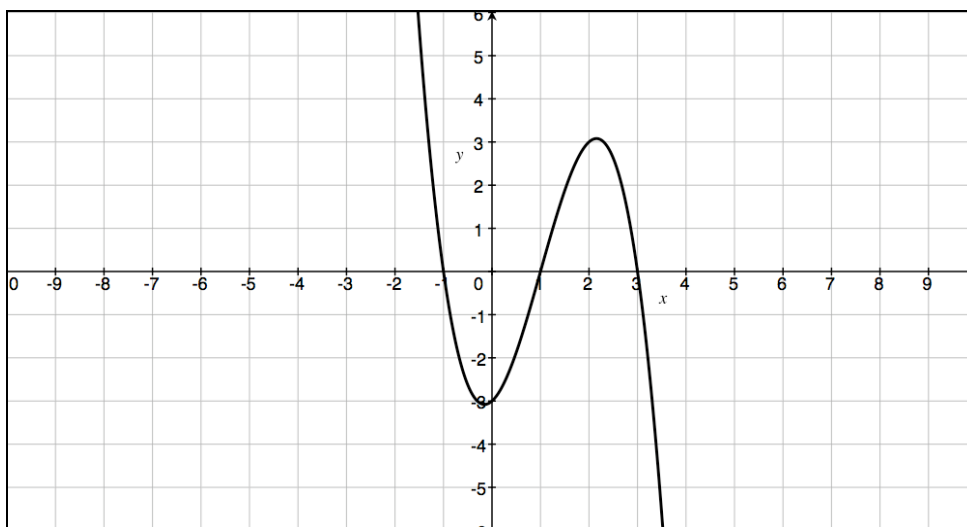


AP Calc Warm Up – 8/25/10

Name: _____

Block: _____

- 1) Is the following function strictly increasing, strictly decreasing or neither?



- 2) Convert the following verbal descriptions into interval notation with brackets.

a. x is between 2 and 9 not including 2 and 9.

b. x is between -3 and 3 not including -3 but including 3.

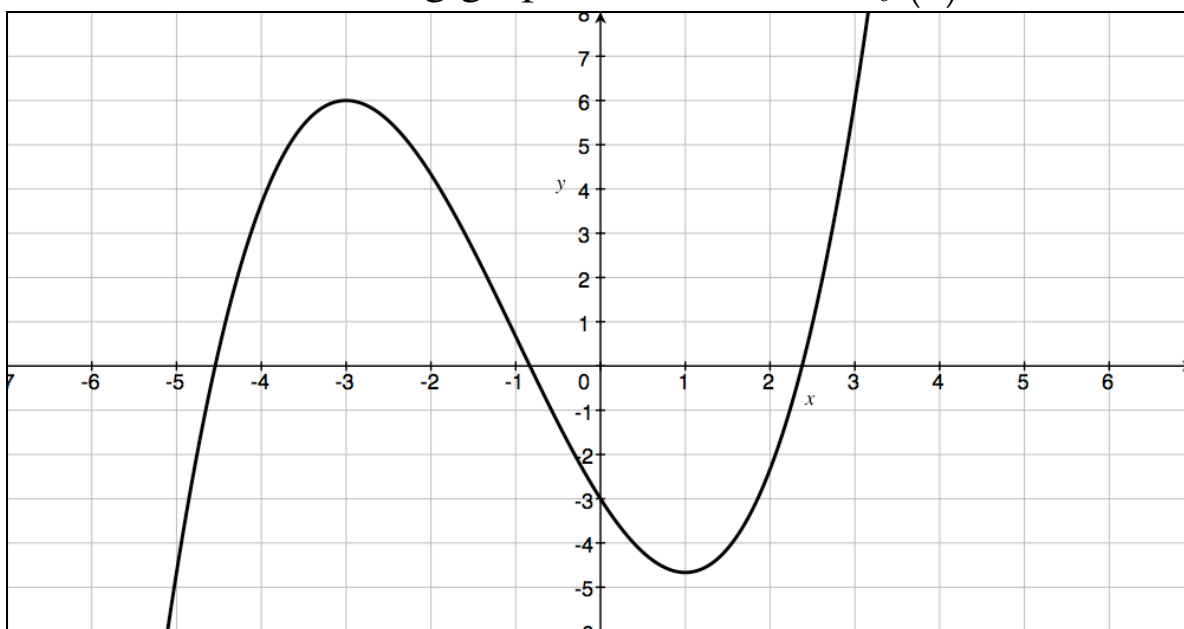
c. x is greater than 7

IDENTIFYING INCREASING/DECREASING CONCEPT BUILDER

Name: _____ Date: _____ Period: _____

Concept – Students will be able to use interval notation to describe where a function is increasing or decreasing.

