2. Adding and Subtracting Integers

Okay, it's time to add and subtract integers! Yay!

First of all, there are 4 patterns that you need to know – and memorize eventually.

(+)(+) → (+)   • a *positive* with a *positive* becomes a ***positive***
(–)(–) → (+)   • a *negative* with a *negative* becomes a ***positive***

(–)(+) → (–)   • a *negative* with a *positive* becomes a **negative**
(+)(–) → (–)   • a *positive* with a *negative* becomes a **negative**

As you can see, if both signs are the same, they become (+).
If the signs are different, they become (–).

What does that mean? I'm glad you asked! Let's look at some examples.

Positive with Positive
You may encounter questions like this:

$$(+1) + (+2) = \_\_\_$$

When solving addition and subtraction questions, it's good to "clean it up" first!
Start by removing the brackets.

$$+1 + +2 = \_\_\_$$

Now, we don't like having 2 math signs side by side, so we ask ourselves, what do 2 positive signs become? The answer: 1 positive sign!

$$+1 +2 = \_\_\_$$

And what is +1 plus +2? I know you already know the answer, but let's look at the integer number line first.
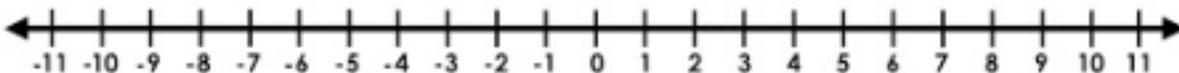
Start with the first integer as your starting point.
Since it is + 2, go 2 spaces to the RIGHT. **PLUS always goes to the RIGHT!**

Your final answer is +3.
For the answer, include the plus sign since we are dealing with integers.
The brackets are not needed for the final answer!

$$(+1) + (+2) = +3$$

Negative with Negative
Okay, let's try it with 2 negative signs.

$$(-3) - (-4) = \underline{\quad}$$

Let's "clean it up" first! Remove the brackets.

$$-3 - -4 = \underline{\quad}$$

Remember, we don't like having 2 math signs side by side, so we ask ourselves, what do 2 negative signs become? The answer: 1 positive sign!

$$-3 + 4 = \underline{\quad}$$

Let's use the integers number line again.

Start with the first integer as your starting point.
Since it is + 4, go 4 spaces to the RIGHT. **PLUS always goes to the RIGHT!**

$$-3 + 4 = +1$$

We'll do one more example.

Negative with Positive *or* Positive with Negative

Okay, let's try it with 2 negative numbers.
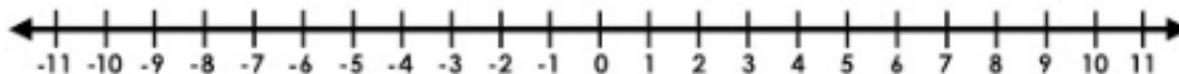
$$(+2) + (-5) = \underline{\quad}$$

Let's "clean it up" first! Remove the brackets.

$$+2 + -5 = \underline{\quad}$$

We don't want 2 math signs side by side, so we ask ourselves, what does a "−" and a "+" become? The answer: a negative sign!

+2 − 5 = ___

Let's use the integers number line again.

Start with the first integer as your starting point on the number line.
Since it is –5, go 5 spaces to the LEFT. **MINUS always goes to the LEFT!**

+2 − 5 = –3

Videos Adding and Subtracting Integers

Now that we had that brief overview, try watching these videos. Everyone is different. A video that works well for someone else might not work well for you and vice versa! Sometimes hearing a piece of information in a different way is all that is needed for you to "get it." Sometimes watching a video more than once helps. Unfortunately, there are the beginning ads.

"Adding and Subtracting Integers Using a Simple Method" – The Organic Chemistry Tutor

https://www.youtube.com/watch?v=jVvvUiExjes

- Don't let the name fool you. This video is not about organic chemistry!
- It starts with a really easy equation and then gradually uses harder questions.

"Adding & Subtracting Integers" – Math Antics

https://www.youtube.com/watch?v=_BgblvF90UE