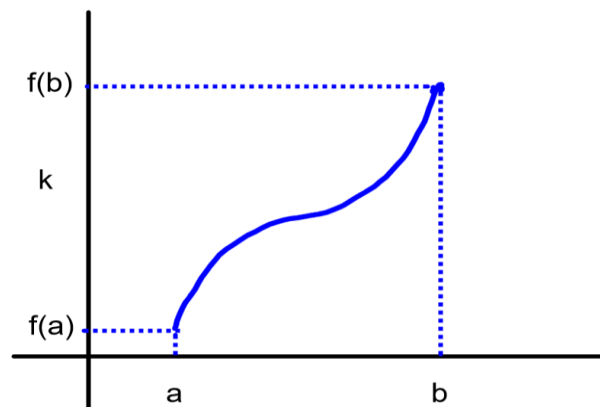


AP Calculus AB

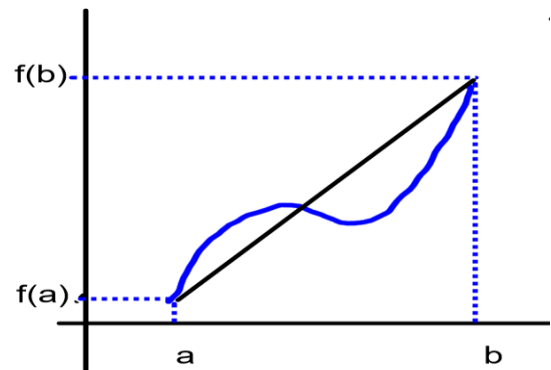
Theorems

If $f(x)$ is _____ on a closed interval $[a, b]$ and k is any number between _____ and _____, then there exists at least one value c in (a, b) such that _____.



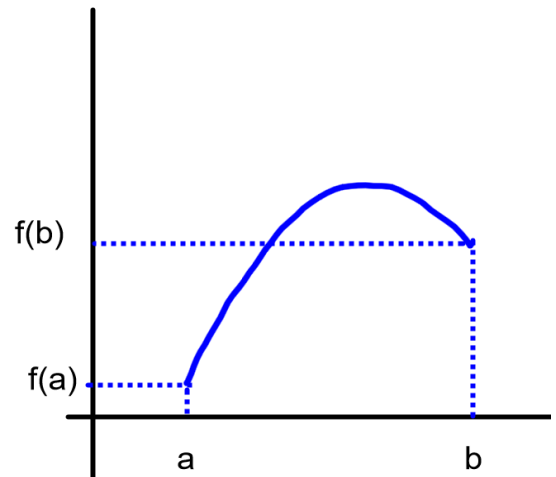
I V T

If $f(x)$ is _____ on the closed interval $[a, b]$ and _____ on the open interval (a, b) , then there exists at least one value c in (a, b) such that



M V T

A _____ $f(x)$ on a closed interval $[a, b]$ attains an _____
_____ at $x = c$ where $f(c) \leq f(x)$ for all x in the interval and an _____
_____ at $x = c$ where $f(c) \geq f(x)$ for all x in the interval.



E V T

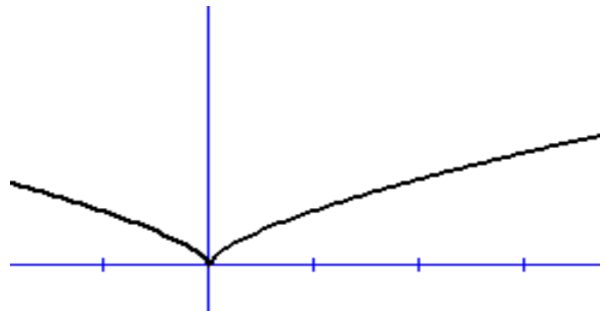
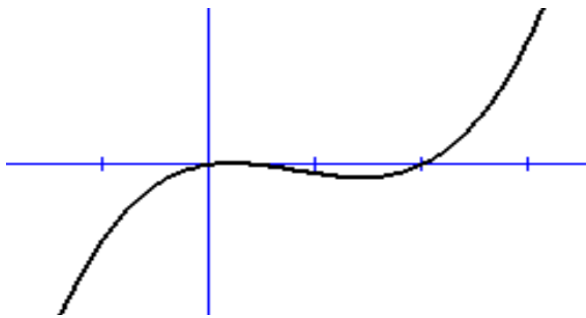
Theorem: Differentiability Implies Continuity

If $f(x)$ is differentiable on some interval (a, b) ,

then $f(x)$ is continuous on the interval (a, b) .

CAUTION: The converse of that theorem is NOT true.

Continuity does NOT imply differentiable.



Differentiability \rightarrow Continuity