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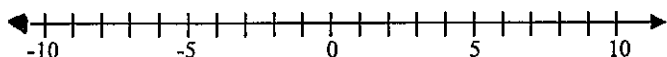
Date: _____

INTERVAL NOTATION COMMON CORE ALGEBRA I

We will often want to talk about **continuous segments** of the **real number line**. We've already done work with this in the last lesson using what is known as **inequality or set-builder notation**. Today we will see a very simple way of showing these segments.

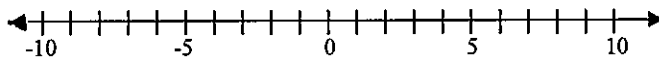
Exercise #1: For each of the following, graph the portion of the number line described by the inequality and then write the equivalent using **interval notation**.

(a) $-3 \leq x \leq 5$



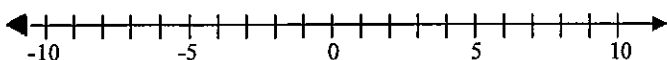
Equivalent Interval Notation: _____

(b) $-6 < x < 4$



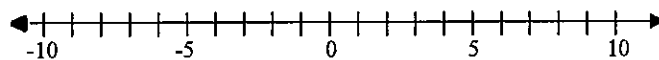
Equivalent Interval Notation: _____

(c) $-4 < x \leq 8$



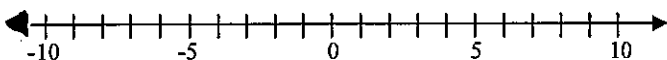
Equivalent Interval Notation: _____

(d) $x \geq 4$



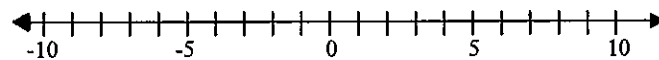
Equivalent Interval Notation: _____

(e) $x < 5$



Equivalent Interval Notation: _____

(f) $-4 < x$



Equivalent Interval Notation: _____

One of the great advantages of **interval notation** is that we essentially need to know a starting value, an ending value and then whether they are included or not.

Exercise #2: Which of the following represents the equivalent interval to $-12 \leq x < 4$?

(1) $(-12, 4)$

(3) $[-12, 4)$

(2) $(-12, 4]$

(4) $[-12, 4]$

Name _____

Date _____

Mrs. Roubos

8A Period _____

Review of Set Theory

	Set-builder Notation	Interval Notation	Graph
1.	$\{x \in \mathbb{R} \mid x < 3 \text{ or } x \geq 5\}$		
2.		$(-4, 0) \cup (1, \infty)$	
3.			
4.	$\{x \in \mathbb{R} \mid -5 \leq x < 4\}$		
5.		$(-\infty, 2) \cup (2, \infty)$	
6.			
7.	$\{x \in \mathbb{R} \mid x < -3 \text{ or } -2 \leq x \leq 3\}$		
8.		$(-\infty, -4] \cup (-2, \infty)$	
9.			
10.	$\{x \in \mathbb{R} \mid x \leq -2 \text{ or } -1 < x < 4\}$		