Introduction to Integers:

Integers are whole numbers and their opposites. There is an infinite number of integers and they can be represented as {..., -3, -2, -1, 0, 1, 2, 3,...}

Although + can be used to represent positive numbers and - used to represent negative numbers we typically do not write + with positive numbers.

Introduction to Integers:

Positive and negative numbers are sometimes referred to as signed numbers. They can be used to represent many real world situations.

For example,

- Temperatures above or below zero
- Gains and losses
- Elevations above or below sea level
- Debits or credits

Use a signed number to represent each situation:

- 1. 9° below zero
- 2. Lost 10 pounds
- 3. Owe \$27
- 4. 150 ft above sea level
- 5. Gained 12 yards
- 6. Went up 8 floors



Use a signed number to represent each situation:

1. 9° below zero _90 2. Lost 10 pounds -10 pounds 3. Owe \$27 -\$27 4. 150 ft above sea level 150 feet5. Gained 12 yards 12 yards 6. Went up 8 floors 8 floors

Number Lines:

A number line can be horizontal or vertical.

On a horizontal number line, the negative numbers are to the left of zero and the positive numbers are to the right of zero.

The lesser number always lies to the left of the greater number.



Number Lines:

A number line can be horizontal or vertical.

On a vertical number line, the negative numbers are below zero and the positive numbers are above zero.

The lesser number always lies below the great number.



For every positive number there is a corresponding negative number.

For example, for the positive number 11 the corresponding negative number is -11.

For every negative number there is a corresponding positive number,

For example, for the negative number -13 the corresponding positive number is 13.

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Numbers that are the same distance form zero on a number line are opposites of each other.

For example, -5 is the opposite of 5 because both 5 and -5 are 5 units from zero on a number line.

8 is the opposite of -8 because both -8 and 8 are 8 units from zero on a number line.

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Signed numbers (positive & negative numbers) can be compared using inequality notation.

a < b means a is less than b; this is true when a is to the left of b on a horizontal number line OR a is below b on a vertical number line.

a > b means a is greater than b; this is true when a is to the right of b on a horizontal number line OR a is above b on a vertical number line. Write the opposite of each number:

1. -19

2. 37

3. 819

4. -236

5. -72

6. 513



Write the opposite of each number:

1. -19 19 2. 37 -37 3. 819 -819 4. -236 236 5. -72 72 6. 513 -514



Replace ? with < or > so that the statement is true

- 1. 23?-17
- 2. -15?-9
- 3. 14 ? 31
- 4. -3?-8
- 5. -24?-18
- 6. -26 ? -25



Replace ? with < or > so that the statement is true

1. 23?-17 2. -15?-9 3. 14 ? 31 4. -3 ? -8 5. -24 ? -18 6. -26 ? -25

