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

Simplifying Interval Notation

A. Simplify the given interval notation.

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

Simpliest Form:

2) $[-8, 0] \cup [-8, 0]$

Simpliest Form:

3) $(-2, 3] \cup (-7, 4]$

Simpliest Form:

4) $(-\infty, 4] \cup (-3, 9]$

Simpliest Form:

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

Simpliest Form:

6) $(-\infty, 2] \cup [6, 10) \cup (7, \infty)$

Simpliest Form:

Polynomial Inequality

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

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

Solution Set:

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

Solution Set:

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

Solution Set:

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

Solution Set:

5) $-(x-1)(x+2)^2 \geq 0$

Solution Set:

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

Solution Set:

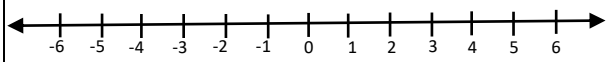
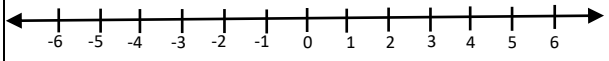
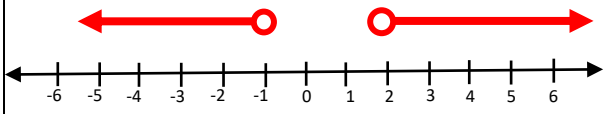
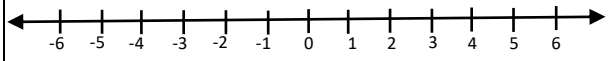
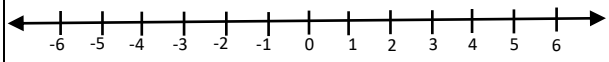
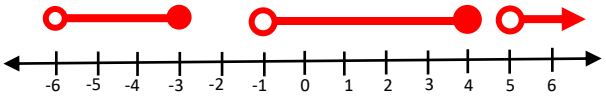
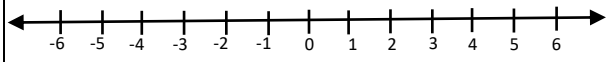
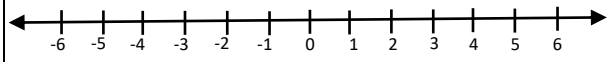
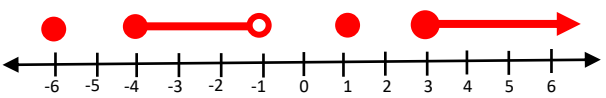
7) $(x+2)^2(x+3) \geq 0$

Solution Set:

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

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	$\{x \in \mathbb{R} \mid x \leq -4,$ $-4 \leq x < 3,$ $x > 3\}$