September 2, 2014 ^{1st} ^{2nd}

Starter

Clear off your desk
except a sharpened pencil
and be ready to go
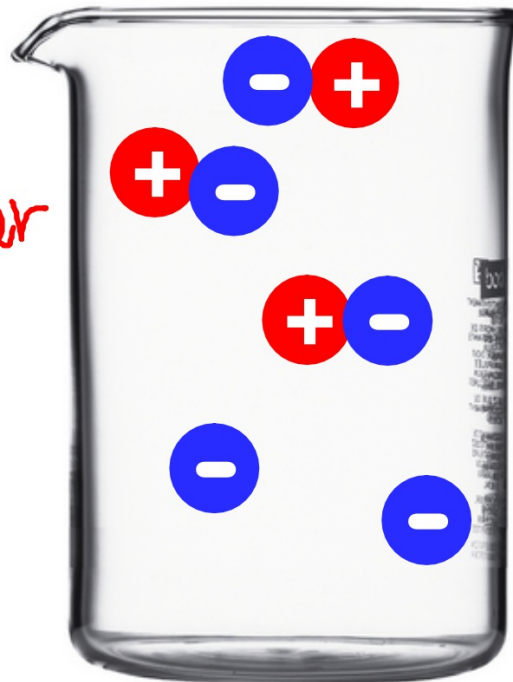when the bell rings.

9/2 Adding Integers using Counters and Numberlines
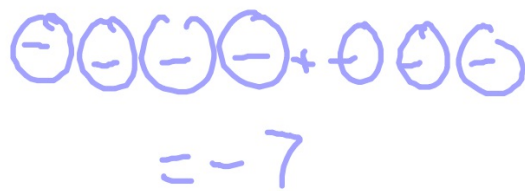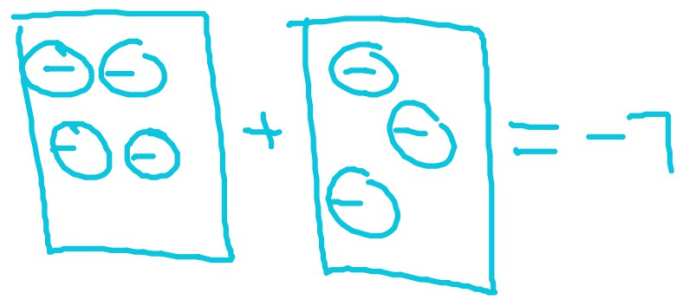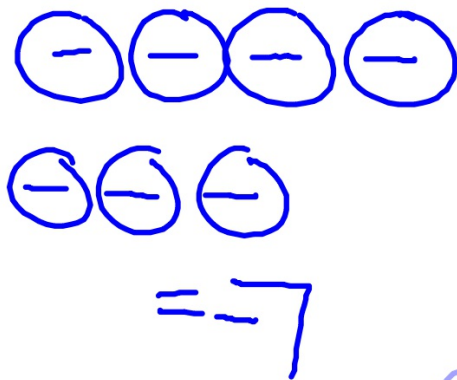
$$-5+3=-2$$

"Integer Counters"

+ = one positive

one degree warmer

− = one negative

one degree colder

1 **ACTIVITY:** Adding Integers with the Same Sign

Work with a partner. Draw a picture to show how you use integer counters to find $-4 + (-3)$.

$= -7$

$+$ $= -7$

$= -7$

ACTIVITY: Adding Integers with Different Signs

Work with a partner. Draw a picture to show how you use integer counters to find $-3 + 2$.

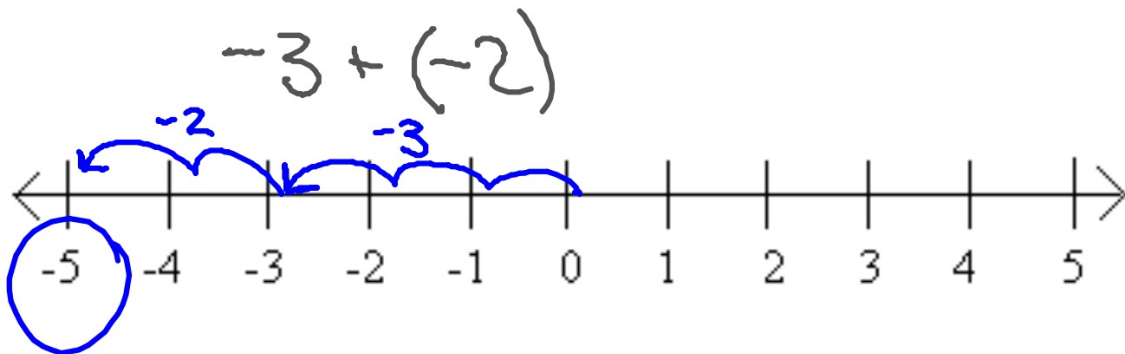$\ominus$ $\ominus$ $\ominus$ + $\oplus$ $\oplus$

$$= -1$$

$\ominus$ $\oplus$

$\ominus$ $\oplus$

$\ominus$

$$= -1$$

$\oplus \ominus$

$\oplus \ominus$

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$\ominus$ $\ominus$ $\ominus$

$\oplus$ $\oplus$

$$= -1$$

Number lines
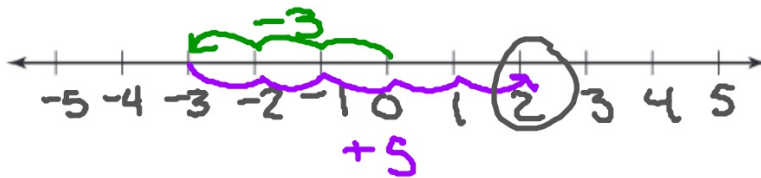
→ **Positive = one to the right**

← **Negative = one to the left**

$$-3 + (-2)$$

3 **ACTIVITY:** Adding Integers with Different Signs

Work with a partner. Show how to use a number line to find $5 + (-3)$.

$$5 + (-3) \overset{= 2}{}$$
$$= (-3) + 5$$

Commutative

4 **ACTIVITY:** Adding Integers with Different Signs

Work with a partner. Write the addition expression shown. Then find the sum. How are the integers in the expression related to 0 on a number line?

Start at 0. Move 7 units to the right.

Add −7.

7

Then move 7 units left to end at ☐.

$$-8 \quad -6 \quad -4 \quad -2 \quad 0 \quad 2 \quad 4 \quad 6 \quad 8$$
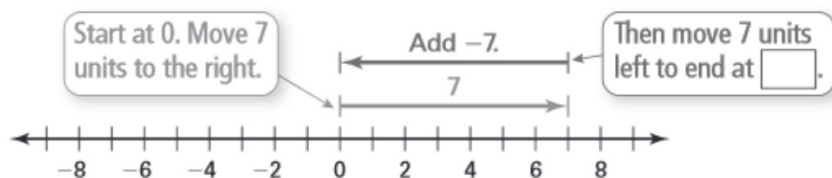
$$7 + (-7) = 0$$

Opposites

"additive inverses"

Homework

Gold WS3

Due Wednesday