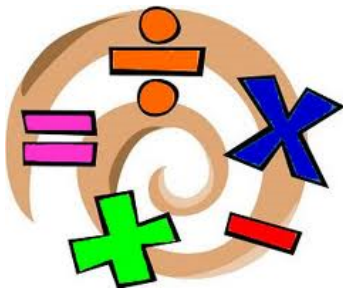


Solving Integers

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Operations on integers



We have the following operations on [integers](#):

- [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

$$6 \times 2 = 12$$

- If both are negative integers :

When both integers are negative, we multiply their absolute value and prefix plus sign.

For example: $(-6) \times (-3) = 18$

- 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: $(-12) \times 3 = 36$

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

$$10 \div 5 = 2$$

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

$$(-14) \div (-7) = 2$$

- 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

$$-15 \div 3 = -5$$

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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