Name _____ Student No._____ G___/____ Date: _____Score: _____
Nickname: _____ Worksheet No.: _____

Simplifying Interval Notation

A. Simplify the given interval notation.

1) $(-\infty, 7] \cup [-7, \infty)$

Simpliest Form:

2) $[-3, 6) \cup [-4, 1)$

Simpliest Form:

3) $(-1, 4] \cup (-3, 5]$

Simpliest Form:

4) $[-8, 3) \cup [-8, 5)$

Simpliest Form:

5) $(-\infty, 2] \cup [7, 9) \cup (5, \infty)$

Simpliest Form:

6) $(-\infty, 2) \cup [4, 11] \cup [5, \infty)$

Simpliest Form:

Polynomial Inequality

B. Give the solution set to the given polynomial inequality.

1) $(x-1)(x+1)(x+2)(x+3) \leq 0$

Solution Set:

2) $-(x-1)(x+1)(x+3) > 0$

Solution Set:

3) $(x-1)^2(x+1)(x+3)^2 \leq 0$

Solution Set:

4) $-(x-2)(x+1)(x+2)^2 > 0$

Solution Set:

5) $(x-1)(x+1)(x+2)(x+3) \leq 0$

Solution Set:

6) $(x-1)(x+1)(x+2)(x+3) \leq 0$

Solution Set:

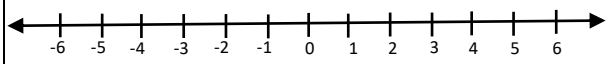
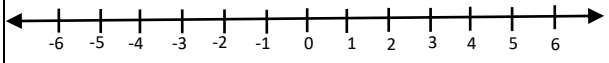
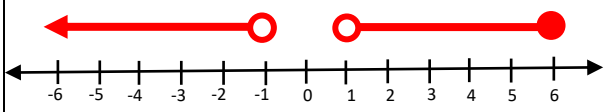
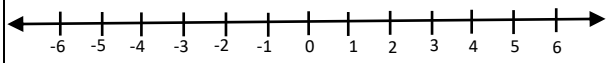
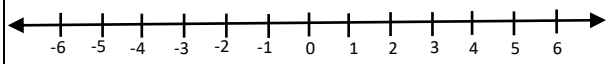
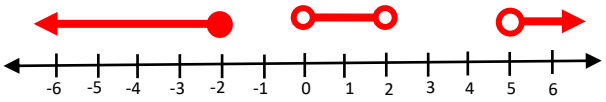
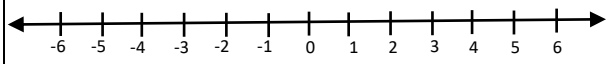
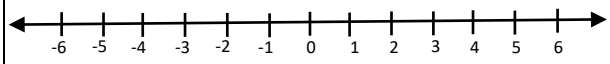
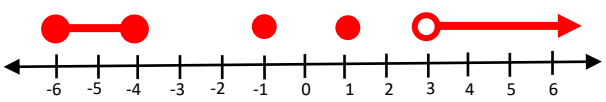
7) $(x+1)^4(x+3) < 0$

Solution Set:

8) $-(x-2)(x+2)^2(x+3) < 0$

Solution Set:

C. Complete the given table below by converting set representation in different forms.

1	$\{x \in \mathbb{R} \mid x \geq 3 \text{ or } x \leq -3\}$		
2		$[-6,-1] \cup [1,5)$	
3			
4	$\{x \in \mathbb{R} \mid -1 \leq x \leq 4$ $\text{or } x < -4\}$		
5		$(-\infty,-3] \cup (2,\infty)$	
6			
7	$\{x \in \mathbb{R} \mid x \leq -3, x = 0,$ $x > 4\}$		
8		$(-\infty,0) \cup \{2\}$ $\cup [3,4)$	
9			
10	$\{x \in \mathbb{R} \mid x < -5,$ $-5 < x < 2,$ $x > 2\}$