

④

① $|3x-1| = |x+1|$

$x = -1$

$$\begin{aligned} 3x &= 1 \\ x &= \frac{1}{3} \end{aligned}$$

	$(-\infty, -1)$	$(-1, \frac{1}{3})$	$(\frac{1}{3}, \infty)$
$ 3x-1 $	-	-	+
$ x+1 $	-	+	+

① $-3x+1 = -x-1$

$-2x+2 =$

$-x = -1$

$x = 1$

② $-3x+1 = x+1$

$-3x = x$

$x = 0$

③ $3x-1 = x+1$

~~$x = 0$~~

$x = 1$

$x_1 = 0, x_2 = 1$

$$② \quad x^2 - 4|x| + 6 = -x$$

$$x^2 - 4|x| + x = -6$$

$x \in \mathbb{R}$

$$x^2 - 4x + x = -6, \quad x \geq 0$$

$$x^2 - 4x(-x) + x = -6, \quad x < 0$$

$$\begin{matrix} x = -3 \\ x = -2 \end{matrix}$$

③

$$\frac{|x-1|}{x-2} = x-1, \quad x \neq 2$$

$$|x-1| = (x-1) \cdot (x-2)$$

$$|x-1| - (x-1) \cdot (x-2) = 0$$

$$|x-1| - (x^2 - 2x - x + 2) = 0$$

$$|x-1| - x^2 + 3x - 2 = 0$$

$$x-1 - x^2 + 3x - 2 = 0$$

$$\begin{matrix} x = 1 \\ x = 3 \end{matrix}$$

$$-(x-1) - x^2 + 3x - 2 = 0$$

$$x = 1$$

$$\textcircled{4} \quad \frac{x-2}{|x-1|} = x-2, \quad x \neq 1, x \neq -1$$

$$x-2 = (x-2) \cdot (|x|-1)$$

$$x - (x-2) \cdot (|x|-1) = 2$$

$$x - (x \cdot |x| - x - 2 \cdot |x| + 2) = 2$$

$$x - x \cdot |x| + x + 2 \cdot |x| - 2 = 2$$

$$2x - x \cdot |x| + 2 \cdot |x| - 2 = 2$$

$$2x - x \cdot x + 2x - 2 = 2, x \geq 0$$

$$x = 2$$

$$2x - x \cdot (-x) + 2 \cdot (-x) - 2 = 2$$

$$x = -2$$

$$x = 2$$

$$\textcircled{5} \quad |x+1| = 2x-3$$

$$|x+1| - 2x = -3$$

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$$x+1-2x = -3, x+1 \geq 0$$

$$x = -4$$

$$-(x+1) - 2x = -3, x+1 < 0$$

$$x = \frac{2}{3}$$

$$x \in \emptyset$$

Tuesday, February 23, 2021 5:52 PM

Norko Yesterday at 5:52 PM

① $15x + 1 = 16x + 9$

$20x + 1 = 16x + 9$

$4x = 8$

$x = 2$

	$(-10, -9)$	$(-7, -\frac{1}{2})$	$(\frac{1}{2}, 20)$
$(5, 9)$	-	-	+
$(-9, 1)$	-	+	+

① $-3x + 1 = -x + 1$ ② $-3x + 1 = x + 1$ ③ $3x - 2 = x + 1$

$-2x + 2 =$ $-2x = 0$ $x = 0$ $x = 2$

$-x = 0$ $x = 0$

$x_1 = 0, x_2 = 2$