pg 83

Maximum and Minimums

A function value f(a) is called a **relative minimum** of f if there exists an interval (x_1, x_2) that contains a such that

$x_1 < x < x_2$ implies $f(a) \leq f(x)$

In other words...
If a y-value is less than all the other y-values around it on a certain interval, then it is a relative min

A function value f(a) is called a **relative maximum** of f if there exists an interval (x_1, x_2) that contains a such that

$x_1 < x < x_2$ implies $f(a) \geq f(x)$

In other words...
If a y-value is greater than all the other y-values around it on a certain interval, then it is a relative max

How can you define a maximum and minimum using increasing and decreasing intervals?

A max is ....

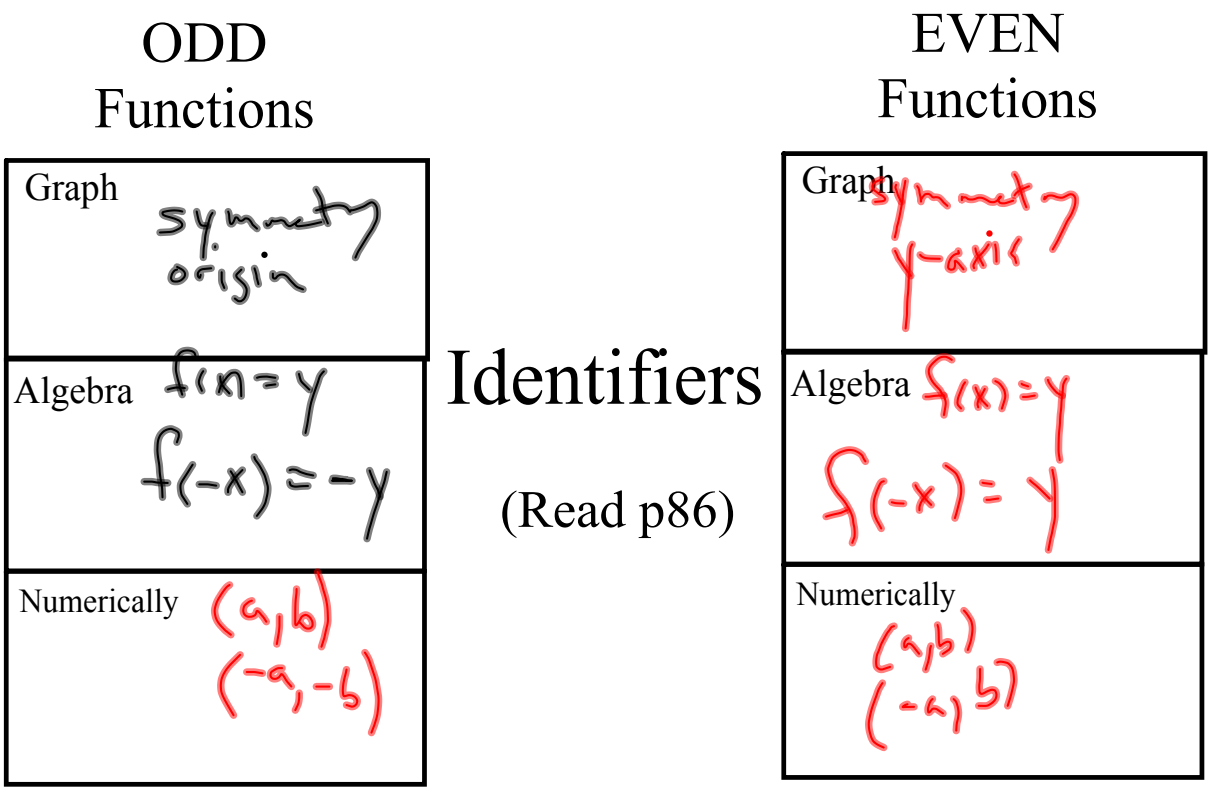
the point where a function changes from increase to decreasing.

