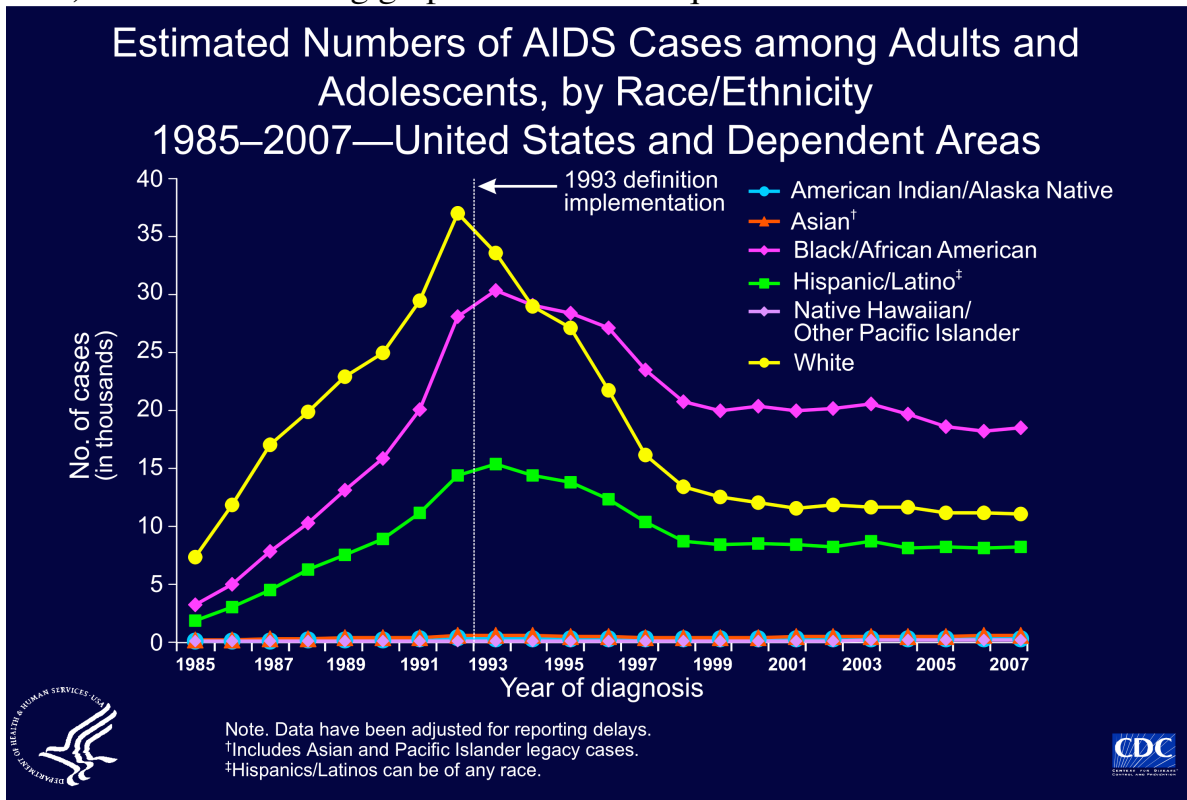


# Precalc Warm Up – 9/16/10

Name: \_\_\_\_\_

Period: \_\_\_\_\_

1) Use the following graph to answer the questions.



- Of Whites, African Americans and Latinos, which group had the greatest number of AIDS cases in 2007?
- Of Whites, African American and Latinos, which group had the greatest number of AIDS cases in 1992?
- Did the number of AIDS cases for Whites increase or decrease between 1992 and 2007?
- From 1992 to 2007 did the number of AIDS cases decrease at a greater rate for Whites or for African Americans?

