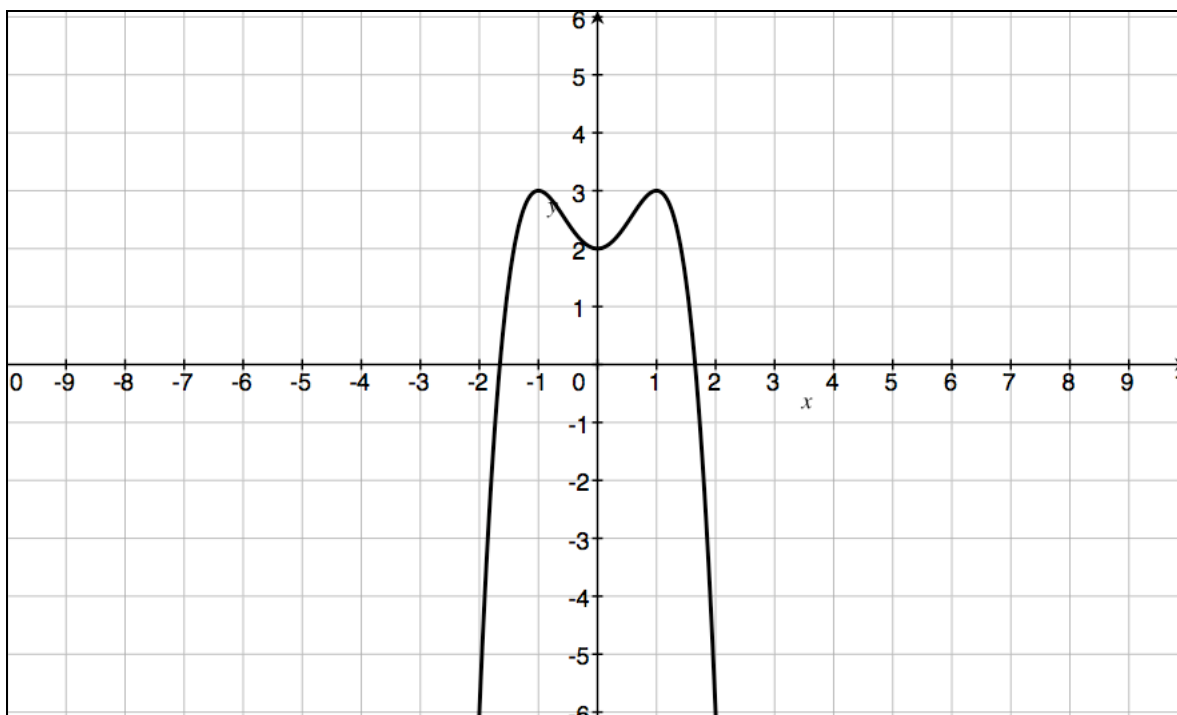


AP Calc Warm Up – 8/26/10

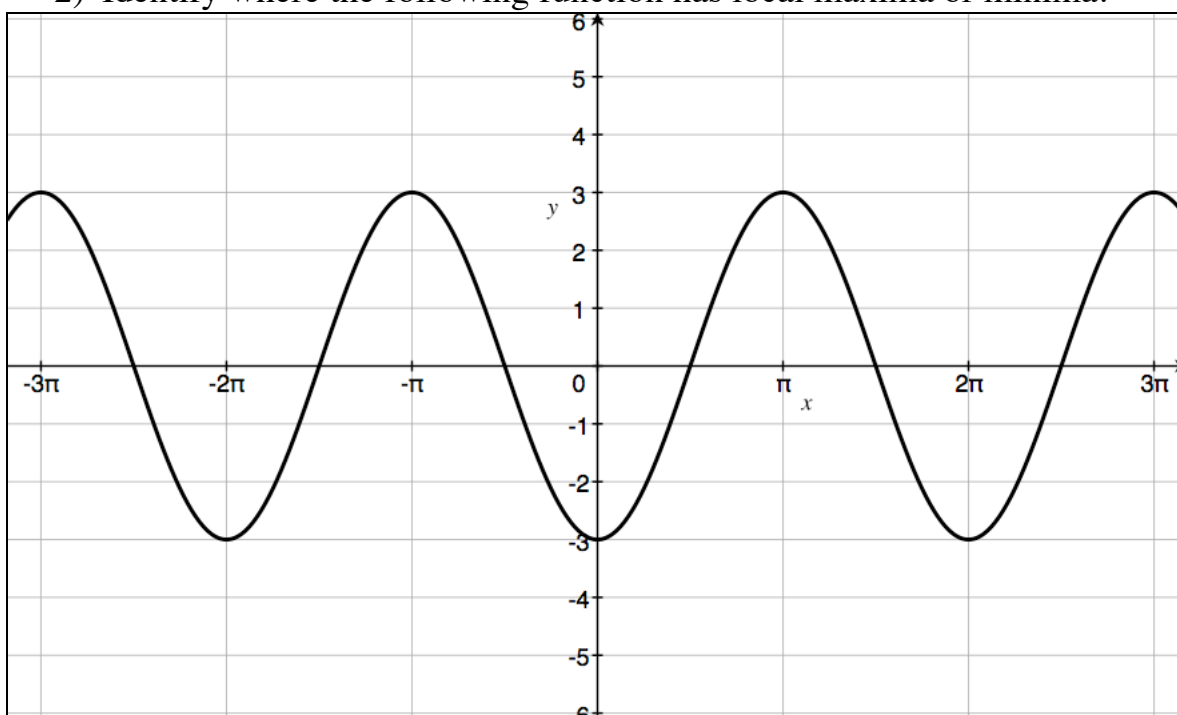
Name: _____

Block: _____

1) Identify where the following function has local maxima or minima.



2) Identify where the following function has local maxima or minima.

