

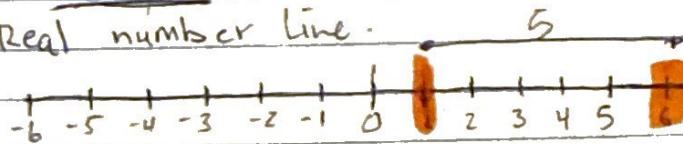
Definition 4



- * If the quantity in the absolute value is positive then the absolute value bars don't change anything.
- * If the quantity in the absolute value is negative the the absolute value bars do change anything.

Example:

* Real number line.



Find the distance between 1 and 6.

Subtracting $6 - 1 = 5$ so the distance is 5. But when we do $1 - 6 = -5$ which is negative because the order is changing the result so using subtraction only is not going to help us. So we introduce Absolute Value.

$$* |6 - 1| = 5 \text{ and } |1 - 6| = 5$$

* So we used the absolute value function to measure the distance between two numbers. Thus the distance between 1 and 6 is $|1 - 6| = 5$.