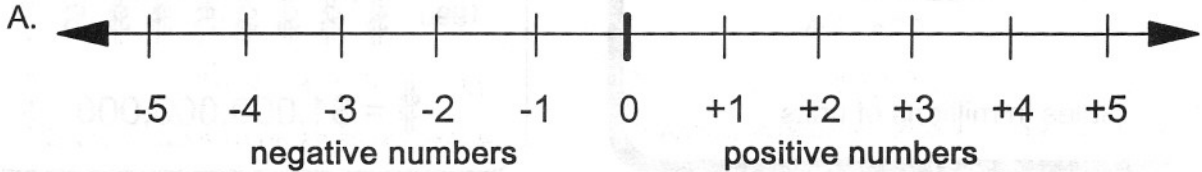


Unit 45 Signed Numbers

1. Signed numbers

- A. Numbers may be **positive (+)** or **negative (-)**.
1. A temperature of plus 90 degrees (+90) is hot.
 2. A temperature of minus 3 degrees (-3) is cold.
- B. Understanding and working with positive and negative numbers begins with a number line.

2. Number line



- B. **Symbols** are used to show position and direction on a number line
- | | |
|-------------------------------|--|
| $>$ means greater than | \geq means greater than or equal to |
| $<$ means less than | \leq means less than or equal to |

- C. As you move to the right on a number line, the numbers are larger.

$$-2 > -5 \quad 0 > -2 \quad 2 > 0 \quad 5 > 2$$

3. Absolute value

- A. The absolute value of a number is its distance from zero (in either direction).
- B. The symbol for absolute value is $| \quad |$.
- C. $|3| = 3$.
- D. $|-3| = 3$.

4. Addition of signed numbers

- A. **With like signs**, add the numbers and give the answer the like sign.

$$5 + 3 = 8$$

$$-5 + (-3) = -8$$

- B. **With unlike signs**, subtract the numbers and give the answer the sign of the larger number.

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

$$-5 + 3 = -2$$

5. Subtraction of signed numbers

Change the sign of the number being subtracted and add.

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

$$5 - (-3) = 5 + (+3) = 8$$

$$-5 - (+3) = -5 + (-3) = -8$$

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