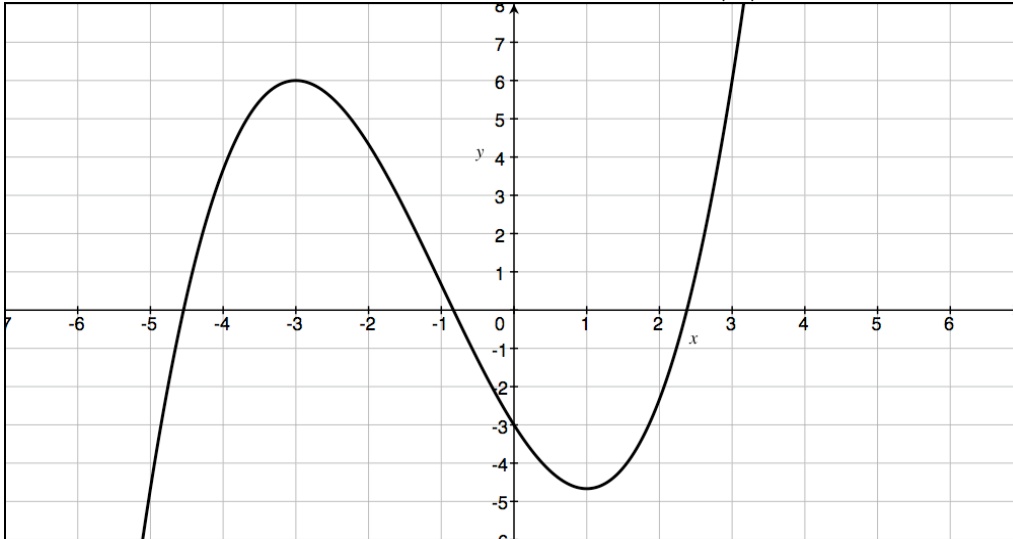


IDENTIFYING CONTINUITY CONCEPT BUILDER

Name: _____ Date: _____ Period: _____

Concept – Students will be able to determine if a function is continuous by analyzing at its graph.