Consider the following graph of the function $f(x)$.



Write a verbal description of where $f(x)$ is increasing and where it is decreasing.

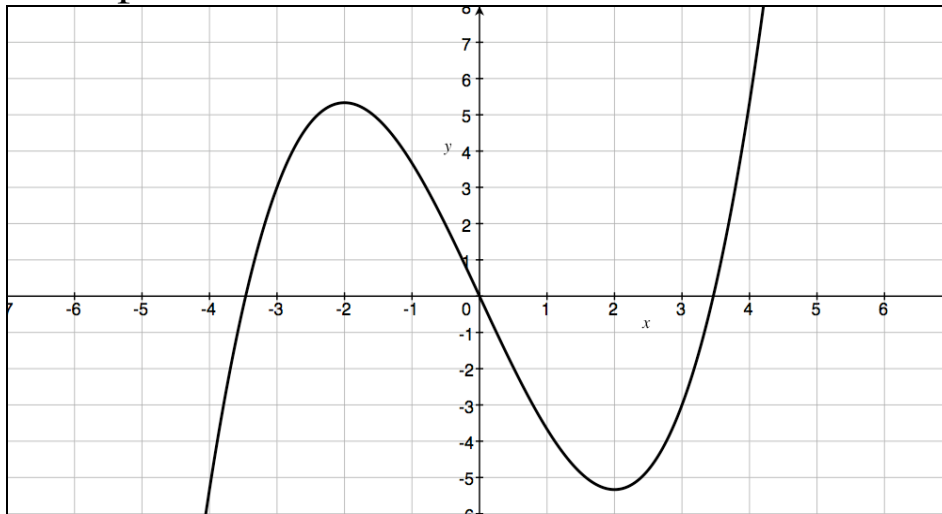
$f(x)$ is decreasing on the interval...

$f(x)$ is increasing on the interval...

$f(x)$ has a local maximum at...

$f(x)$ has a local minimum at...

Examples –

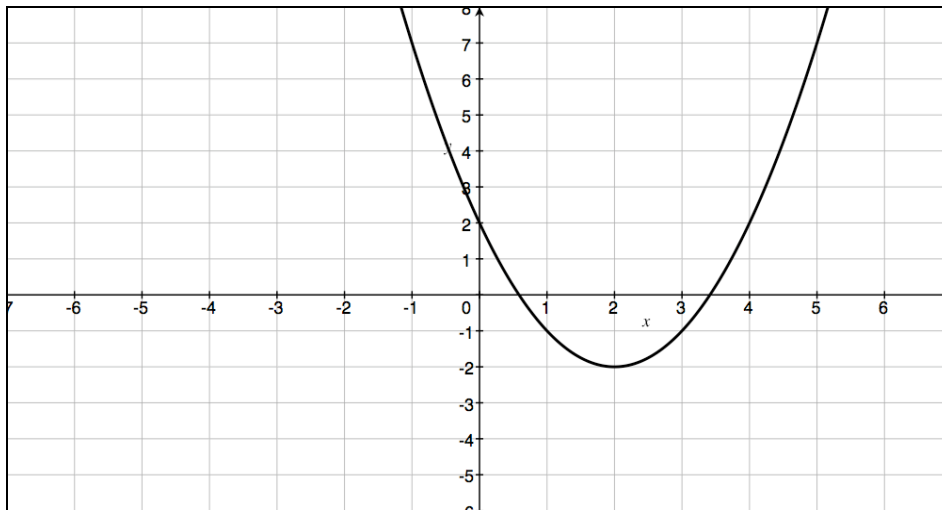


$f(x)$ is decreasing on the interval...

$f(x)$ is increasing on the interval...

$f(x)$ has a local maximum at...

$f(x)$ has a local minimum at...



$f(x)$ is decreasing when...

