Student name:_____

Date:_____ Block: _____

Project name : Absolute Value Inequalities

Basic	
$$\lvert x - 3 \rvert \le 4$$	$$\lvert x + 3 \rvert > 4$$
$$x + 3 \le 4 \quad \text{and} \quad x - 3 > -4$$	$$x + 3 \le 4 \quad \text{or} \quad x - 3 > -4$$

Advanced	
$$4(2 - x) < 12 \quad \text{and} \quad 4(2 + x) < 12$$	$$8 - 2\lvert x - 3 \rvert \le 4$$

Super Expert

$$(2 - y)(y - 3) < 0$$

$$|z + 1| < |2 - z|$$

Hint 1 : $|X| = \begin{cases} X & if & X \geq 0 \\ -X & if & X < 0 \end{cases}$

Hint 2: Consider different zones