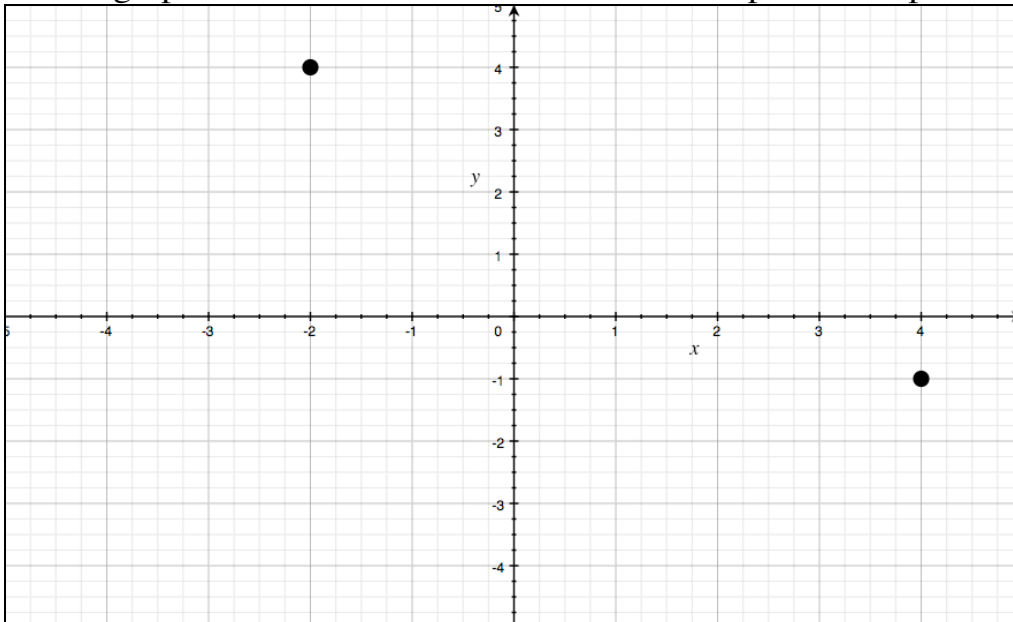
Consider the following graph of the function $f(x)$.



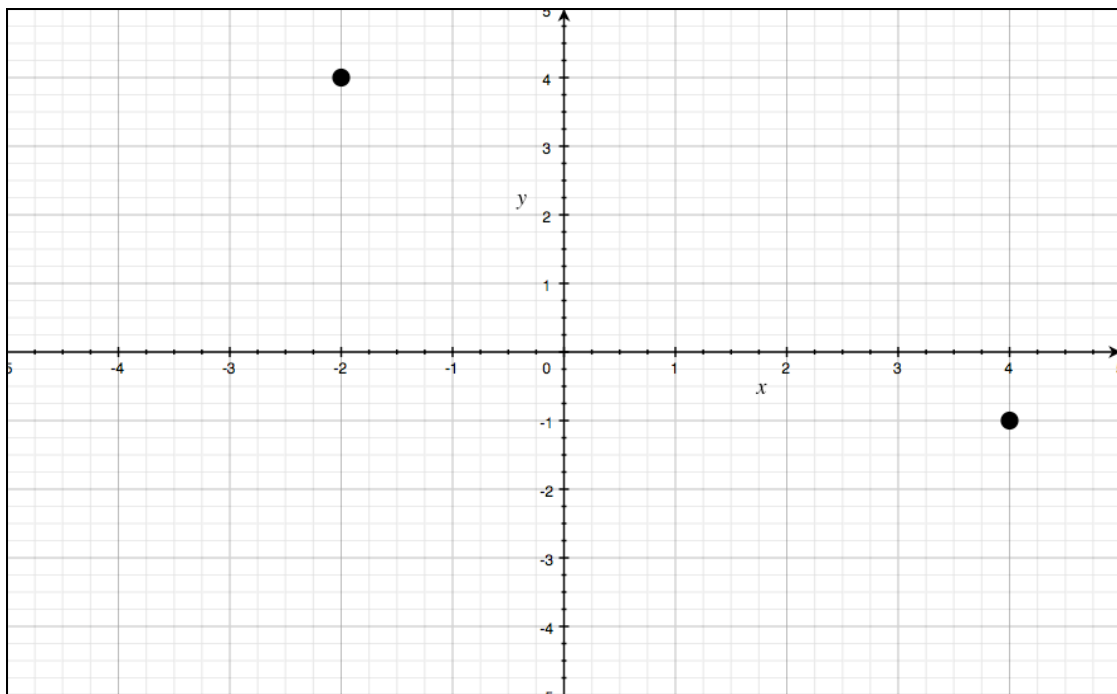
Circle where $f(x)$ goes from above the x-axis to below the x-axis.

Put a square around where $f(x)$ goes from below to above the x-axis.

On the graph below, draw a continuous line from point A to point B.



