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

Simplifying Interval Notation

A. Simplify the given interval notation.

1) $[-1, 3) \cup [0, \infty)$

Simpliest Form:

2) $(-\infty, 7] \cup (3, 9]$

Simpliest Form:

3) $[-4, 7] \cup [-3, 5]$

Simpliest Form:

4) $[-5, 3) \cup [2, \infty)$

Simpliest Form:

5) $(-\infty, 4) \cup [1, 12] \cup [6, \infty)$

Simpliest Form:

6) $(-\infty, 3] \cup [3, 11) \cup (6, \infty)$

Simpliest Form:

Polynomial Inequality

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

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

Solution Set:

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

Solution Set:

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

Solution Set:

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

Solution Set:

5) $(x+2)^5 \leq 0$

Solution Set:

6) $(x-1)(x+1)(x+2) \geq 0$

Solution Set:

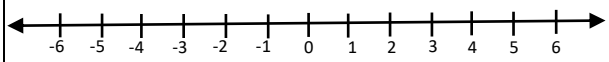
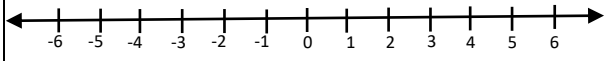
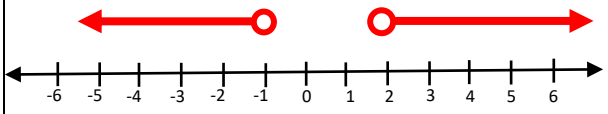
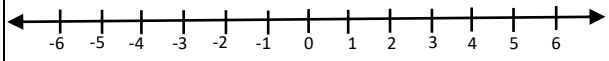
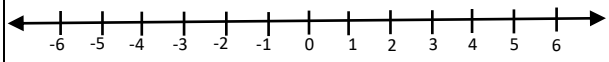
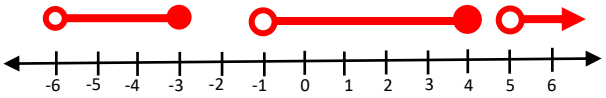
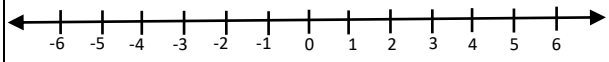
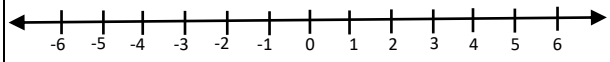
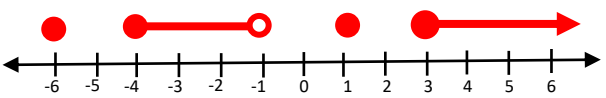
7) $(x-1)(x+1)(x+2)^2 > 0$

Solution Set:

8) $(x+1)^4 \geq 0$

Solution Set:

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

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