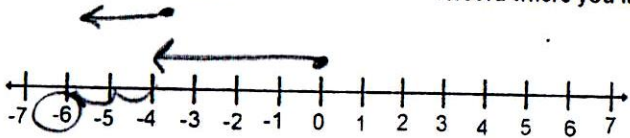


Accelerated Math Notes
(Addition of Integers) Section 2-2

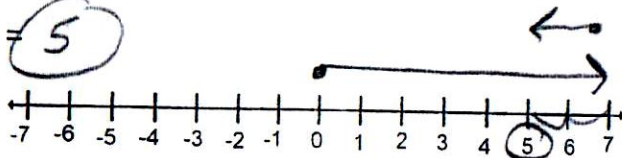
Add integers using a number line

- *Start at 0
- *Draw first number's arrow to left if negative & to right if positive
- *Draw second number's arrow above 1st one
- *Record where you last arrow ends

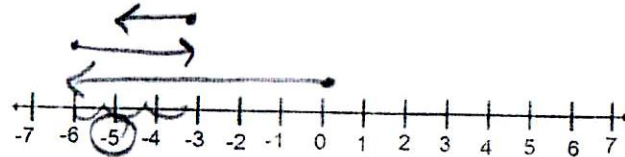
1) $-4 + -2 = -6$



2) $7 + -2 = 5$

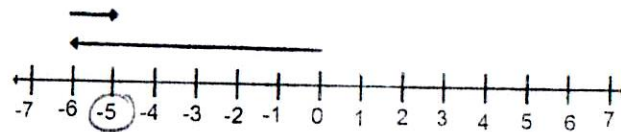


3) $-6 + 3 + -2 =$



4) What's the addition problem?

$-6 + 1 = -5$



Addition of Integers Modeled with Counters:

Let ● = -1 and ○ = +1

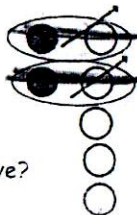
Example: $-1 + -2 = -3$

Draw one negative counter
Then draw 2 negative counters in another column
How many negative counters are there altogether?



Example: $-2 + 5 = 3$

Draw two negative counters
Then draw five positive counters in another column
Look for zero pairs and show they can be removed
How many and what kind of counters do you now have?



Model these problems with counters:

1) $-4 + 7 = 3$



2) $-5 + -3 = -8$



What addition problems are modeled by these counters?

3) $3 + -1 = 2$



4) $2 + -3 = -1$



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

*POSITIVE if both integers positive

$$6 + 9 = 15$$

*NEGATIVE if both integers negative

$$-6 + -9 = -15$$

To ADD integers with different signs, subtract their absolute values. The sign for the sum is the sign of the number with the greater absolute value.

$$-6 + 8 = 2$$

$$6 + -8 = -2$$

6
8
-8
-6

To add more than two addends:

*Add the negatives

*Add the positives

*Add those answers

$$\underline{-2} + 7 + \underline{-4} + \underline{-5} + 3 + \underline{-10}$$

$$-21 + 10$$

$$-11$$