# Comparing $f(x)$ and Increasing/Decreasing

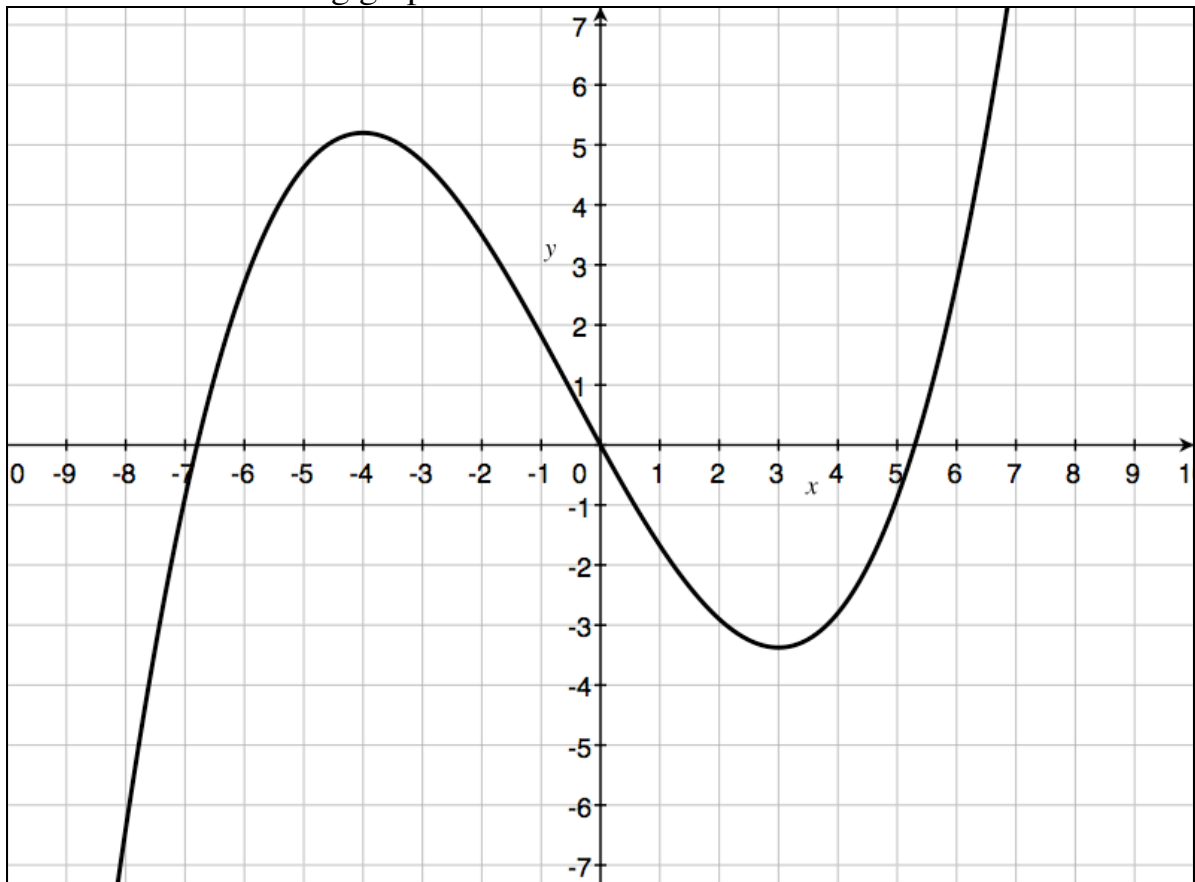
## SKILL BUILDER

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Period: \_\_\_\_\_

Concept – Students will be able to determine if a function is positive/negative and increasing/decreasing from its graph

We want to be able to distinguish between when a function is negative and when it is decreasing.

