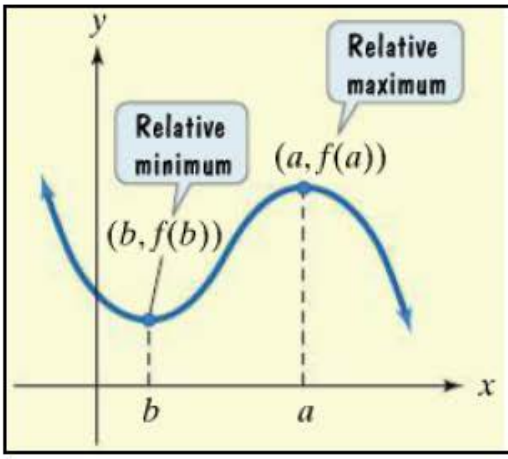


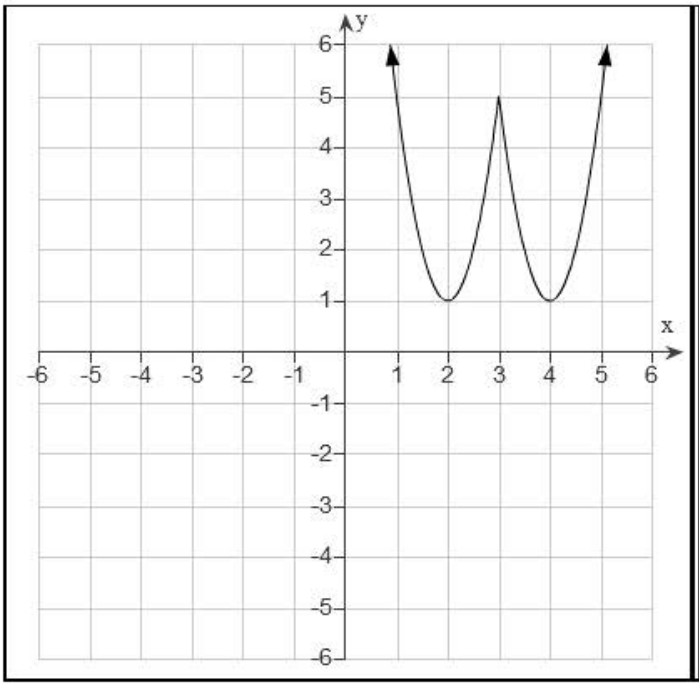
Definitions of Relative Maximum and Relative Minimum

1. A function value f(a) is a relative maximum of f if there exits an open interval containing a such that f(a) > f(x) for all $x \neq a$ in open interval.

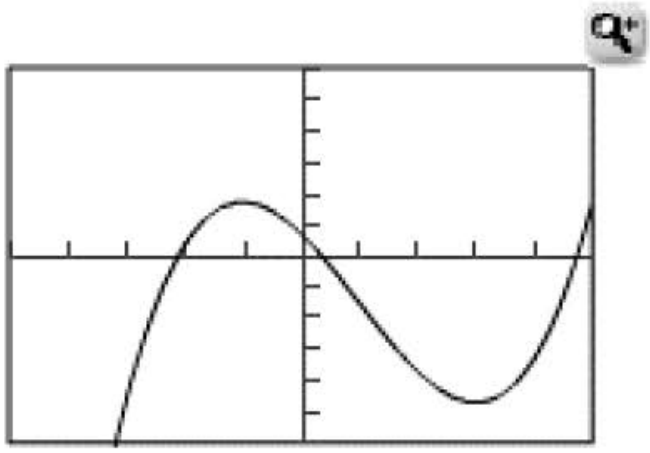
2. A function value f(b) is a relative minimum of f if there exists an open interval containing b such that f(b) < f(x) for all $x \neq b$ in the open interval.

The word local is sometimes used instead of relative when describing maxima or minima.

Example 2: Use the graph to find each of the following, a) The numbers, if any, at which f has a relative maximum. What are these relative maxima? B) The numbers, if any, at which f has a relative minimum. What are these relative minima?



$$f(x) = 2x^3 - 6x^2 - 18x + 7$$



$$[-5,5,1] \text{ by } [-60,60,10]$$