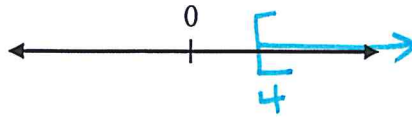


Pre-Calculus  
 INTERVAL NOTATION WORKSHEET  
 Assignment #4

NAME: Key  
 Period \_\_\_\_\_ Group # \_\_\_\_\_

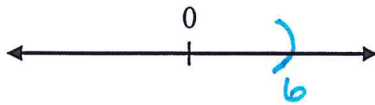
Rewrite the inequality in interval notation AND draw a graph of each inequality.

1.  $x \geq 4$



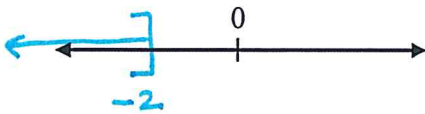
1.  $[4, \infty)$

2.  $x < 6$



2.  $(-\infty, 6)$

3.  $x \leq -2$



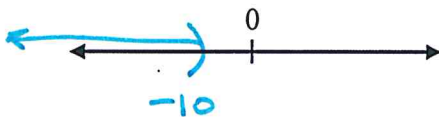
3.  $(-\infty, -2]$

4.  $x > 8$



4.  $(8, \infty)$

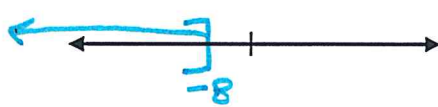
5.  $x < -10$



5.  $(-\infty, -10)$

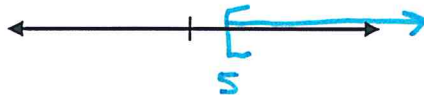
Write each interval as an inequality, and draw a graph for each.

6.  $(-\infty, -8]$



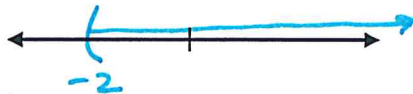
6.  $x \leq -8$

7.  $[5, \infty)$



7.  $x \geq 5$

8.  $(-2, \infty)$



8.  $x > -2$

9.  $[-10, \infty)$



9.  $x \geq -10$

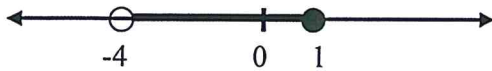
10.  $(-\infty, 6)$



10.  $x < 6$

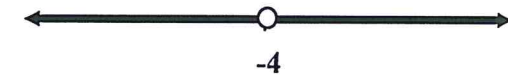
Write the interval notation that describes the graph

11.



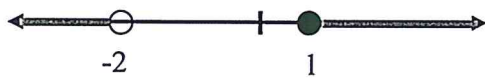
11.  $(-4, 1]$

12.



12.  $(-\infty, -4) \cup (-4, \infty)$

13.



13.  $(-\infty, -2) \cup [1, \infty)$

Write the following sets in interval notation.

14. The set of all numbers less than or equal to -3.

$(-\infty, -3]$

15. The set of all real numbers greater than or equal to 4 and less than 8.

$[4, 8)$

16. The set of all real numbers either greater than 6 or between, but not equal to -3 and -2.

$(-3, -2) \cup (6, \infty)$

17. The set of all real numbers between 8 and 12, including 12 but not including 8.

$(8, 12]$

Problem Number	Interval Notation	Inequality Notation	Graph	Words
18.	$(-1, \infty)$	$x > -1$		$x$ is greater than $-1$
19.	$(-1, 3)$	$-1 < x < 3$		$x$ is greater than $-1$ and less than $3$
20.	$(-\infty, 2]$	$x \leq 2$		$x$ is less than or equal to $2$
21.	$(-\infty, 4]$	$x \leq 4$		$x$ is less than or equal to $4$
22.	$(-5, \infty)$	$x > -5$		$x$ is greater than $-5$
23.	$[-2, 3)$	$-2 \leq x < 3$		$x$ is greater than or equal to $-2$ but less than $3$
24.	$(0, \infty)$	$x > 0$		$x$ is positive
25.	$[-3, 1)$	$-3 \leq x < 1$		$x$ is greater than or equal to $-3$ but less than $1$
26.	$[5, 8]$	$5 \leq x \leq 8$		$x$ is greater than or equal to $5$ but less than or equal to $8$
27.	$(-\infty, 2) \cup (3, \infty)$	$x < 2$ or $x > 3$		$x$ is less than $2$ or greater than $3$
28.	$(-\infty, -3) \cup (-3, \infty)$	$x < -3$ or $x > -3$		$x$ is all real numbers except $x \neq -3$
29.	$(-\infty, 0)$	$x < 0$		$x$ is negative