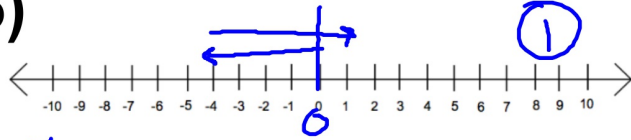
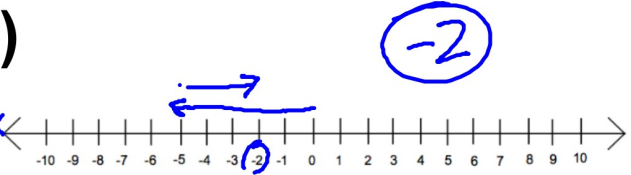


Subtract: Think- which way will the arrow move or number line?
What pattern do you see?

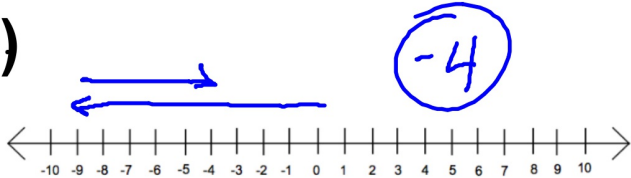
$-4 - (-5)$



$-5 - (-3)$

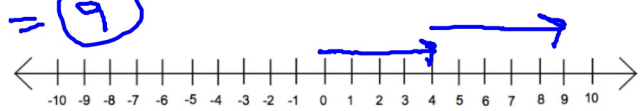


$-9 - (-5)$

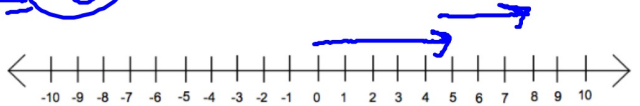


Subtract: Think- which way will the arrow move o
number line?
What pattern do you see?

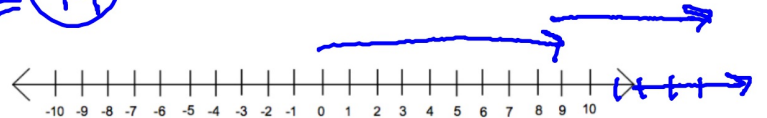
$4 - (-5) = 9$



$5 - (-3) = 8$

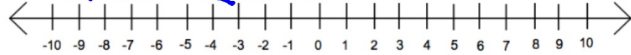


$9 - (-5) = 14$



Subtract: Think- which way will the arrow move on
number line?
What pattern do you see?

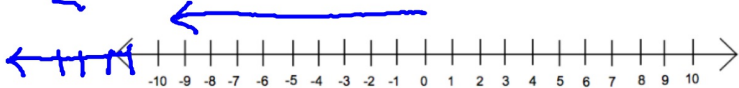
$-4 - 5 = -9$



$-5 - 3 = -8$

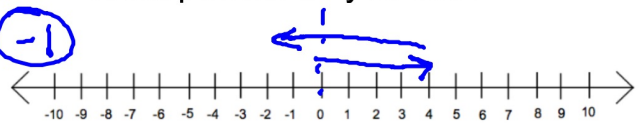


$-9 - 5 = -14$

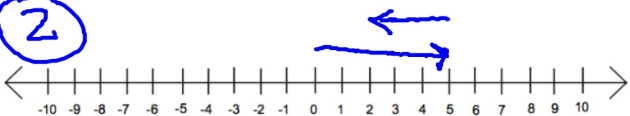


Subtract: Think- which way will the arrow move on
number line?
What pattern do you see?