Consider the following graph



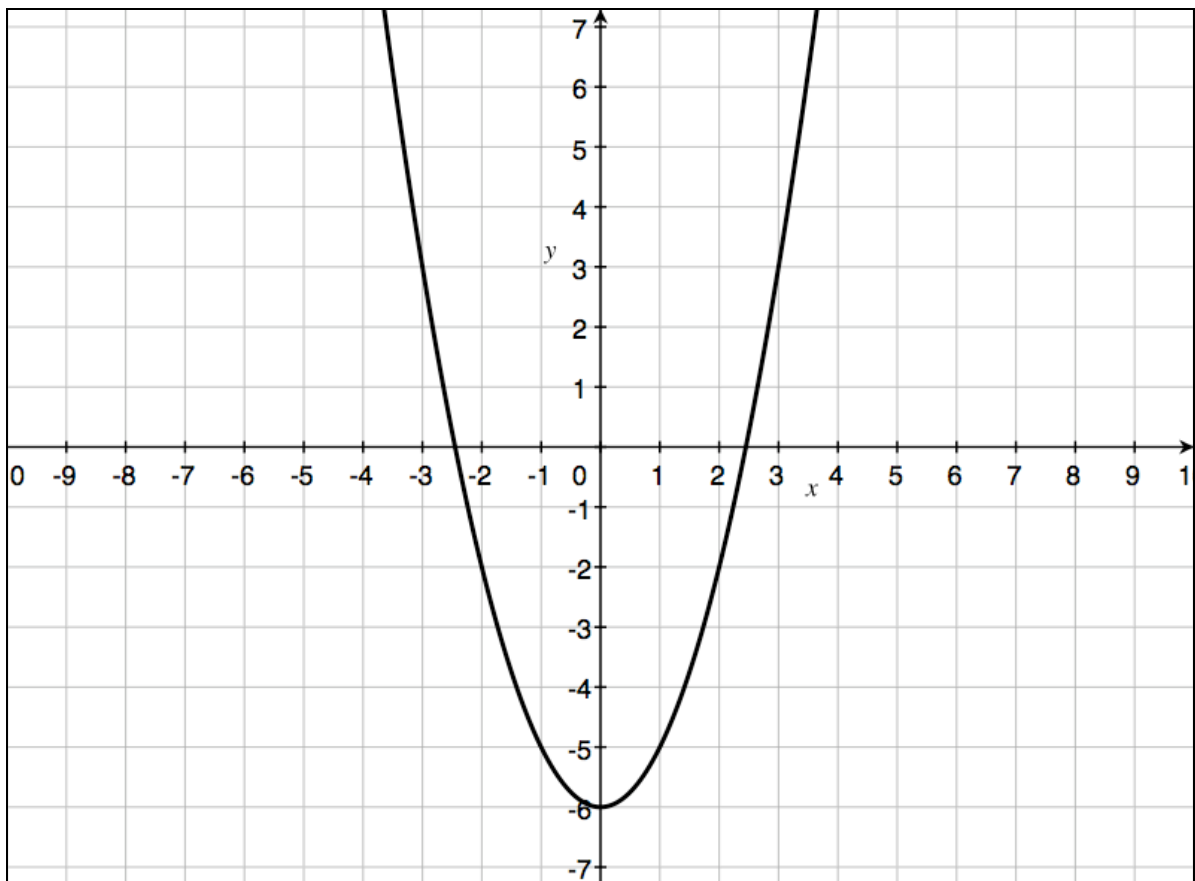
Identifying if  $f(x)$  is positive or negative by graph -

Positive

Negative

Consider the function  $f(x) = x^2 - 6$

Identifying if  $f(x)$  is positive or negative using the equation -



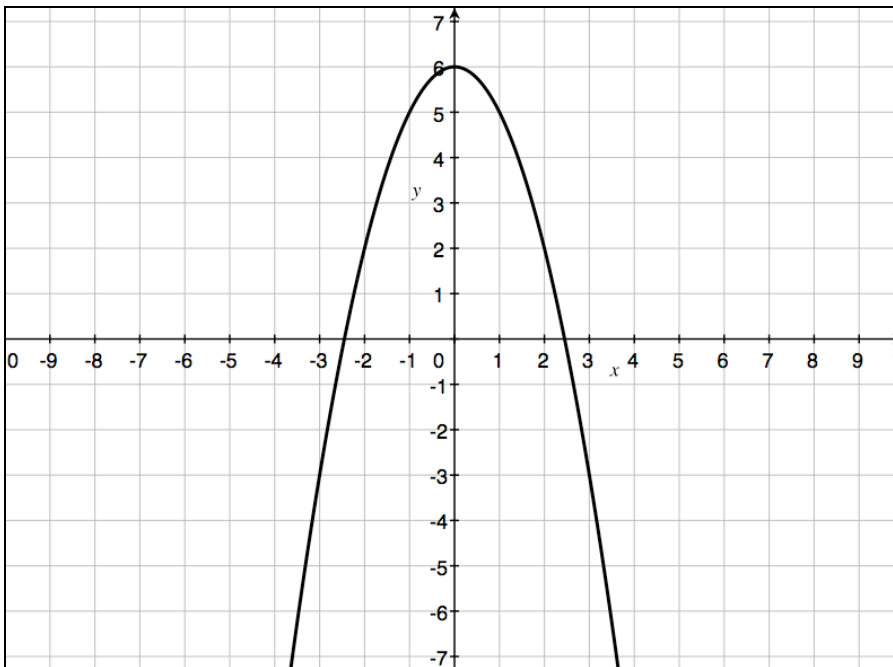
Quick Practice – Identify if the following functions are positive or negative for the given x-value.

1) Is the function  $f(x) = 4x - 12$  positive or negative at  $x=4$ ?

