

**Extreme Value Thm:**

If  $f(x)$  is continuous on  $[a, b]$ ,  
then  $f(x)$  must have both an absolute min and  
absolute max on the interval  $[a, b]$ .

**Formulas and Theorems**Extreme-Value Theorem

If  $f$  is continuous on a closed interval  $[a, b]$ ,  
then  $f(x)$  has both a maximum and minimum on  $[a, b]$ .

Extreme-Value Theorem

If  $f$  is continuous on a closed interval  $[a, b]$ , then  $f(x)$  has both a maximum and minimum on  $[a, b]$ .