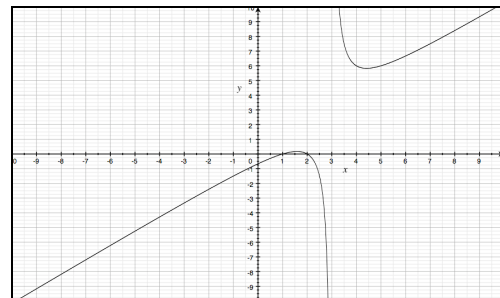
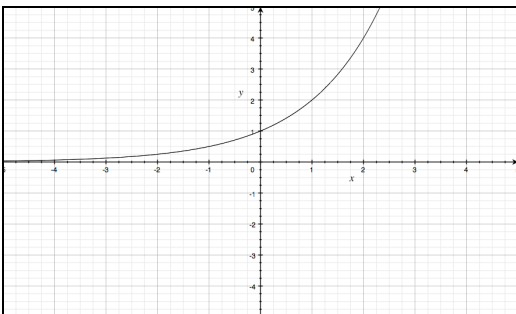
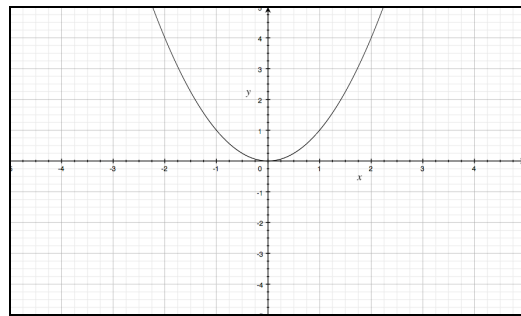
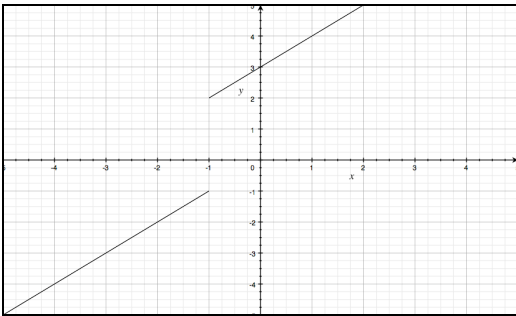
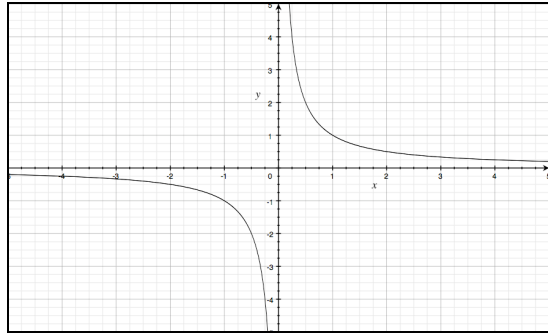
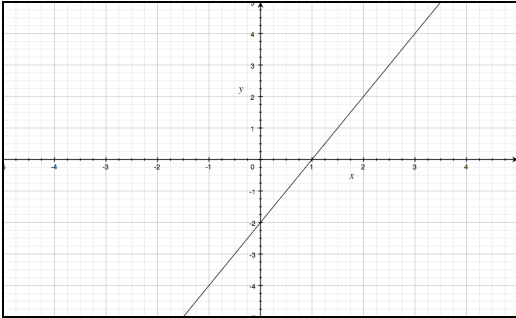
Now a new challenge: draw a continuous line from point A to point B THAT DOES NOT CROSS THE x-axis.



A function is continuous if....

PRACTICE

Directions - Identify if the following functions are continuous or not continuous. If it is not continuous, identify where the discontinuity is.



What kinds of functions are continuous?

Most of the functions...

What kinds of functions are NOT CONTINUOUS?

There is one major concept to keep in mind when considering functions that are not continuous...

For what x-values do the following functions divide by zero?

