

Integers

I. ADDITION:

Rule 1 Same signs, add and keep the sign.

Example 1:

$$8 + 6 = 14$$

Example 2:

$$-8 + -6 = -14$$

Rule 2 Different signs, subtract and keep the sign of the larger number.

Example 1:

$$8 + -6 = 2$$

Example 2:

$$-8 + 6 = -2$$

II. SUBTRACTION:

ADD the Opposite: (change the subtraction sign to addition and change the sign of the second number, then add using Rule 1 or 2).

Example 1:

$$8 - -6$$

$$8 + +6 = 14$$

Example 2:

$$-8 - 6$$

$$-8 + -6 = -14$$

Example 1:

$$8 - 6$$

$$8 + -6 = 2$$

Example 2:

$$-8 - -6$$

$$-8 + +6 = -2$$

III. MULTIPLICATION AND DIVISION:

Rule 3 Same signs the answer is **positive**.

Example 1:

$$8 \cdot 6 = 48$$

$$-8 \cdot -6 = 48$$

Example 2:

$$48 \div 8 = 6$$

$$-48 \div -8 = 6$$

Rule 4 Different signs the answer is **negative**.

Example 1:

$$8 \cdot -6 = -48$$

$$-8 \cdot 6 = -48$$

Example 2:

$$48 \div -8 = -6$$

$$-48 \div 8 = -6$$

IV. DISTRIBUTIVE PROPERTY:

Distribute the negative sign along with the number it is attached to.

Example 1:

$$-(4x + 8)$$

$$(-1)(4x) + (-1)(8)$$

$$-4x + (-8)$$

$$-4x - 8$$

Example 2:

$$-2(3x - 5)$$

$$-2[3x + (-5)]$$

$$(-2)(3x) + (-2)(-5)$$

$$-6x + (10)$$

$$-6x + 10$$