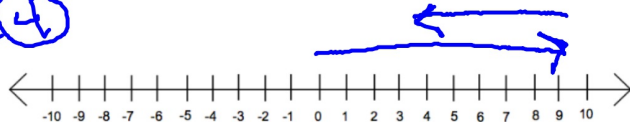
$4 - 5 = -1$



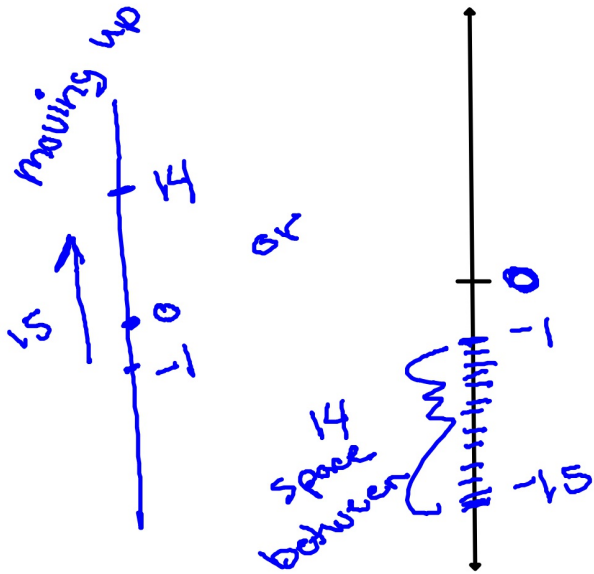
$5 - 3 = 2$



$9 - 5 = 4$



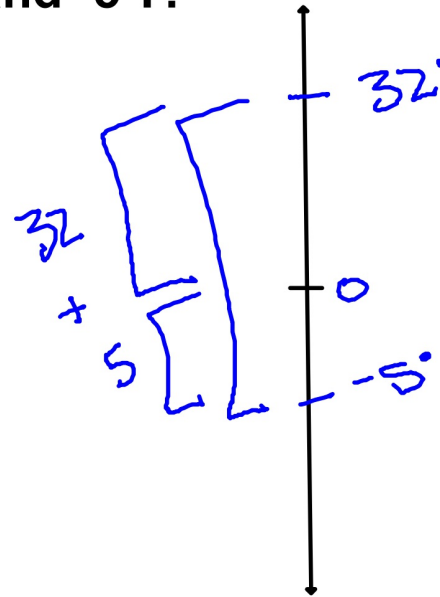
Find the difference between -1°F and -15°F .



$$-1 - (-15)$$

$$-1 + 15 = 14$$

Find the difference between 32°F and -5°F .

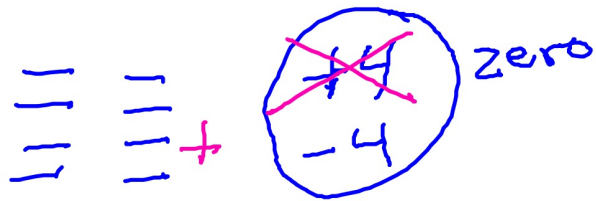


$$32 - (-5) =$$

$$32 + 5 =$$

$$37^{\circ}$$

$-8 - 4$ enough?
NO!

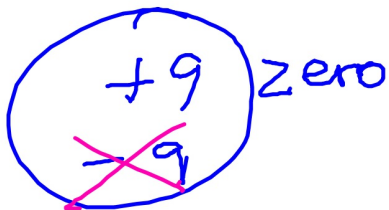


$$-8 + -4 = -12$$

$-12 - (-9)$ enough?
yes

$$\begin{array}{r} -12 \\ - \quad -9 \\ \hline -3 \end{array}$$

$$24 - (-9) \quad \text{enough?} \\ \text{No!}$$



$$24 + 9 = 33$$

$$-6 - (-12) \quad \text{enough?} \\ \text{no}$$



OR



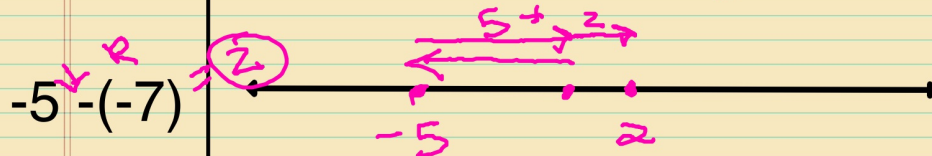
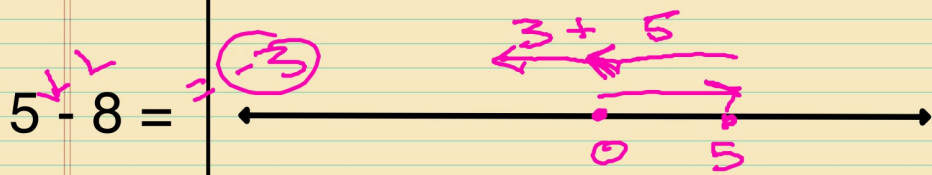
~~$-6 - (-12)$~~

