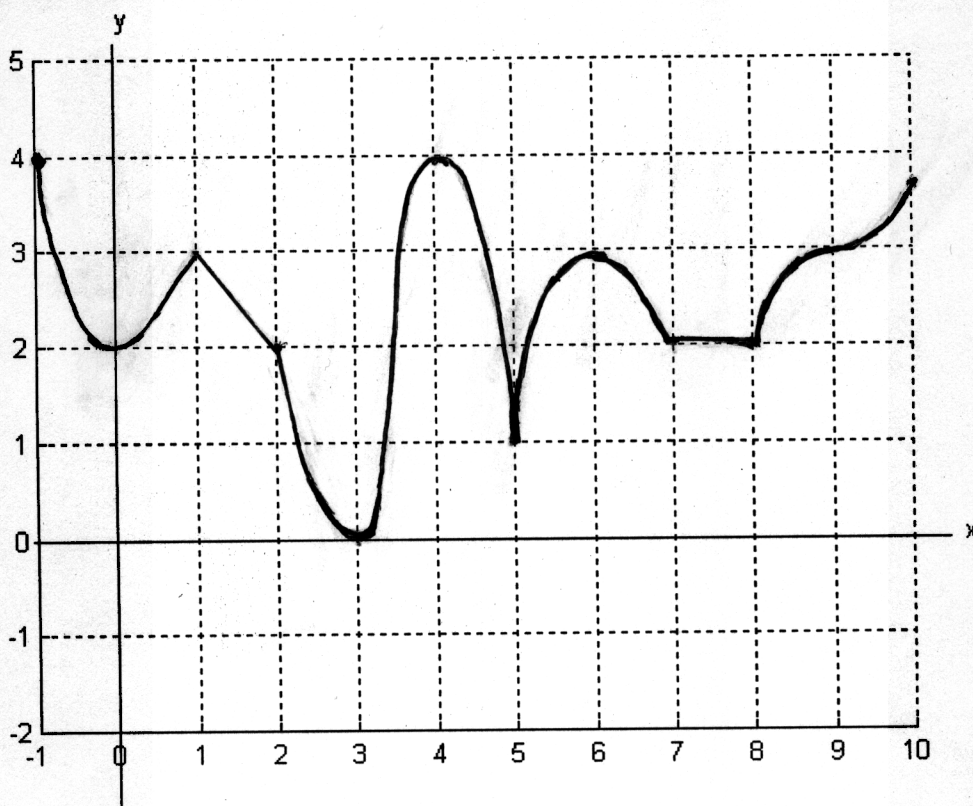


Maxima and Minima

We say that

f has a local (or relative) maximum at c if $f(c) \geq f(x)$ for all x 's "near enough to" c . More precisely, this means that $f(c) \geq f(x)$ for all x 's in some open interval $I = (u, v)$ containing c .

f has a local (or relative) minimum at c if $f(c) \leq f(x)$ for all x 's "near enough to" c . More precisely, this means that $f(c) \leq f(x)$ for all x 's in some open interval $I = (u, v)$ containing c .



Suppose $f(x)$ has domain D . We say that

f has an absolute maximum at c if $f(c) \geq f(x)$ for all x in D . In that case, $f(c)$ is called the (absolute) maximum value of f .

f has an absolute minimum at c if $f(c) \leq f(x)$ for all x in D . In that case, $f(c)$ is called the (absolute) minimum value of f .