**Numbers Can be Positive or Negative (Mathisfun.com)**

|  |  |
| --- | --- |
| Negative Numbers (−) | Positive Numbers (+) |

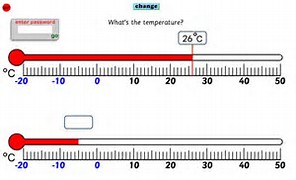
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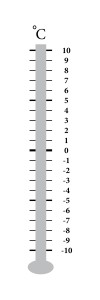
**No Sign Means Positive**

If a number has **no sign** it usually means that it is a **positive** number.

Example: **5** is really **+5**

**Numbers above (greater than) zero are positive. Numbers below (less than) zero are negative.**

[](https://www.bing.com/images/search?view=detailV2&ccid=WrD0SIW0&id=6F40BF3A673C785D6AFA9693B6FAB5103E081B2F&thid=OIP.WrD0SIW00sZlz4j_6lKkXwEsC2&q=learning+negative+numbers+number+line+thermostat&simid=608036799668815218&selectedIndex=0)

[](http://www.singingturtle.com/wp-content/uploads/2013/01/temp-scale.jpg)

Temp Scale for Integer

**The Rules: Adding and subtracting**

It can all be put into **two rules**:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Rule** |  |  |  | **Example** |
| **+(+)** | Two like signs become a **positive sign** |  | plus |  | 3+(+2) = 3 **+** 2 = 5 |
| **−(−)** |  | 6−(−3) = 6 **+** 3 = 9 |
|  |  |  |  |  |  |
| **+(−)** | Two unlike signs become a **negative sign** |  | minus |  | 7+(−2) = 7 **−** 2 = 5 |
| **−(+)** |  | 8−(+2) = 8 **−** 2 = 6 |
|  |  |  |  |  |  |

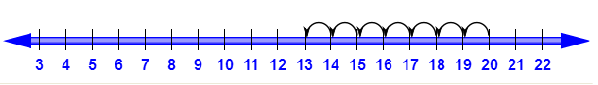
They are "like signs" when they are like each other (in other words: the same).

**The Rules: Multiplying and Dividing**

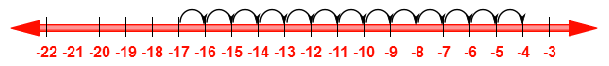
|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  | Example |
| plus× plus | two positives make a positive: | plus | 3 × 2 = 6 |
|  |  |  |  |
| minus× minus | two negatives make a positive: | plus | (−3) × (−2) = 6 |
|  |  |  |  |
| minus× plus | a negative and a positive  make a negative: | minus | (−3) × 2 = −6 |
|  |  |  |  |
| plus× minus | a positive and a negative  make a negative: | minus | 3 × (−2) = −6 |

|  |
| --- |
| What is -9 + (+11) ?  +(+) becomes a positive sign. So -9 + (+11) = -9 + 11 = 2  Start at -9 and move 11 places to the right: [image] |
| What is -16 + (-3)?  +(-) becomes a negative sign. So -16 + (-3) = -16 − 3 = -19  Start at -16 and move 3 places to the left: [image] |

What is 20 + (-7)?

+(-) becomes a negative sign.  
So 20 + (-7) = 20 − 7 = 13  
  
Start at 20 and move 7 places to the left:  


What is -17 + (+13) ?

+(+) becomes a positive sign.  
So -17 + (+13) = -17 + 13 = -4  
  
Start at -17 and move 4 places to the right:  


What is the value of (-3) × (-5) ?

Remember that multiplying two negative numbers makes a positive number.  
So (-3) × (-5) = +15  
  
We can leave the + sign in the answer, but it's not necessary:  
So we can also write (-3) × (-5) = 15

What is the value of (-4) × (+7) ?

Remember that multiplying a negative number by a positive number makes a negative number.  
So, (-4) × (+7) = -28

What is the value of (+6) × (-9) ?

Remember that multiplying a positive number by a negative number makes a negative number.  
So (+6) × (-9) = -54

What is the square of -7 ?

Remember that multiplying two negative numbers makes a positive number.  
So (-7)2 = (-7) × (-7) = +49  
  
We can leave the + sign in the answer, but it's not necessary:  
So we can also write (-7)2 = 49

What is the value of (-2) **×** (+5) **×** (-3) ?

Do this in two steps, working from left to right:  
  
1. Work out (-2) **×** (+5)  
Remember that multiplying a negative number by a positive number makes a negative number.  
So (-2) **×** (+5) = -10  
  
2. Work out (-10) **×** (-3)  
Remember that multiplying two negative numbers makes a positive number  
So (-10) **×** (-3) = +30  
  
We can leave the + sign in the answer, but it's not necessary:  
So the answer is 30