Global Maxima and Minima

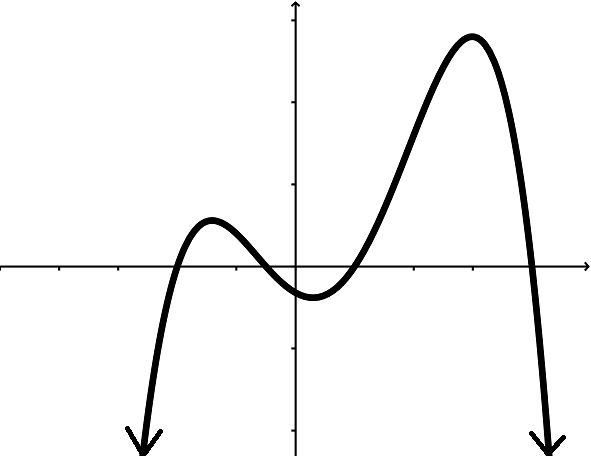
Definition: We say that has a local minimum at if is less than or equal to all other values of near

Definition: We say that has a local maximum at if is greater than or equal to all other values of near

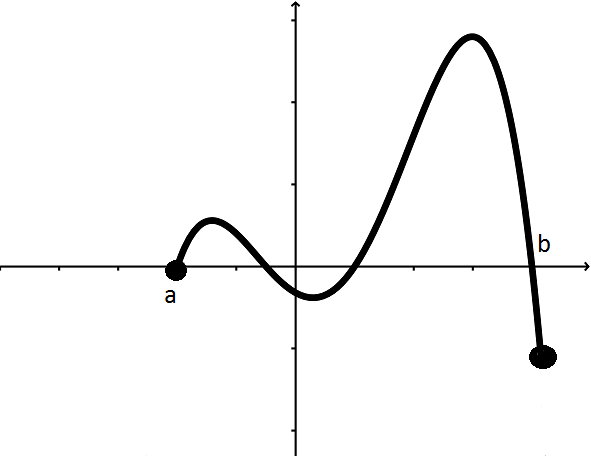
Remark: We saw that for both the local maximum and minimum that . If then is a critical pt.

Definition: We say that has a at if

Definition: We say that has a at if



Extreme Value Theorem: If is continuous on the closed, bounded interval then



How do we find the global maximum and minimum?

Conclusion: The global max (or min) of on is either at

Ex: Find the global max and min of on the interval .

Example 2: Find the global max and min of on the interval .