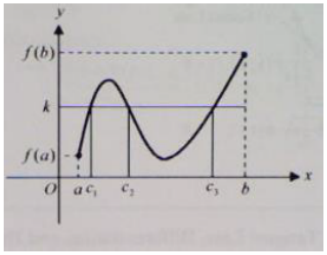
Intermediate Value Theorem

If the function $f(x)$ is continuous on $[a, b]$, and k is a number between $f(a)$ and $f(b)$, then there exists at least one number $x = c$ in the open interval (a, b) such that

$$f(c) = k.$$

Intermediate Value Theorem

If *f* is a continuous function on the closed interval [a, b] and *k* is any number between *f(a)* and *f(b)*, then there exists at least one value of *c* on [a, b] such that *f(c)* = *k*. In other words, on a continuous function, if *f(a)*< *f(b)*, any y – value greater than *f(a)* and less than *f(b)* is guaranteed to exists on the function *f*.



Intermediate Value Theorem:

If f is continuous on $[a, b]$ and k is any number between $f(a)$ and $f(b)$, then there is at least one number c between a and b such that $f(c) = k$.