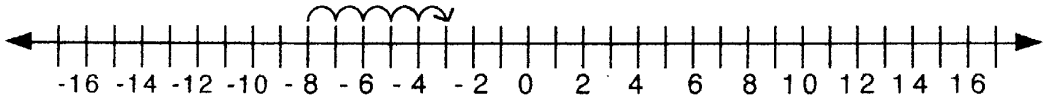
Adding Integers

There are different ways of doing just about everything in math. This is the challenge to the educator: to present a technique for doing something that will make sense to the greatest number of students. When you present more than one or two methods, students begin to get confused. Hopefully, one of the two methods I'm discussing below will be the way your teacher used.

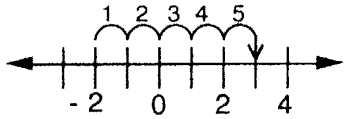
Method #1: Use a number line.



To figure -8 + 5, think of it as you're starting at -8. Then, the + sign means to go to the right. So, starting at -8 and going to the right 5, we'd end up at -3. Therefore, -8 + 5 = -3.

The first number in the problem always tells you the starting point. Then, adding means to go to the right and subtracting means go left, EXCEPT when there's a "-" sign after the operation symbol, then the direction changes. Example: 7 + (-3) First of all, the parentheses around the -3 are simply there to separate the plus sign from the negative sign. Now, start at 7. The plus sign means to go to the right, but then the negative sign tells us to do the opposite, so we go to the left 3 places. This takes us to 4. 7 + (-3) = 4.

Example: -2 - (-5)



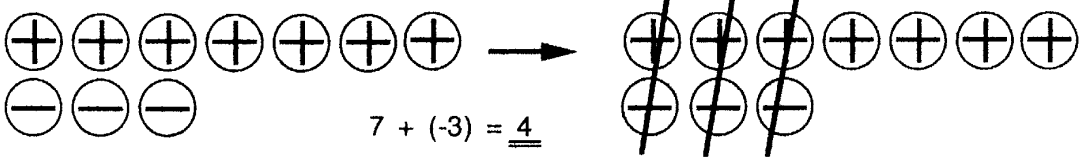
Start at -2. The minus sign says to move to the left, but the negative sign after it says, "Switch directions!" So we go to the right 5 places. This puts us at +3.

Method #2: Positives and negatives cancel each other out.

When a positive is put together with a negative, they cancel each other out, leaving zero: -1 + 1 = 0 and 1 + (-1) = 0.

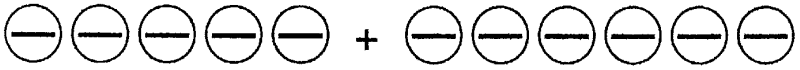
I'll use positive and negative chips to demonstrate.

7 + (-3) would look like this: After canceling, we're left with 4 positives.



7 + (-3) = 4

+4 + (+8) = +12 just as -4 + (-8) = -12 since the "chips" would all be of the same type. Nothing gets cancelled. Below is -5 + (-6).



-5 + (-6) = -11

They're all negatives, so nothing cancels.