$|3| = 3$

$|-3| = 3$

$\Big\}$ $|x| = 3 \rightarrow x = \pm 3$

$|x-2| = 5$ Find Possible value for x?

$x-2 = 5$ $\qquad$ $x-2 = -5$

$x = 7$ $\qquad$ $x = -3$

$2|3x-1| = 12$ $\qquad$ Find x?

$\div 2$

$|3x-1| = 6$

$3x-1 = 6$ $\qquad$ $3x-1 = -6$

$3x = 7$ $\qquad$ $3x = -5$

$x = 7/3$ $\qquad$ $x = -5/3$

$|4x+7| + 2 = 10$ $\qquad$ Find x?

$|4x+7| = 8$

$4x+7 = 8$ $\qquad$ $4x+7 = -8$

$4x = 1$ $\qquad$ $4x = -15$

$x = 1/4$ $\qquad$ $x = -15/4$

$|2x-3| + 7 = 4$ Find x?

$|2x-5| = -3$

No solution

---

which of the following could be equal zero?

1) $|x-2| + 2$ — [+ve] [-ve] = zero
2) $|x-2| - 2$ ✓
3) $|2-x| + 2$
4) $|-2-x| + 2$

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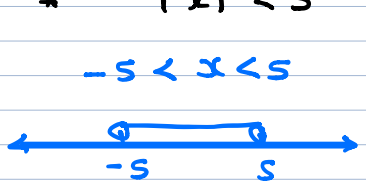
* Absolute inequality:

1) And → $|\ | <$ $\leq$

* $|x| < 5$ $\quad -5 < x < 5$



$|x| \leq 7$ $\quad -7 \leq x \leq 7$

$|x-3| \leq 5$ Find Possible x?

$-5 \leq x-3 \leq 5$

$-2 \leq x \leq 8$

$|2x-1| \leq 7$ Find Possible value For x?

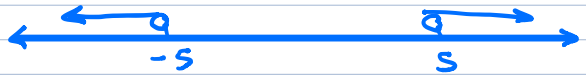
$-7 \leq 2x-1 \leq 7$

$-6 \leq 2x \leq 8$ $\div 2$

$-3 \leq x \leq 4$

$|x| > 5$ → Or

$x > 5$ or $x < -5$



$|x-7| > 4$ Find Possible x?

$x-7 > 4$ or $x-7 < -4$

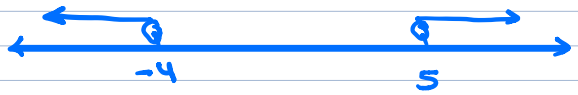
$x > 11$ or $x < 3$

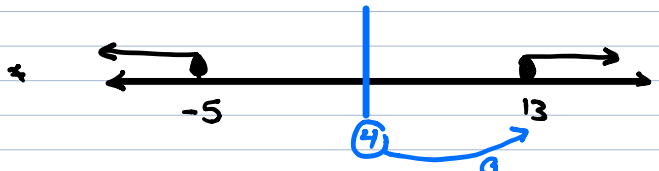
$|2x-1| > 9$ Find Possible value For x?

$2x-1 > 9$ or $2x-1 < -9$

$2x > 10$ $2x < -8$

$x > 5$ $x < -4$





If the graph is represented as $|x-a| > b$ find a, b?

↳ distance

$a \rightarrow$ average $= \frac{-5+13}{2} = 4$

$|x-4| > 9$