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

Simplifying Interval Notation

A. Simplify the given interval notation.

1) $(-\infty, 4) \cup (-2, \infty)$

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

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

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

3) $(-\infty, 0] \cup [-5, \infty)$

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

4) $[-4, 0) \cup [-8, 4)$

Simpliest Form: $[-8, 4)$

5) $(-\infty, 2] \cup [5, 12) \cup (5, \infty)$

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

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

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

Polynomial Inequality

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

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

Solution Set: $(1, \infty)$

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

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

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

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

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

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

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

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

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

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

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

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

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

Solution Set: $[-2, \infty)$