Recall: The derivative of the function is:

The derivative is a function.

Since is a function, we can take *its* derivative.

is called

is the

is increasing

is the rate of change of .

is increasing

Recall: is concave up if the rate of change of is increasing.

is concave up if is increasing

is concave up if

is decreasing is decreasing

Recall: is concave down if the rate of change of is decreasing.

is concave down if is decreasing

is concave down if

is concave up if is concave down if