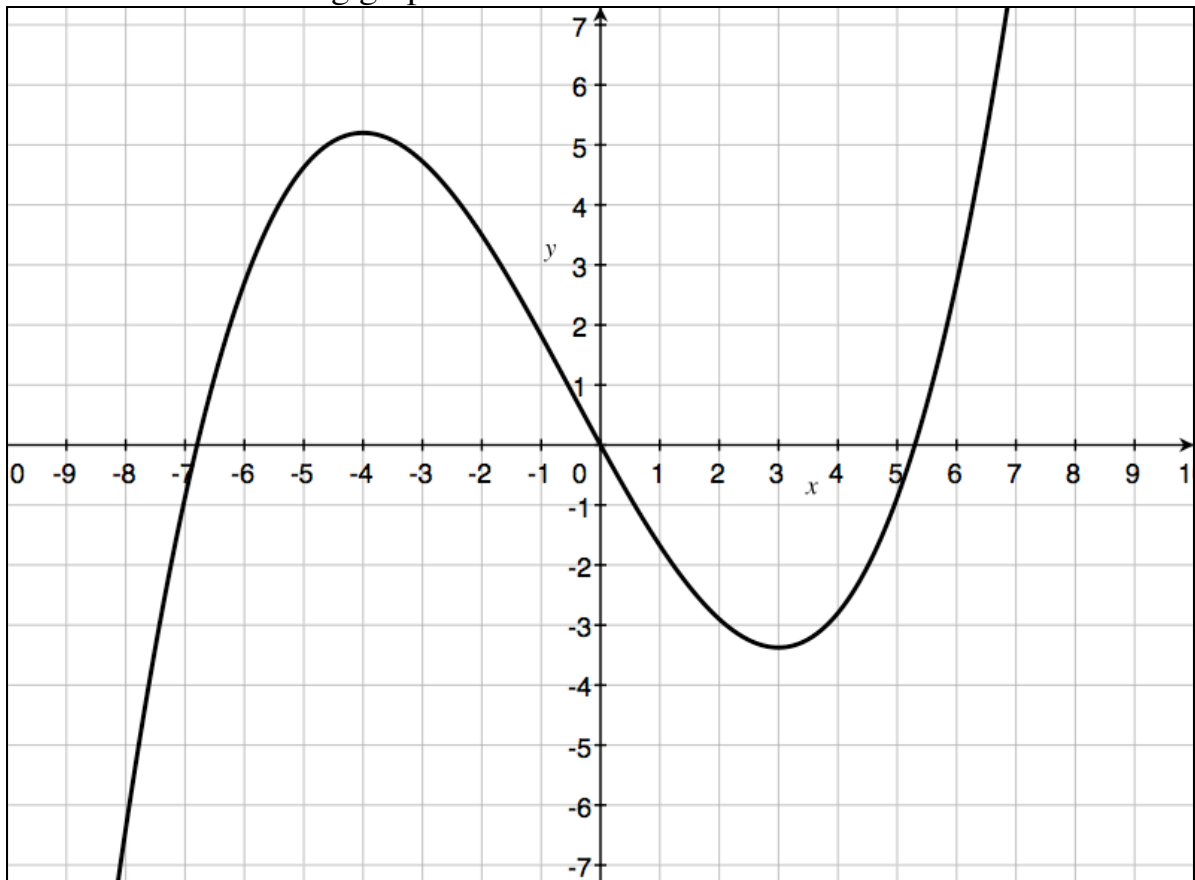
2) Is the function  $f(x) = 4x - 12$  positive or negative at  $x=-2$ ?

3) Is the function  $f(x) = x^2 - 3x - 3$  positive or negative at  $x=4$ ?

4) Use the following graph to determine if  $f(x)$  is positive or negative at  $x=2$



