

Warm-Up

Wednesday, September 17, 2014

Write an integer for the situation.

1. 6 degrees F below 0 -6

Evaluate each expression.

2. $|-9| = 9$

3. $|18| - |-10| =$
 $18 - 10 = 8$

Adding Integers - Same Sign

Key Concept Add Integers with the Same Sign

Words To add integers with the same sign, add their absolute values. The sum is:

- positive if both integers are positive.
- negative if both integers are negative.

Examples $7 + 4 = 11$

$$-7 + (-4) = -11$$

$$7 + 4 = +11$$

$$-7 + (-4) = -11$$

Same sign -
add & keep sign

Adding Integers - Different Sign

Key Concept ▶ Add Integers with Different Signs

Words

To add integers with different signs, subtract their absolute values. The sum is:

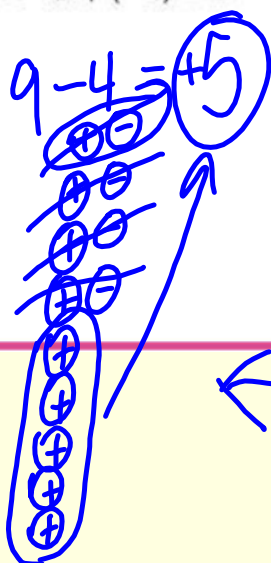
- positive if the positive integer's absolute value is greater.
- negative if the negative integer's absolute value is greater.

Examples

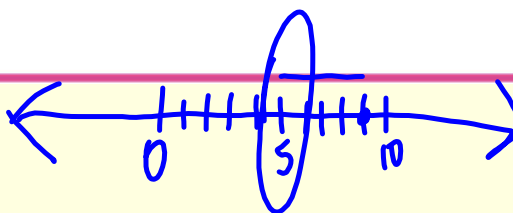
$9 + (-4) = 5$

$-9 + 4 = -5$

Subtract &
Keep the sign
of the one
you have
more of



$9 - 4 = 5$



Example 1: Find $-26 + (-17)$.

S

$$\begin{array}{r} 26 \\ +17 \\ \hline -43 \end{array}$$

Example 2: Find $-34 + (-21)$.

S

$$\begin{array}{r} 34 \\ +21 \\ \hline -55 \end{array}$$

Example 3: $5 + (-3)$

D

$$\begin{array}{r} 5 \\ -3 \\ \hline 2 \end{array}$$

Example 4: $-8 + 3$

D

$$\begin{array}{r} 8 \\ -3 \\ \hline -5 \end{array}$$



Example 5: Find $2 + (-15) + (-2)$. $2 + (-2) = 0$

-15

Example 6: $11 + (-4) + (-11)$

$11 + (-11) + (-4)$
 $0 + (-4) = -4$

Example 7: A roller coaster starts at point A. It goes up 20 feet, down 32 feet, and then up 16 feet to point B. Write an addition sentence to find the height at point B in relation to point A. Then find the sum and explain its meaning.

$$20 + (-32) + 16$$

$$20 + 16 + (-32)$$

$$36 + (-32)$$

$$36 - 32 = 4$$

Point A is 4 ft from Point B



Example 8: Max owes his brother \$20. He gives his brother \$10 one week and then the next week he gives him \$5. Write an addition expression to describe the situation. Then find the sum and explain the meaning.

$$-20 + 10 + 5$$

$$-20 + 15 = 20 - 15 = 5$$

Max owes \$5 still

Homework:

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