Recall: The distance a number is from zero on a number line is called the
absolute value of the number.
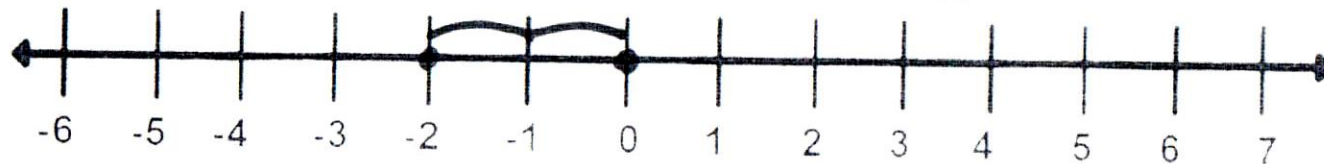
SO, $|a| = a$ if   a ≥ 0

        $|a| = -a$ if   a < 0

Show the meaning of $|-2|$ on the number line.

What other number has an absolute value of 2 ? **2**

-2 is 2 units from zero

TASK: Find the meaning of $|a - b|$ where a and b are two

different points on a number line.

-6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6 7

Choose values for a and b and complete this chart.

	a	b	a - b	a + b	| a - b |
●	-1	3	-1 - 3 -1 + -3 (-4)	-1 + 3 ②)	|-4| ④
△	-5	-3	-5 - -3 -5 + 3 (-2)	-5 + -3 (-8)	|-2| ②
▢	4	7	4 - 7 4 + -7 (-3)	4 + 7 ⑪	|-3| ③
✳	-2	2	-2 - 2 -2 + -2 (-4)	-2 + 2 ⓪	|-4| ④

Conclusion:

$|a - b|$ means __the distance____ a __is__ __from__ b

__on the # line__

Explain the meaning using values for a and b

a   b

If a = -2
   b = 3

-2 0 3

-2 is 5 units from 3 since

$|-2-3| = 5$

$|-2-3|$
$|-2+-3|$
$|-5|$
5