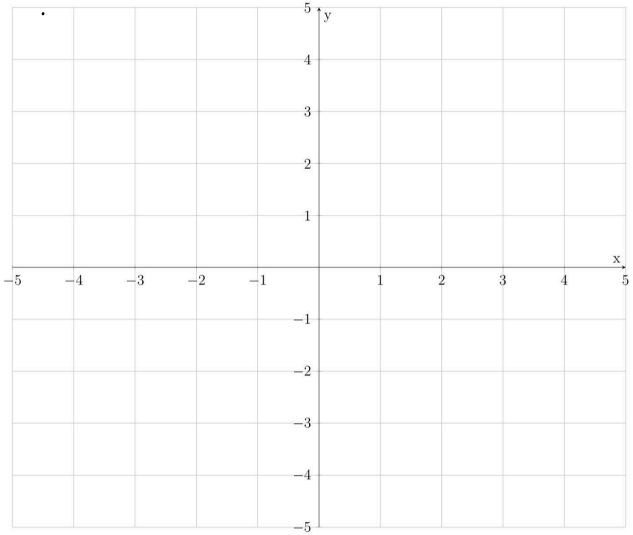
If $f(3) = 0$, then 3 is zero of f.

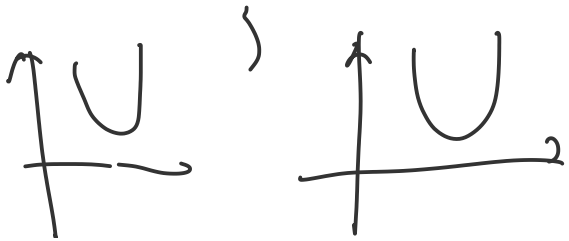
f'' 1 zero at most

f' 2 zeros at most

f 3 zeros at most

$x = -3, \quad x = 1$



0. $3x^2$ $6x$

x^3 $2x$