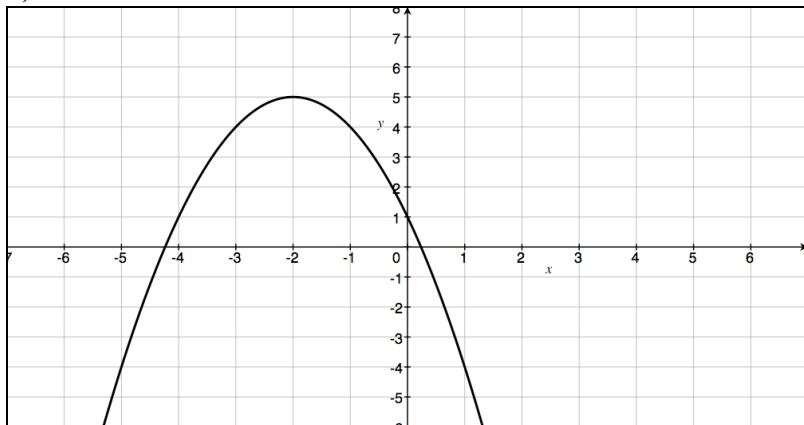
$f(x)$ is increasing when...

$f(x)$ has a local minimum at...

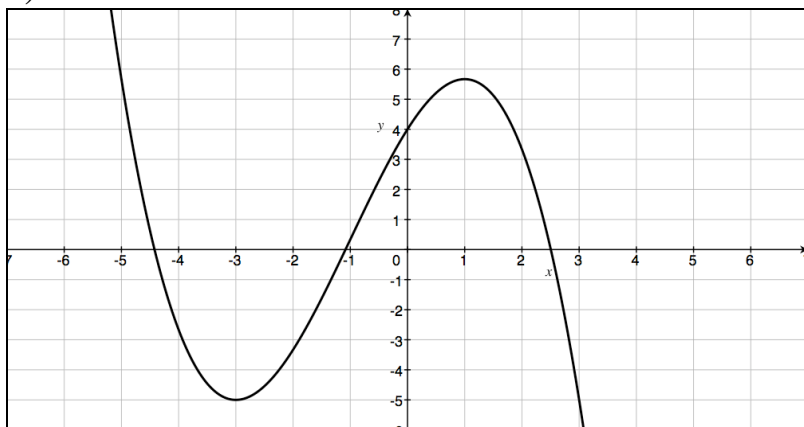
PRACTICE

Directions – use bracket notation to identify where the following functions are increase and/or decreasing. Identify any local maxima or minima.

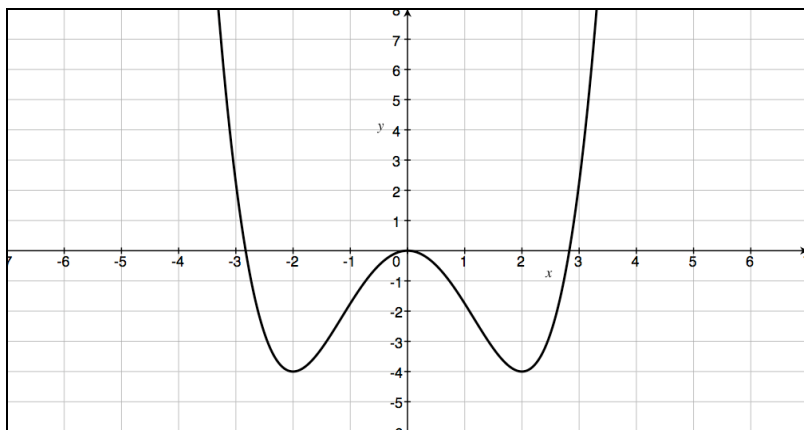
1)



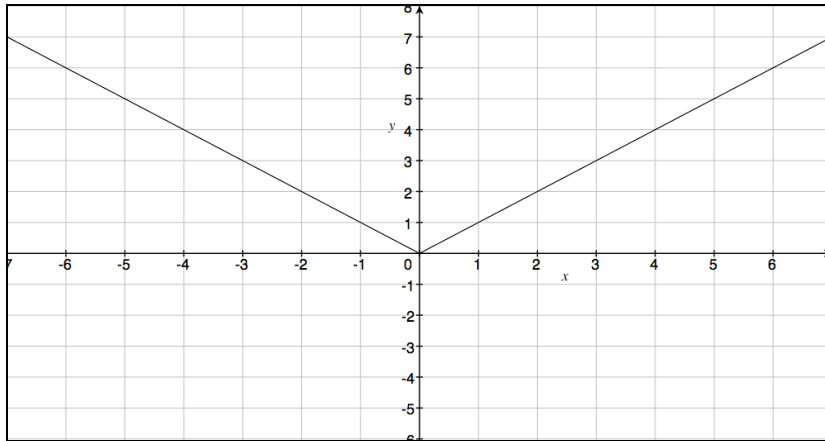
2)



