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

Simplifying Interval Notation

A. Simplify the given interval notation.

1) $[-3, 2) \cup [1, \infty)$

Simpliest Form: $[-3, \infty)$

2) $(-\infty, 2) \cup (0, \infty)$

Simpliest Form: $(-\infty, \infty)$

3) $[-8, 6] \cup [-5, 2]$

Simpliest Form: $[-8, 6]$

4) $[-8, 8] \cup [-4, 4]$

Simpliest Form: $[-8, 8]$

5) $(-\infty, 2) \cup [6, 10] \cup [5, \infty)$

Simpliest Form: $(-\infty, 2) \cup [5, \infty)$

6) $(-\infty, 4] \cup [2, 12) \cup (6, \infty)$

Simpliest Form: $(-\infty, \infty)$

Polynomial Inequality

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

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

Solution Set: $(-\infty, 1]$

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

Solution Set: $(-\infty, -3) \cup (1, 2)$

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

Solution Set: $(-2,-1)$

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

Solution Set: $(-\infty,-2) \cup (-2,-1)$

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

Solution Set: $(-\infty,-3) \cup (1,2)$

6) $-(x-2)(x+2)(x+3) < 0$

Solution Set: $(-3,-2) \cup (2,\infty)$

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

Solution Set: $(-\infty,-3] \cup \{1\}$

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

Solution Set: $(1,\infty)$