

Def. Global Extrema

Suppose the function f is defined on a set D .

Suppose that a number $c \in D$ satisfies

$f(c) \geq f(x)$ for all $x \in D$. Then we say

The global maximum of f on D is $f_{\max} = f(c)$,

and this global max is attained at c .

notations
global max AKA
global max value
global max output.

If c satisfies
 $f(c) \leq f(x)$
for all x , then
the global minimum
of f is $f_{\min} = f(c)$