




Add & Subtract Integers Fact Sheet

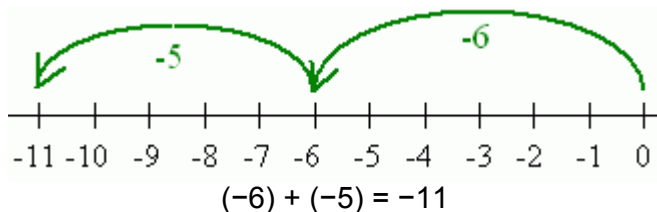
Adding negative integers.

 and  is 

 $(-1) + (-3) = (-4)$

$(-6) + (-12) + (-3) + (-10) + (-5) = -36$
 debt debt debt debt debt = lots of debt

You jump on the number line towards the negative (left), more and more.



Just add the absolute values, and put the negative sign in front.

Subtracting a positive integer.

$2 - 1 = 1$	$(-4) - 0 = -4$
$2 - 2 = 0$	$(-4) - 1 = -5$
$2 - 3 = -1$	$(-4) - 2 = -6$
$2 - 4 = -2$	$(-4) - 3 = -7$
etc.	etc.

It is like temperature dropping, or money being subtracted from a bank account. Subtracting a positive integer just means more debt.

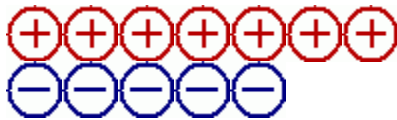
On a number line, subtracting 7 means jumping 7 steps towards the left.

$5 - 8$ is also the same as $5 + (-8)$. In other words, you can change subtracting a number into addition of the opposite number.

Let's say the answer to $(-2) - 6$ is A and we don't know it yet. Since subtraction is the opposite operation of addition, $A + 6 = -2$. $A = -8$ is the only number that works.

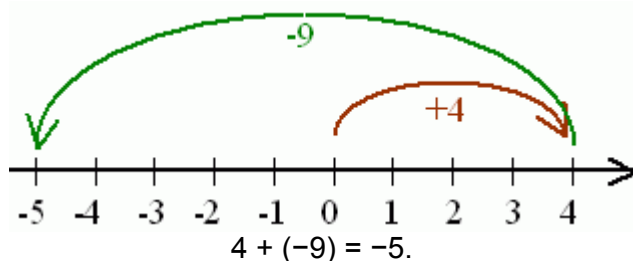
Adding integers with different signs.

$7 + (-5) = \square$



Some of the positives & negatives cancel each other. The difference of the absolute values tells you how many didn't get canceled.

Jump on the number line: a positive number is a jump to the right, a negative number means a jump to the left.



Subtracting a negative integer.

$2 - 2 = 0$	$(-7) - 2 = (-9)$
$2 - 1 = 1$	$(-7) - 1 = (-8)$
$2 - 0 = 2$	$(-7) - 0 = (-7)$
$2 - (-1) = 3$	$(-7) - (-1) = (-6)$
$2 - (-2) = 4$	$(-7) - (-2) = (-5)$
etc.	etc.

When you subtract a negative integer, change it into adding the opposite of the negative number, which is of course positive:

$8 - (-4) = 8 + 4 = 12$
 $(-10) - (-4) = (-10) + 4 = (-6)$

Two negatives changes into one positive!

On number line, subtracting (-4) means jumping 4 steps to the left - but before you jump, the extra minus makes you turn around, so you jump to the right instead.

Let's say the answer to $2 - (-3)$ is B and we don't know it yet. Since subtraction is the opposite operation of addition, $B + (-3) = 2$. $B = 5$ is the only number that works.

Similarly, if $(-7) - (-3)$ is C, then $C + (-3) = -7$. So C is (-4) .