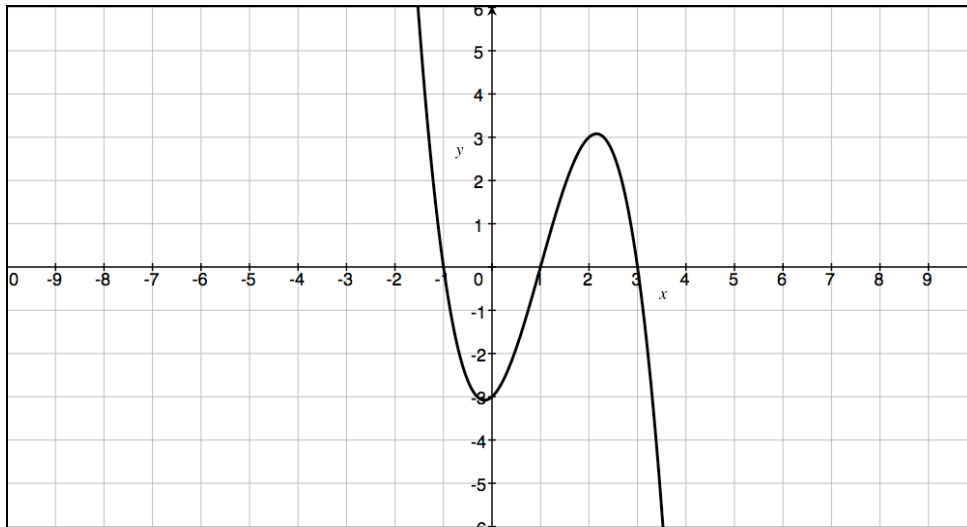


# AP Calc Warm Up – 8/24/10

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

Block: \_\_\_\_\_

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



- 2) Imagine that the function  $g(x)$  is strictly decreasing and goes through the point  $(2,6)$ . Cross out all of the points below that  $g(x)$  COULD NOT go through. (A drawing could help you.) Be ready with a reason for why you did or did not cross out each point.

a.  $(3,5)$

b.  $(1,7)$

c.  $(4,8)$

d.  $(0,3)$

# INTERVAL NOTATION SKILL BUILDER

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

Skill – Students will be able to translate between interval notation and a verbal description.

## EXAMPLES

<u>Verbal Description</u>	<u>Greater then less than Notation</u>	<u>Brackets Notation</u>
x is greater than 3		
x is greater than or equal to 3		
x is less than 5		
x is less than or equal to 5		

Practice – Fill in the missing values in the chart

<u>Verbal Description</u>	<u>Greater then less than Notation</u>	<u>Brackets Notation</u>
x is greater than 4		
	$x \geq -4$	
	$x < 17$	
x is less than or equal to -8		

## EXAMPLES

<u>Verbal Description</u>	<u>Greater then less than Notation</u>	<u>Brackets Notation</u>
x is between 2 and 7, not including 2 and 7		
x is between 2 and 7, including 2 and 7		
x is between -4 and 12, including -4 but not including 12		
x is between -4 and 12, not including -4 but including 12		

Practice – Fill in the missing values

<u>Verbal Description</u>	<u>Greater then less than Notation</u>	<u>Brackets Notation</u>
x is between 3 and 9, not including 3 and 9		
	$-2 \leq x \leq 5$	
x is between 5 and 8, including 5 but not including 8		
		$(5,8]$

# SKILL PRACTICE

Directions – convert the following verbal descriptions into greater than less than notation.

- 1)  $x$  is between  $-5$  and  $10$ , not including  $-5$  and  $10$  \_\_\_\_\_
- 2)  $x$  is between  $2$  and  $7$ , including  $2$  and  $7$  \_\_\_\_\_
- 3)  $x$  is greater than  $12$  \_\_\_\_\_

Directions – convert the following verbal descriptions into brackets notation.

- 1)  $x$  is between  $-12$  and  $-4$ , not including  $-12$  and  $-4$  \_\_\_\_\_
- 2)  $x$  is between  $11$  and  $25$ , including  $11$  but not  $25$  \_\_\_\_\_
- 3)  $x$  is less than  $7$  \_\_\_\_\_

Directions – convert the following into a verbal description.

- 1)  $2 < x < 13$  \_\_\_\_\_
- 2)  $-4 \leq x \leq -1$  \_\_\_\_\_
- 3)  $[3, 18]$  \_\_\_\_\_
- 4)  $[5, 13)$  \_\_\_\_\_
- 5)  $(-3, 6]$  \_\_\_\_\_
- 6)  $(0, \infty)$  \_\_\_\_\_

# AP Calc – Exit Slip – 8/24/10

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

Block: \_\_\_\_\_

- 1) Translate the following verbal description into interval notation using brackets

Statement	Translation
x is in the closed interval from 3 to 10	
x is in the open interval from 3 to 10	
x is in the open interval from -2 to infinity	

- 2) Translate the following verbal description into interval notation using greater than and less than symbols

Statement	Translation
x is between 2 and 6 inclusive	
x is between 4 and 8 not including 4 and not including 8	

- 3) Translate the following interval notation into a verbal description.

Statement	Translation
$[-2, 10)$	
$1 < x \leq 12$	

PERIOD:

STUDENT #:

<u>Verbal</u> <u>Description</u>	<u>Greater than /</u> <u>Less than</u> <u>notation</u>	<u>Brackets</u> <u>Notation</u>

PERIOD:

STUDENT #:

## AP Calc – Homework – 8/25/10

LAST NAME, FIRST NAME: \_\_\_\_\_

1) Consider the following statement: “ $x$  is between 0 and 72 including 0 and 72.”

a. Can  $x=37$ ? Why or why not? \_\_\_\_\_

\_\_\_\_\_

b. Can  $x=-37$ ? Why or Why not? \_\_\_\_\_

\_\_\_\_\_

c. Can  $x=72$ ? Why or why not? \_\_\_\_\_

\_\_\_\_\_

2) Consider the following interval notation:  $(5,28]$

a. Can  $x=18$ ? Why or why not? \_\_\_\_\_

\_\_\_\_\_

b. Can  $x=28$ ? Why or Why not? \_\_\_\_\_

\_\_\_\_\_

c. Can  $x=5$ ? Why or why not? \_\_\_\_\_

\_\_\_\_\_