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

Simplifying Interval Notation

A. Simplify the given interval notation.

1) $[-5, 0] \cup [-6, 4]$

Simpliest Form: $[-6, 4]$

2) $[-10, 5] \cup [-5, 4]$

Simpliest Form: $[-10, 5]$

3) $[-10, 5] \cup [-6, 2]$

Simpliest Form: $[-10, 5]$

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

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

5) $(-\infty, 2) \cup [1, 11] \cup [6, \infty)$

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

6) $(-\infty, 3] \cup [1, 11) \cup (6, \infty)$

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

Polynomial Inequality

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

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

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

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

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

3) $-(x+1)^4 \leq 0$

Solution Set: $(-\infty, \infty)$

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

Solution Set: $(-1, 1)$

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

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

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

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

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

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

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

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