Subtracting Integers

Example: -11 –(- 7)

That is 11 negatives.

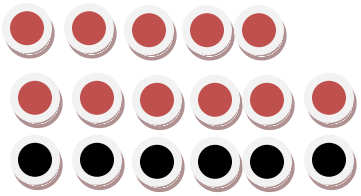
Now let's subtract (take away) seven negatives.

And we are left with four negatives, so

-11 – (-7) = -4

Example: -5 – 6

That is five negatives, but I don't have any positives to subtract (take away). So, I am going to add Zero Sum Pairs until I have six positives that I can take away. (notice that the chips still sum to -5 after I add the zero sum pairs)



Having added six zero sum pairs, I now have six positives that I can take from my group which is still worth -5. And when I do, I end up with this.

I'm left with eleven negatives and -5 – 6 = -11.

Look at the previous two examples, but instead of subtracting the second number from the first, add the opposite of the second number to the first.

Example -11 – (-7)

-11 + 7

With the seven zero sum pairs, our sum is again -4.

Example: -5 – 6

-5 + (-6)

And again, adding the opposite gives me the same value as subtracting the number, in this case -11.

Rule for Subtracting Integers

Instead of Subtracting, Add the opposite.

Examples:

15 – 7 = 15 + (-7)

= 8 signs are different so subtract the numbers, answer is pos b/c GAV is pos

-17 – (-8) = -17 + 8

=-9 signs are different so subt, answer is neg b/c GAV is neg

6 – 9 = 6 + (-9)

= -3 signs are different so subt, answer is neg b/c GAV is neg

-6 – (-12) = -6 + 12

= 6 signs are different so subt, answer is pos b/c GAV is pos