Formulas and Theorems

Intermediate-Value Theorem

A function $y = f(x)$ that is continuous on a closed interval $[a,b]$ takes on every value between $f(a)$ and $f(b)$.

Note: If f is continuous on $[a,b]$ and $f(a)$ and $f(b)$ differ in sign, then the equation $f(x) = 0$ has at least one solution in the open interval (a,b).
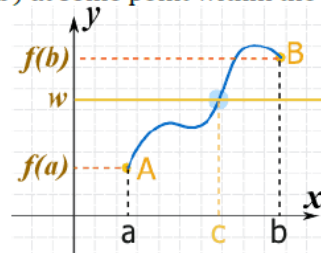
Intermediate Value Thm.

A function $f(x)$ that is continuous on $[a,b]$ takes on every y-value between $f(a)$ and $f(b)$.

Intermediate Value Theorem f is a continuous function with an interval, [a, b], as its domain.	If f takes **values** $f(a)$ and $f(b)$ at each end of the interval, then it also takes any **value** between $f(a)$ and $f(b)$ at some point within the interval.

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