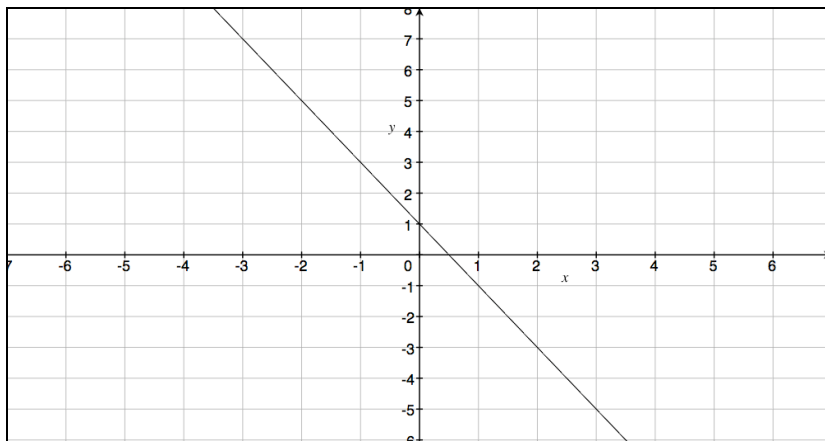
3)



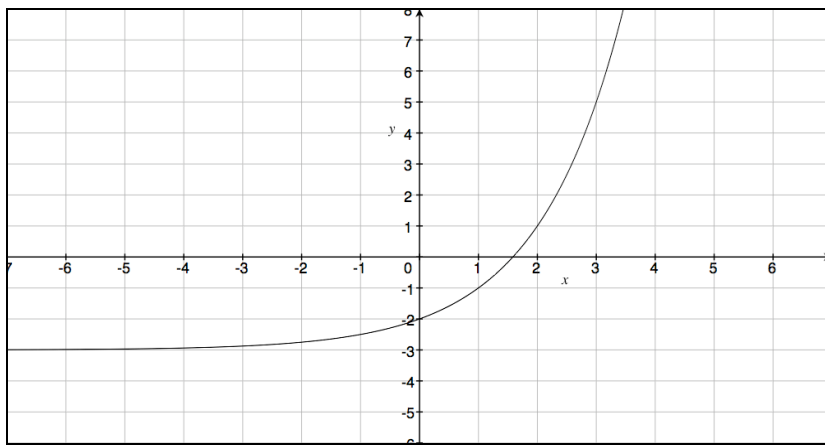
4)



5)



6)

