Solving Integers

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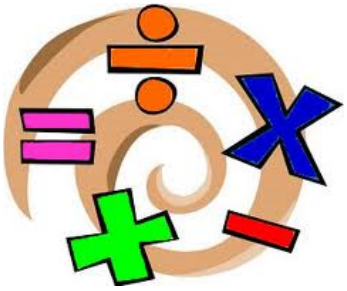
Operations on integers



We have the following operations onintegers:

- Addition of Integers
- Subtraction of Integers
- Multiplication of Integers
- Division of Integers

Let’s discuss each one of them in detail:

Addition of Integers

We have three cases under this:

- If both integers are positive:

We will learn this by using examples :

Add: 2 + 3
As we can see that both 2 and 3 are positive, so the answer to the above problem is 5.

- If both integers are negative :

Add: (-2) + (-3)
Here, both -2 and -3 are negative integers, so we will add 2 and 3 that is we will get 5 and in the final answer we will put a negative sign before the answer.
So the final answer is -5

- If one integer is positive and other one negative:

Solve: 2 + (-3)
In such case, we find the difference of their absolute values and prefix the sign of the integer whose absolute value is greater.
As in the above example, absolute value of -3 is greater than 2 so we get the answer as -1

Subtraction of Integers

Subtraction is the inverse of addition. Here also we have three cases:

- If both integers are positive:

For example: Subtract 3 from 7.
7 – 3 = 4

- If both are negative integers:

Suppose, we want to subtract -3 from -5
We proceed like this:
-5 – (-3)
Negative of a negative integer is the corresponding positive number.
-5 + 3 = -2

- If one is negative and other one is positive:

For example: Subtract -3 from 5
5 – (-3) = 5 + 3 = 8

Multiplication of Integers

Multiplication is repeated addition. As in addition and subtraction, in multiplication also we have three cases :

- If both integers are positive :

When both integers are positive, we multiply their absolute values and prefix plus sign to the product.
For example: Multiply 6 by 2
6 x 2 = 12

- If both are negative integers :

When both integers are negative, we multiply their absolute value and prefix plus sign.
For example: (-6) x (-3) = 18

- If one is negative and other one is positive:

When one integer is positive and the other is negative, we multiply their absolute values and prefix minus sign to their product.
For example: (-12) x 3 = 36

Division of Integers

Division is the inverse of multiplication. We have two cases under division of integers :

- Division of integers with like signs :

To divide two integers of like signs, we divide their absolute values and prefix (+) sign.

Example 1 : Divide: 10 by 5

10 ÷ 5 = 2

Example 2 : Divide (-14) by (-7)

(-14) ÷ (-7) = 2

- Division of integers with unlike signs:

To divide two integers of opposite signs, we divide their absolute values and prefix minus (-) sign.

For example: Divide: -15 by 3

-15 ÷ 3 = -5

Now try it yourself! Should you still need any help,click here to schedule live online session with e Tutor!

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Reference Links :

- http://en.wikipedia.org/wiki/Integer
- http://www.aaamath.com/add65_x2.htm
- http://www.aaamath.com/g5_65_x3.htm
- http://www.aaamath.com/mul65_x2.htm
- http://www.aaamath.com/div65_x2.htm

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