Theorems

Students should be able to apply and have a geometric understanding of the following:

- Intermediate Value Theorem
- Mean Value Theorem for derivatives
- Extreme Value Theorem

Name	Formal Statement	Restatement	Graph	Notes
IVT	If $f(x)$ is continuous on a closed interval $[a, b]$ and $f(a) \neq f(b)$, then for every value m between $f(a)$ and $f(b)$ there exists at least one value c in (a, b) such that $f(c) = k$.			
MVT	If $f(x)$ is continuous on the closed interval $[a, b]$ and differentiable on (a, b), then there must exist at least one value c in (a, b) such that $f'(c) = \frac{f(b) - f(a)}{b - a}$			
EVT	A continuous function $f(x)$ on a closed interval $[a, b]$ attains both an absolute maximum $f(c) \geq f(x)$ for all x in the interval and an absolute minimum $f(c) \leq f(x)$ for all x in the interval			