

September 3, 2014 ^{1st}
_{2nd}
Starter

Find the next 2 numbers in each sequence.

- 0 1 3 6 10 15 21
+1 +2 +3 +4 +5 +6
- 1 2 4 7 11 _____
- 32 29 26 23 20 _____
- 10 12 16 22 30 _____
- 6 6 9 9 12 _____
- 10 1 11 2 12 _____
- 3 4 7 12 19 _____
- 4 4 5 6 6 8 _____
- 3 21 4 20 6 18 _____
- 8 6 7 5 6 4 _____



9/3 - Adding Integers using Rules

With your partner, answer each of the following:

Is the sum of 2 integers positive, negative or zero?
How can you tell?

If the $|\text{neg. \#}|$ is bigger than the $|\text{pos. \#}| \rightarrow$ answer is negative.

If the neg $\#$ is further away from 0 than the pos. $\#$, the answer is negative.

More negatives = negative

More positives = positive

Same $\#$ of neg / pos = 0

Adding Integers with the Same Sign

Words Add the absolute values of the integers. Then use the common sign.

Numbers $2 + 5 = 7$ $-2 + (-5) = -7$

Write the rule in your own words:

Add |#|'s, keep the sign.

Adding Integers with Different Signs

Words Subtract the lesser absolute value from the greater absolute value, then use the sign of the integer with the greater absolute value.

Numbers $8 + (-10) = -2$ $-13 + 17 = 4$

Write this rule in your own words:

Ignore the signs, subtract the #'s,
Keep the sign of the biggest #.
Subtract the abs. values of the #'s,
Keep the sign of the # w/ the greatest
abs. value.

Additive Inverse Property

Words The sum of an integer and its **additive inverse**, or opposite, is 0.

Numbers $6 + (-6) = 0$ $-25 + 25 = 0$ **Algebra** $a + (-a) = 0$

Write this rule in your own words:

Sum of two opposites = 0

On Your Own

Add.

$$4. -2 + 11 = 9 \quad 5. 13 + (-8) = 5 \quad 6. 9 + (-10) = -1$$

$$7. -8 + 4 = -4 \quad 8. 7 + (-7) = 0 \quad 9. -31 + 31 = 0$$

Three questions to ask yourself on every one:

1. Are the signs the same or different?

2. Do I add or subtract?

3. Is the answer positive or negative?

Real life connections:

Write an expression for what is given then compute it.
Remember labels in your answers.

BANKING Your bank account has a balance of $-\$12$. You deposit $\$60$.
What is your new balance?

$$\begin{aligned}(-12) + 60 &= \$48 \\ 60 + (-12) &\end{aligned}$$

TEMPERATURE The temperature is -3°F at 7:00 A.M. ~~During the next 4 hours,~~
the temperature increases 21°F . What is the temperature at ~~11:00 A.M.?~~

$$-3 + 21 = 18^{\circ}\text{F}$$

What if...

...there are more than 2 numbers?

$$\underline{7 + (-12) + (-7)}$$

L → R

$$= -5 + (-7)$$

$$= -12$$

$$\cancel{7} + (-12) + \cancel{(-7)}$$

$$= -12$$

Commutative
property
"any order"

$$\underline{-12 + 25 + (-15)}$$

$$= 13 + (-15)$$

$$= -2$$

$$\underline{-12 + 25 + (-15)}$$

$$= -27 + 25$$

$$= -2$$

$$\underline{6 + (-9) + 14}$$

$$= 20 + (-9)$$

$$= 11$$

$$\underline{6 + (-9) + 14}$$

$$= -3 + 14$$

$$= 11$$

Homework
Buff WS Pr. B

Due Friday