

## Integer Rules

### Addition and Subtraction:

- If the signs are the same (like signs), add the numbers and keep the sign.

$$3 + 4 = 7$$

$$-3 + -4 = -7$$

- If the signs are different (unlike signs), subtract the numbers and keep the sign of the larger number.

$$-3 + 4 = 1$$

$$3 - 4 = -1$$

### Multiplication and Division

- Like signs will always have a positive answer.

$$-4 \times -8 = 32$$

$$4 \times 8 = 32$$

- Unlike signs will always have a negative answer.

$$-4 \times 8 = -32$$

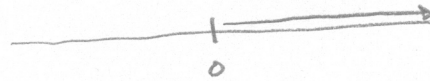
$$4 \times -8 = -32$$

## Vocabulary

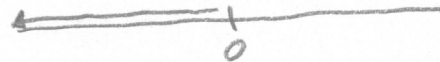
Integer: A whole number that is not a fraction.

$-3, -2, -1, 0, 1, 2, 3$

Positive Integer: A whole number to the right of zero on a horizontal number line, or above zero on a vertical number line.



Negative integer: A whole number to the left of zero on a horizontal number line, or below zero on a vertical number line.



Opposites: Two numbers that, when added together, equal zero (Also called zero pairs).

$$-1 + 1 = 0$$

$$-6 + 6 = 0$$

Like signs: all terms have the same sign

Positive  $\rightarrow$   
 $6 + 6 = 12$

negative  $\rightarrow$   
 $-12 + -8 = -20$

Unlike signs: all terms have different signs.

unlike  $\rightarrow$   
 $-6 + 6 = 0$

unlike  $\rightarrow$   
 $-7 + 14 = 7$