$$-6 + 12 = 6$$

- I can evaluate integer expressions. (subtracting)

Numberline model

*start at zero move **right** for positive, **left** for negative.
*subtracting move in the **OPPOSITE** direction; negatives move right, positives move left.



Zero pairs

$$-8 - (-6)$$

$$-8 + 6$$

$$-12 - 6$$

$$-12 + -6$$

$$5 - 12$$

$$5 + -12$$

- * if you have enough to subtract subtract
- * if you don't have enough to subtract add in zero pairs so you can subtract.

$$-8 - 6 \quad \text{enough?} \\ \text{yes}$$

$$-12 - 6 \quad \text{enough?} \\ \text{no}$$

$$-12 + -6 = -18$$

$$5 - 12 \quad \text{enough?} \\ \text{no}$$

$$5 + 12 = -7$$

1-4 • I can evaluate integer expressions.

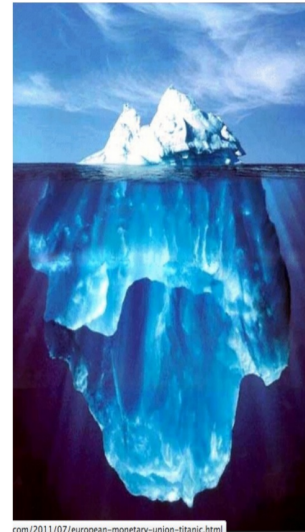
How do I add integers?

*numbers are **all** positive **or all** negative, **count them (add) keep the** sign (+ = +, - = -)
 *numbers are **both** positive **and** negative, **take out** the zero pairs, then record left overs

How do you subtract integers?

*if the first number has enough to **subtract**, **take away that amount**.
 *if the first number does not have enough to subtract, **add in enough zero pairs**, to take away that amount needed.
 (same as **add the opposite**)
OR use number line- **which direction** should you move?

An iceberg is 235 feet above sea level, and goes 632 feet below sea level. How tall is the iceberg from top to bottom?



$$\begin{array}{r} \overbrace{235} \\ \hline 0 \\ \underbrace{235 - (-632)}_{632} \\ = \\ 235 + 632 \\ \hline \boxed{867 \text{ ft}} \end{array}$$

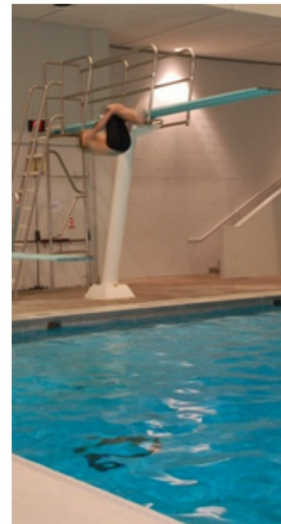
The top of the Sears Tower in Chicago, is 1454 feet above street level, while the lowest level is 43 feet below street level. How far is it from the lowest level to the top?



$$\begin{array}{r} 1454 \\ + \\ 43 \\ \hline 1497 \text{ ft} \end{array}$$

Handwritten notes: $1454 - (-43)$, $1454 + 43$, 1454 , 43 , -0 , -43

The distance from the high dive to the swimming pool is 10 feet. The pool is 12 feet deep. What is the total distance from the high dive to the bottom of the pool?



$$\begin{array}{r} 10 \\ - 0 \\ - 12 \\ \hline 22 \text{ ft} \end{array}$$

Handwritten notes: $10 - (-12) =$, $10 + 12$