1) $\frac{1}{x}$

2) $\frac{1}{2-x}$

3) $\frac{1}{x+5}$

4) $\frac{x^2}{x^3+8}$

5) $\frac{5}{x^2-4}$

6) $\frac{1}{\sin x}$

7) $\frac{1}{2^x-1}$

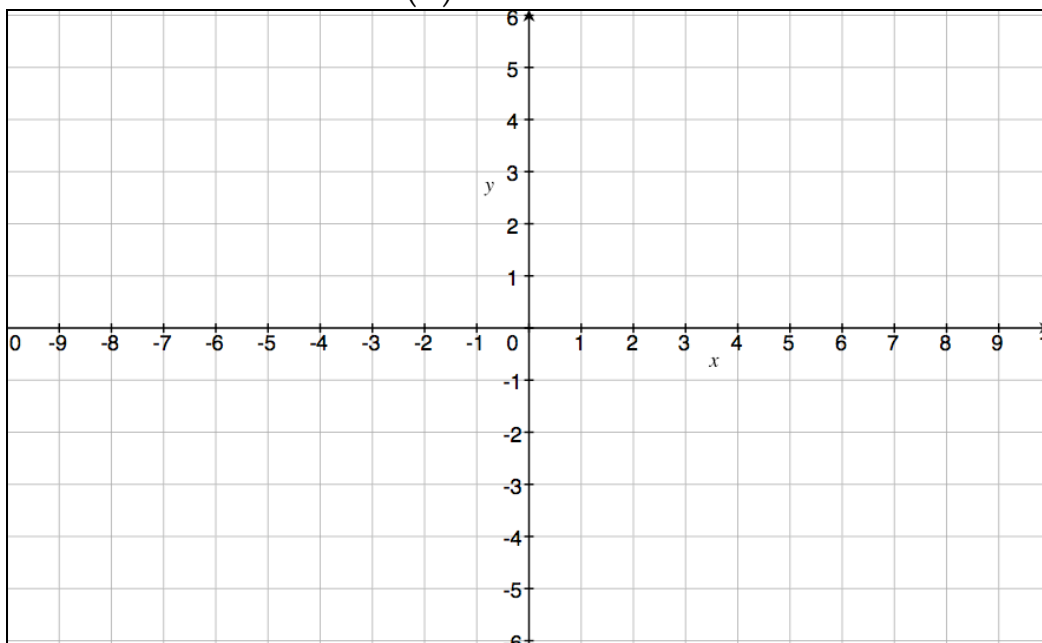
8) $\frac{2}{4-2^x}$

AP Calc – Exit Slip – 8/26/10

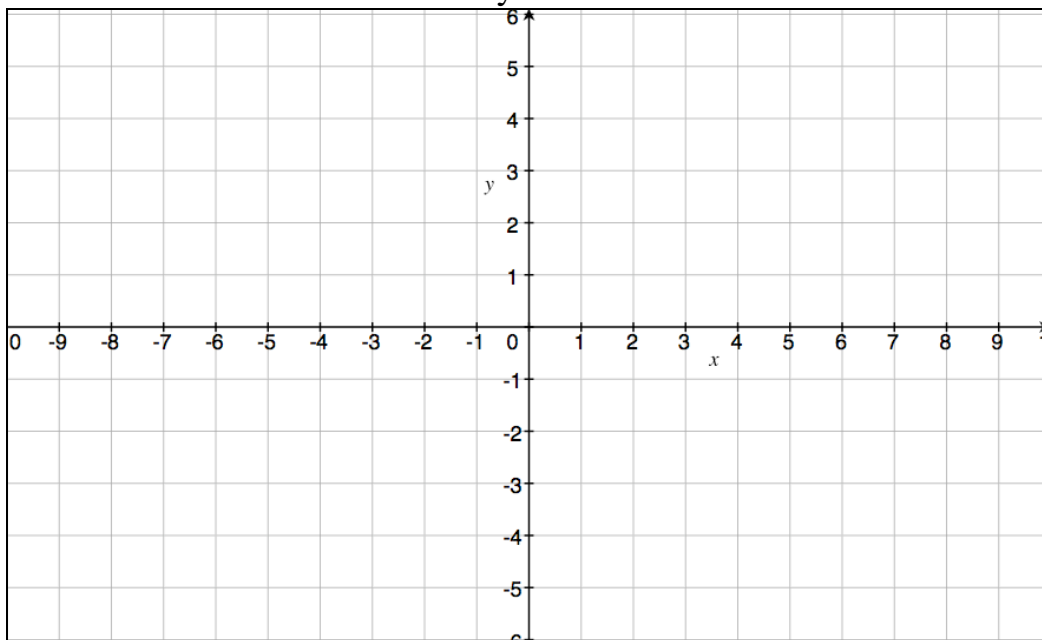
Name: _____

Block: _____

1) Sketch a function $f(x)$ that is continuous.



1) Sketch a function $f(x)$ that is NOT continuous. State where the function has a discontinuity.



PERIOD:

STUDENT #:

AP Calc – Homework – 8/26/10

LAST NAME, FIRST NAME: _____

- 1) Complete the following textbook problems: p. 47 #2, 4, 5, 6, 7, 9
But, change the instructions to, “Find the x-value that makes the denominator of the function equal to zero.