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

Simplifying Interval Notation

A. Simplify the given interval notation.

1) $[-10, 8] \cup [-6, 3]$

Simpliest Form: $[-10, 8]$

2) $(-\infty, 0] \cup (-6, \infty)$

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

3) $(-\infty, 4) \cup (6, \infty)$

Simpliest Form: $(-\infty, 4) \cup (6, \infty)$

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

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

5) $(-\infty, 3] \cup [4, 10) \cup (7, \infty)$

Simpliest Form: $(-\infty, 3] \cup [4, \infty)$

6) $(-\infty, 4) \cup [2, 11] \cup [7, \infty)$

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

Polynomial Inequality

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

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

Solution Set: $[-1, \infty)$

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

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

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

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

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

Solution Set: $[-2,-1] \cup \{1\}$

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

Solution Set: $[-1,\infty)$

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

Solution Set: $(-\infty,-2] \cup \{1\}$

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

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

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

Solution Set: $(-1,2)$