

$$|x-1| < 3$$

$$-3 < x-1 < 3$$

N 380 P. 57

$$\frac{1}{4+x^2} = -1 - |x^2 - 4x + 3| \quad \begin{matrix} \text{CE} \\ 4+x^2 \neq 0 \\ \forall x \in \mathbb{R} \end{matrix}$$

$$|x^2 - 4x + 3| = -1 - \frac{1}{4+x^2} \quad \nexists x \in \mathbb{R}$$

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$$\frac{1}{|x-2|} = \frac{x+1}{2}$$

$$CE \\ x \neq 2$$

$$\left\{ \begin{array}{l} x-2 > 0 \\ \frac{1}{x-2} = \frac{x+1}{2} \end{array} \right. \vee \left\{ \begin{array}{l} x-2 < 0 \\ \frac{1}{2-x} = \frac{x+1}{2} \end{array} \right.$$

$$\left\{ \begin{array}{l} x > 2 \\ 2 = (x+1)(x-2) \\ x^2 - 2x + x - 2 = 0 \\ x^2 - x - 2 = 0 \\ x = 1 \vee x = 2 \end{array} \right. \vee \left\{ \begin{array}{l} x < 2 \\ 2 = (x+1)(2-x) \\ 2x - x^2 + 2 + x = 0 \\ -x^2 + 3x + 2 = 0 \\ x^2 - 3x - 2 = 0 \end{array} \right.$$

$$x = 1 \vee x = 2 \quad \text{A.C.C.} \quad x = 1 \vee x = 2$$

$$|x+3|=|2|$$

$$x+3=\pm 2$$

$$|x|=|y|$$



$$x=\pm y$$

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

$$x+3=\pm(2x-1)$$

$$|x+3|=7-|2x-1|$$

N. 477 P. 61

$$1) |x+5| < 7$$

$$2) -x < |x+2| - 1$$

$$① |x+5| < 7$$

$$-7 < x+5 < 7$$

$$\frac{x+5 > -7}{x+5}$$

$$\boxed{-12 < x < 2}$$

$$S: -\frac{1}{2} < x < 2$$

$$-x < |x+2| - 1$$

$$-|x+2| < x-1$$

$$|x+2| > 1-x$$

$$\begin{cases} x+2 \geq 0 \\ x+2 > 1-x \end{cases} \vee$$

$$\begin{cases} x+2 < 0 \\ -2-x > 1-x \end{cases}$$

$$\boxed{x > -\frac{1}{2}}$$

$$S_2$$

$$x^2 - x - 4 = 0$$

$$\Delta = b^2 - 4ac = 1 + 16 = 17$$

$$x_{1/2} = \frac{-b \pm \sqrt{\Delta}}{2a} \quad \left/ \quad \frac{1 + \sqrt{17}}{2} \text{ ACC} \right.$$

$$\frac{1 - \sqrt{17}}{2} \quad \begin{matrix} \text{NO} \\ \text{ACC} \end{matrix}$$