

Objectives: I can find opposites and absolute values of integers and add integers.

Adding Integers

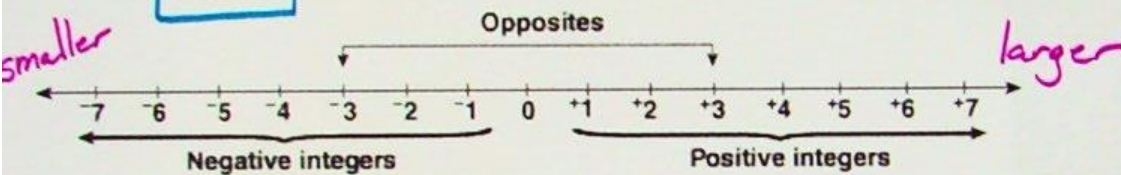
(Absolute Value and Opposites of Integers)

absolute value

The distance of a number from zero; the positive value of a number.
Two parallel lines around a number or expression mean "the absolute value."
For example: $|-4| = 4$ $|8| = 8$ $|0| = 0$

opposites

Two numbers that lie the same distance from 0 on the number line but in opposite directions.
For example: The opposite of 2 is -2 The opposite of -5 is 5.
A negative sign in front of a number or variable means "the opposite of."
Therefore, $-(-9) = 9$



Write an integer for each situation.

- 1. Lose \$7 -7
 - 2. 1,300 ft below sea level -1300
 - 3. 8°C below zero -8
 - 4. 3 yards gained 3
 - 5. 5 floors down -5
 - 6. Deposit of \$150 150
 - 7. Profit of \$40 40
 - 8. Borrowed \$6 -6 (debt)
- Handwritten note: Withdrawal of \$150 = -150

Compare. Use >, < or = to complete each statement.

- 1. -4 -2 (larger)
- 2. $|-4|$ $|-5|$ (4 < 5)
- 3. -7 $|4|$ (4)

Notes about adding integers...

Notes...

Signs the Same
positive + positive
negative + negative

← Add, Keep the sign
 $5+6=11$ $-2+(-7)=-9$

Signs are Different
positive + negative
negative + positive

← Subtract, Use the
Sign of the larger absolute value
 $-5+8=3$ $-6+2=-4$
 $3+(-6)=-3$ $10+(-2)=8$

Practice Applying Rules of Addition

Find each sum.

1. $9+(-12)=$ -3

2. $-4+10=$ 6

3. $-1+(-8)=$ -9

4. $-6+(-11)=$ -17

5. $-5+15=$ 10

6. $2+(-14)=$ -12

7. $1+(-3)+2+(-10)=$ -10

8. $-12+(-6)+15+(-2)+5=$ 0

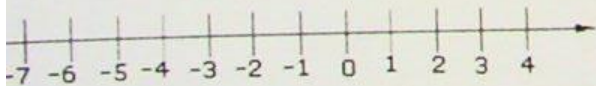
~~1~~ + ~~-3~~ + ~~2~~ + ~~-10~~

~~-12~~ + ~~-6~~ + ~~15~~ + ~~-2~~ + ~~5~~

HOMEWORK

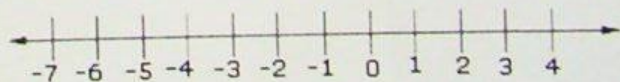
Graph each set of numbers on a number line. Then order the numbers from least to greatest. (On #3 and 4, you have to write your own numbers under the number lines.)

1. -4, -7, 3



least to greatest: _____

2. 3, -3, -2



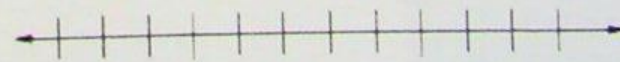
least to greatest: _____

3. 0, -6, -4



least to greatest: _____

4. -7, -1, -3



least to greatest: _____

Homework is continued on the next page.

