Mean Value Theorem

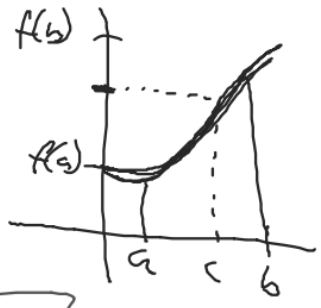
Existence Th.

IVT → Intermediate Value Th.

If f cont on $[a, b]$, there exists ($\exists$)

Some c in $[a, b]$ such that

$f(c)$ is between $f(a)$ and $f(b)$.



EVT Extreme Value Th.

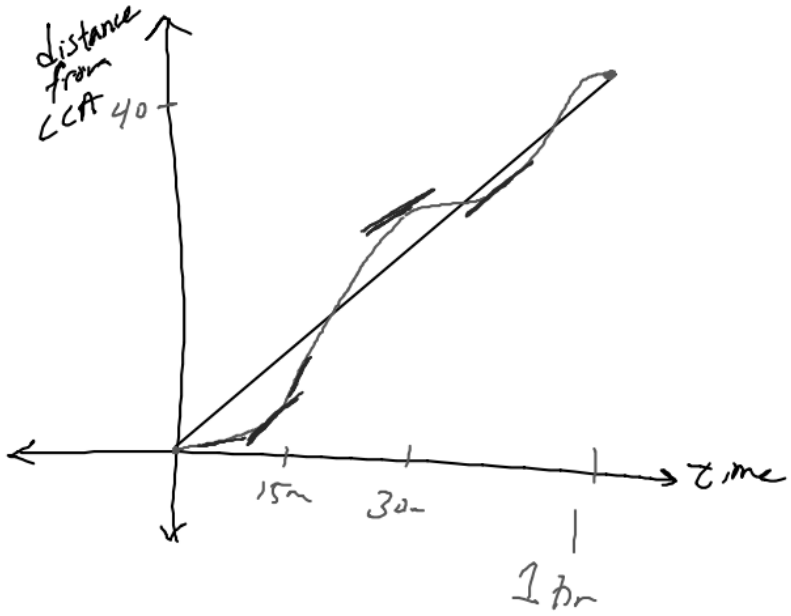
for a cont. f on $[a, b]$ f must have an absolute max and absolute min.

Mean Value Theorem

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

$$f'(c) = \text{avg value on } [a,b] = \frac{f(b) - f(a)}{b - a}$$

instant slope = avg. slope.



Avg. velocity $\frac{40 \text{ mi}}{\text{hr}}$

Set of Data

Test Scores

Avg: 78.356 %