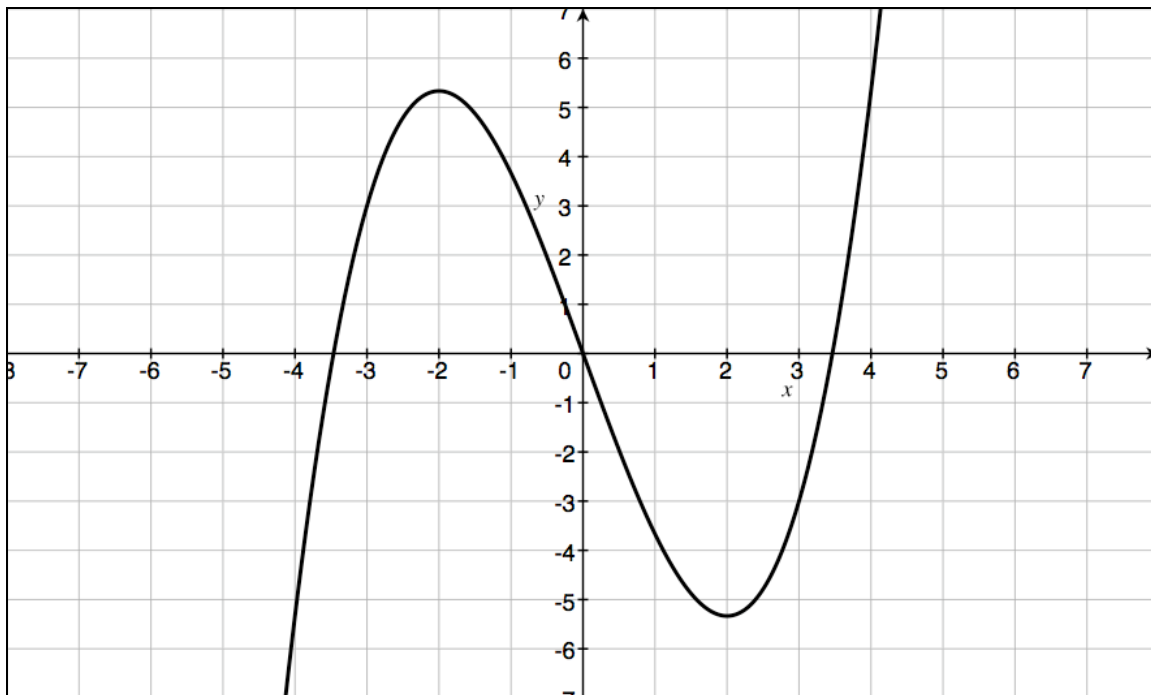


AP Calc – Exit Slip – 8/25/10

Name: _____

Block: _____

- 1) Identify the intervals over which $f(x)$ is increasing/decreasing using the graph below. Be sure to use proper interval notation. Identify any local maxima or minima.



Increasing

Decreasing

Maxima

Minima

PERIOD:

STUDENT #:

AP Calc – Homework – 8/25/10

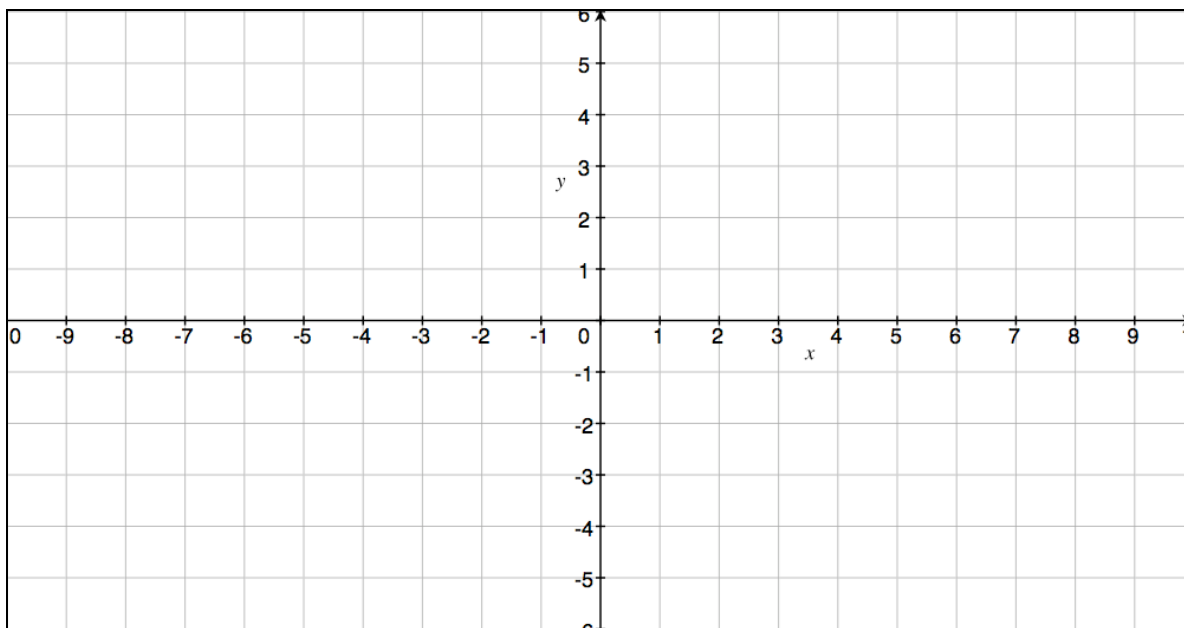
LAST NAME, FIRST NAME: _____

1) On the following graph sketch a function (label it $f(x)$) that meets the following criteria:

a. $f(x)$ increases on the interval $(-\infty, -4)$

b. $f(x)$ decreases on the interval $(-4, 1)$

c. $f(x)$ increases on the interval $(1, \infty)$



For the graph that you drew, identify any maxima or minima.