

# Know: Adding Integers

**Show: I can add integers to complete 10 problems on white boards using t-charts, number lines, and going to war methods.**

# Key Vocabulary:

- integers- the set of all whole numbers and their opposites.

Ex. {..., -5, -4, -3, -2, -1, 0, 1, 2, 3, 4, 5, ...}

# ESSENTIAL FACTS:

- The sum of two positive integers is **ALWAYS** positive.
- The sum of two negative integers is **ALWAYS** negative.
- The sum of a positive integer and a negative integer is sometimes positive, sometimes negative, & sometimes zero.
- A positive and negative integers cancel each other out.

# Review Integers

What is an integer? Any number that does not have an extra fraction or a decimal.

The numbers on a number line!

# Example 1: Find $4 + (-1) =$

## \*\*\*METHOD 1: T-Chart Counters

Step 1: Make a t-chart for positive and negative.

Step 2: Draw plus sign counters (+) in the positive column for the positive number.

### Step 3:

**Draw negative sign counters (-) in the negative column for the negative number.**

Step 4: **Cross out any that cancel each other out (counters that are across from each other).**

**Step 5: Count your remaining counters and keep the sign in the answer.**

**PRACTICE!**

**We do: Add. t-chart counters.**

$$8 + (-5) =$$



# Example 1: Find $4 + (-1) =$

**\*\*\*METHOD 2: Number line**

**Step 1: Make a number line.**

**Step 2: Start at 0, draw the first arrow for the first given number.**

- If positive go right, if negative go left.

**Step 3: From that number, draw the second arrow above the 1<sup>st</sup> arrow showing the units of the 2nd given number.**

- Where the top arrow ends is the **ANSWER** to equation.

**PRACTICE!**

**We do: Add. Use number line.**

$$3 + (-6) =$$

# Example 1: Find $8 + (-3) =$

**\*\*\*METHOD 3: Going to War!**

The easiest way to make sure we get these questions right every time is to go to war!

Step 1: Look at the two numbers and the two signs. Whichever sign is bigger, keep that sign.

Step 2: If the signs are different, the answer is the difference between the numbers.

Positive= Good guys

Negative= Bad guys

**We do: Add. Use Going to  
War.**

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

# Example 1: Find $-3 + (-6) =$

**\*\*\*METHOD 3: Use money**

Positive integers represent what you get “PAID”

Negative integers represent what you “OWE”

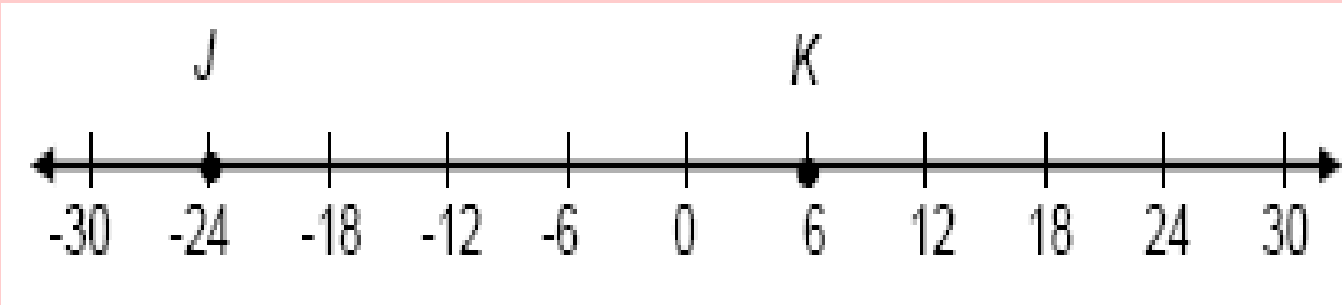
If you owe \$3 and owe another \$6, then you owe a total of \_\_\_\_\_

**We do: Add. Use money  
method.**

$$-9 + 8 =$$

# Extension:

Which expression represents the distance between points  $J$  and  $K$  on the number line?



**A**  $-24 + 6$

**B**  $-24 + 30$

**C**  $6 - (-24)$

**D**  $6 - (6 + 24)$



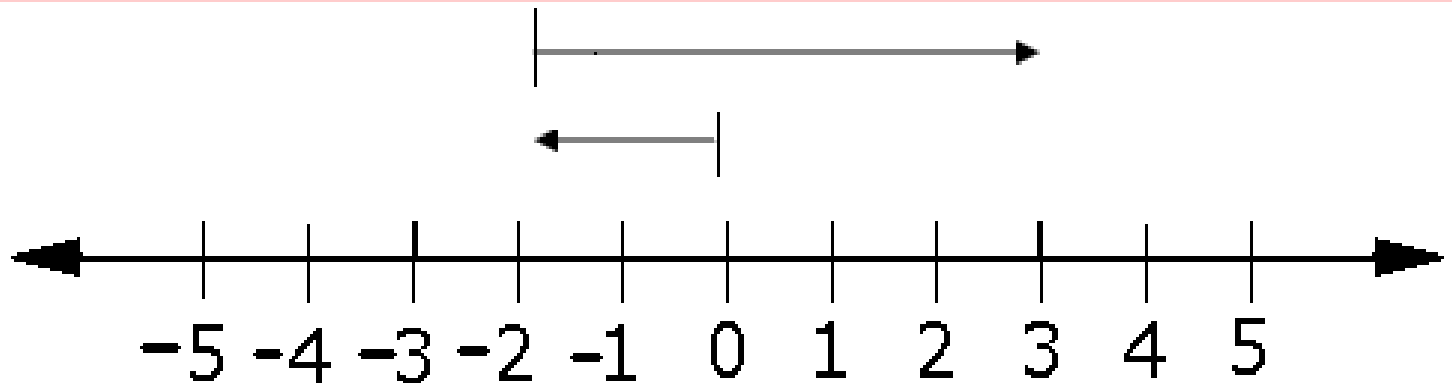
You Do: Which of the following number sentences is represented on the number line shown below?

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

B.)  $-2 + 5 = 3$

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

D.)  $2 + 3 = 5$



YOU DO: Write an equation that matches the number line below