Consider the following graph



Identifying if  $f(x)$  is positive or negative AND increasing or decreasing

At  $x=-8$

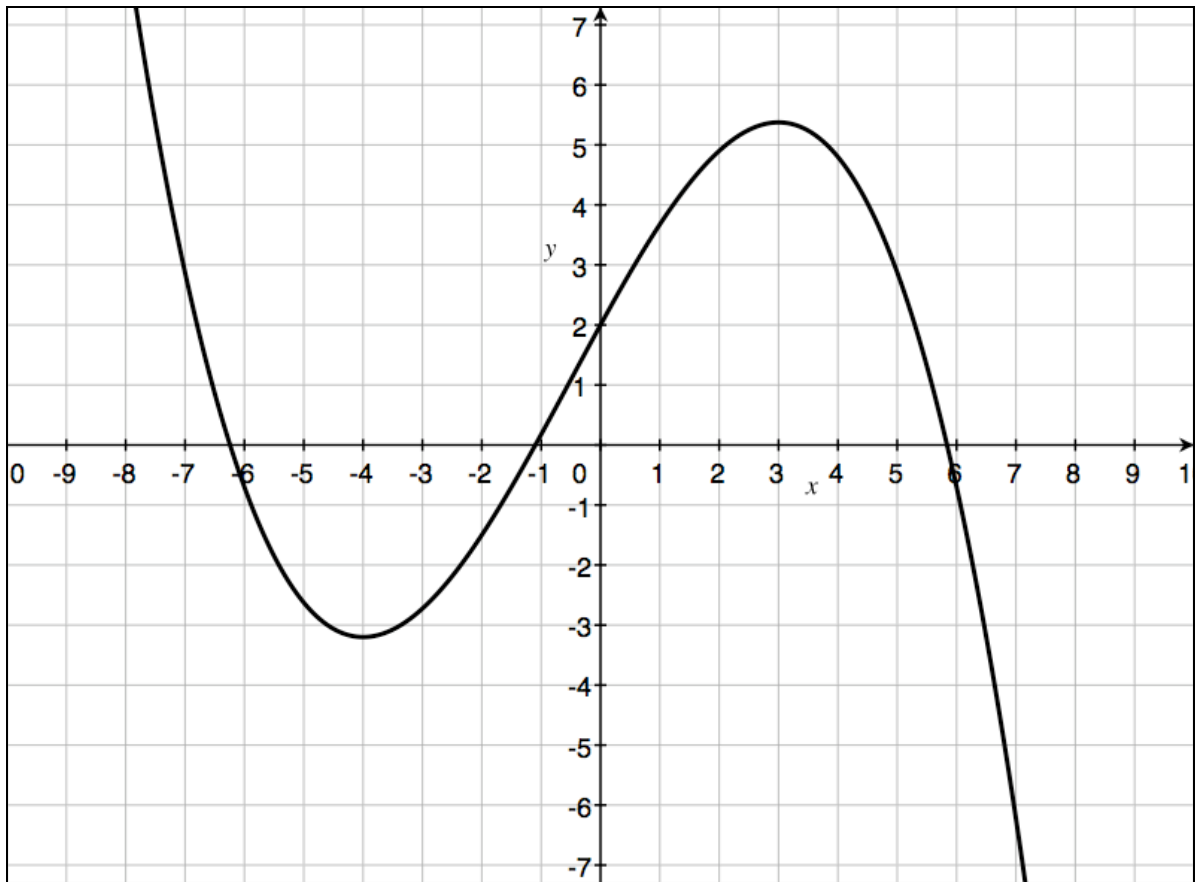
At  $x=2$

At  $x=6$

At  $x=-3$

## PRACTICE

Use the following graph to determine if the function is positive or negative and increasing or decreasing at the given x-value.



1) at  $x=-5$

2) at  $x=-2$

3) at  $x=0$

4) at  $x=4$

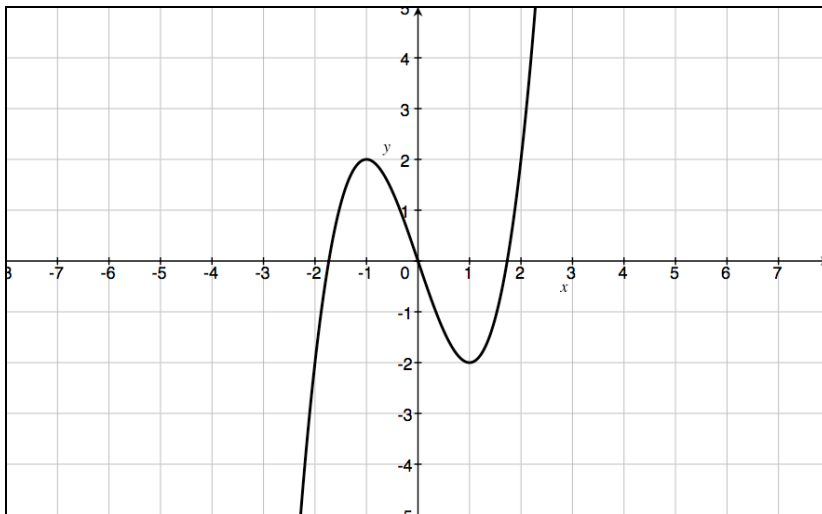
# Precalc – Exit Slip – 9/16/10

Name: \_\_\_\_\_

Period: \_\_\_\_\_

- 1) Consider the function  $f(x) = 3x^2 - 15$ . Answer the following questions (you must show your work):
- a) When  $x=2$  is  $f(x)$  positive or negative?
  - b) When  $x=4$  is  $f(x)$  positive or negative?
  - c) When  $x=-3$  is  $f(x)$  positive or negative?

- 1) Consider the graph of  $f(x)$  shown below. Which of the following statements is true when  $x=-2$ ?



- a)  $f(x)$  is positive and increasing
- b)  $f(x)$  is positive and decreasing
- c)  $f(x)$  is negative and increasing
- d)  $f(x)$  is negative and decreasing