

Name \_\_\_\_\_ Student No. \_\_\_\_\_ G \_\_\_\_/\_\_\_\_ Date: \_\_\_\_\_ Score: \_\_\_\_\_  
Nickname: \_\_\_\_\_ Worksheet No.: \_\_\_\_\_

## Simplifying Interval Notation

### A. Simplify the given interval notation.

1)  $(-4, 4] \cup (-8, 2]$

4)  $(-6, 2] \cup (-5, 1]$

Simpliest Form:

Simpliest Form:

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

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

Simpliest Form:

Simpliest Form:

3)  $(-5, 3] \cup (-5, 4]$

6)  $(-\infty, 4) \cup [5, 9] \cup [6, \infty)$

Simpliest Form:

Simpliest Form:

## Polynomial Inequality

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

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

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

Solution Set:

Solution Set:

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

Solution Set:

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

Solution Set:

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

Solution Set:

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

Solution Set:

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

Solution Set:

$$8) -(x+1)^4 > 0$$

Solution Set: