

$$\textcircled{V2} \quad 3x^2 - 5x = 0 \Leftrightarrow 3 \cdot x^2 + (-5) \cdot x + 0 = 0$$

$$a = +3 \quad b = -5 \quad c = 0 \rightarrow \Delta = b^2 - 4ac = (-5)^2 - 4 \cdot 3 \cdot 0$$

$$x_{1,2} = \frac{-b \pm \sqrt{\Delta}}{2a}$$

$$\Delta = 25 - 0 = 25 \rightarrow \sqrt{\Delta} = \sqrt{25} = 5$$

$$x_{1,2} = \frac{-(\textcolor{red}{-5}) \pm 5}{2 \cdot 3} = \frac{5 \pm 5}{6} \Rightarrow \left. \begin{array}{l} x_1 = \frac{5+5}{6} = \frac{10}{6} = 0 \\ x_2 = \frac{5-5}{6} = \frac{0}{6} = 0 \end{array} \right\} \Rightarrow S = \{0; \frac{5}{3}\}$$

$$-2x^2 + x - 1 = 0 \quad | \cdot (-1) \Leftrightarrow 2x^2 - x + 1 = 0 \quad \left. \begin{array}{l} a=2 \quad b=-1 \quad c=1 \end{array} \right\} \Rightarrow$$

$$\Delta = b^2 - 4ac = (-1)^2 - 4 \cdot 2 \cdot 1 = 1 - 8 = -7$$

$$\Delta < 0 \Rightarrow S = \emptyset$$

$$(x+2)^2 - 5x = 6 \Leftrightarrow x^2 + 2 \cdot 2 \cdot x + 2^2 - 5x - 6 = 0 \Leftrightarrow$$

$$\underbrace{x^2 + 4x + 4}_{\sim} - \underbrace{5x - 6}_{\sim} = 0 \Leftrightarrow x^2 - x - 2 = 0 \quad \left. \begin{array}{l} a=1 \quad b=-1 \quad c=-2 \end{array} \right\} \Rightarrow \Delta = b^2 - 4ac$$

$$\Delta = (-1)^2 - 4 \cdot 1 \cdot (-2) = 1 + 8 = 9 \Rightarrow \sqrt{\Delta} = \sqrt{9} = 3 \Rightarrow x_{1,2} = \frac{-(\textcolor{red}{-1}) \pm 3}{2 \cdot 1} = \frac{1 \pm 3}{2} = \left. \begin{array}{l} \frac{1-3}{2} = -1 \\ \frac{1+3}{2} = 2 \end{array} \right\}$$

$$\Rightarrow S = \{-1; 2\}$$

$$\textcircled{V2} \quad x^2 - x - 2 = 0 \Leftrightarrow \underbrace{x^2 - 2x + x - 2}_{\sim} = 0 \Leftrightarrow x(x-1) + 1 \cdot (x-2) = 0 \Leftrightarrow$$

$$(x-1)(x+1) = 0 \Leftrightarrow x-1 = 0 \quad \text{oder} \quad x+1 = 0 \quad \left. \begin{array}{l} x=1 \\ x=-1 \end{array} \right\} \Rightarrow S = \{1; -1\}$$

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