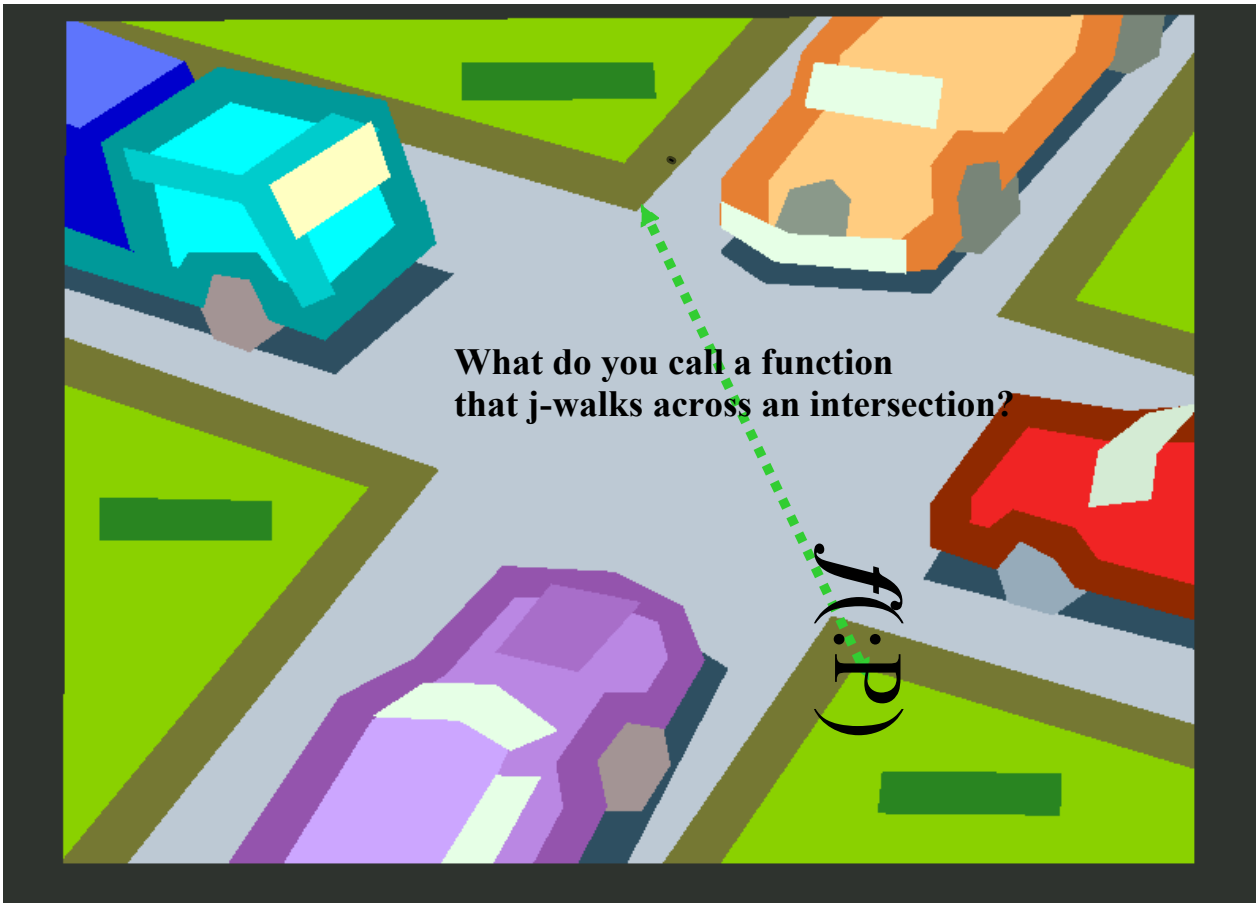
A min is ....

the point where a function changes from decreasing to increasing.

Special types of functions

Odd and Even





Assignment p89:53-57odd, 97-102all, 108-114even

Main Idea: Functions

Take notes on 1.3: p92-96

Essential questions for 1.3 Transformations of functions

What are six graphs of the common functions?

How do you determine if a common function shifts horizontally and vertically? (Algebraically and Graphically)

How do you determine if a common function is reflected over the x or y-axis? (Algebraically and Graphically)

How do you determine if a common function stretches horizontally and vertically? (Algebraically)