Adding and Subtracting Integers | **MFM1P**

Adding and subtracting integers is pretty straightforward when you are working with just positive integers. For example, add and subtract the following integers:

a) 2 + 5 =   b) 5 – 3 =   c) 10 + 12 =   d) 100 – 99 =

Many applications (especially in grade 10) will require us to add and subtract negative integers.

We will now look at the four possible cases for adding and subtracting integers.

When you are adding you move to the _____ , when subtracting to the _____.

Adding a Positive Integer

a) 3 + 7   b) −3 + 5   c) −5 + 1

Subtracting a Positive Integer

a) 7 – 3   b) 3 – 5   c) −5 – 1

Adding a Negative Integer

a) 7 + (− 4)   b) 3 + (− 3)   c) −4 + (− 1)

Subtracting a Negative Integer

a) 7 – (− 1)   b) −3 – (− 1)   c) −4 – (− 6)

Addition and subtraction of integers can be confusing at times … so a method that you can use that will get you the correct answer 100% of the time is listed below.

- The first number is your starting point, plot it on the number line.
- If there are two signs between the integers, **simplify accordingly using your $\cdot|$ rules**.
- If the result is "+" move to the right using the second number.
- If the result is "-" move to the left using the second number.

Eventually, you will be able to do these mentally and the more you practice the better you will get.

Use the above method, and the given number lines to answer each question:

a) $-4-3$

b) $4-8$

c) $5+(-6)$

d) $4+(-2)$

e) $4-(-4)$

f) $-3-(-5)$

g) $-7-(-2)$