

解の公式1

NO. 1

名前

/ 6 点

◆次の方程式を解の公式を使って解きなさい。

(1) $x^2 + 5x + 2 = 0$

(2) $x^2 - 7x + 2 = 0$

(3) $x^2 + 4x - 7 = 0$

(4) $3x^2 + 7x + 3 = 0$

(5) $5x^2 + 3x - 5 = 0$

(6) $2x^2 + x - 1 = 0$

解答

$$\begin{aligned}
 (1) \quad x &= \frac{-5 \pm \sqrt{25 - 8}}{2} \\
 &= \frac{-5 \pm \sqrt{17}}{2}
 \end{aligned}$$

$$\begin{aligned}
 (2) \quad x &= \frac{7 \pm \sqrt{49 - 8}}{2} \\
 &= \frac{7 \pm \sqrt{41}}{2}
 \end{aligned}$$

$$\begin{aligned}
 (3) \quad x &= \frac{-4 \pm \sqrt{16 + 28}}{2} \\
 &= \frac{-4 \pm \sqrt{44}}{2} \\
 &= \frac{-4 \pm 2\sqrt{11}}{2} = -2 \pm \sqrt{11}
 \end{aligned}$$

$$\begin{aligned}
 (4) \quad x &= \frac{-7 \pm \sqrt{49 - 36}}{6} \\
 &= \frac{-7 \pm \sqrt{13}}{6}
 \end{aligned}$$

$$\begin{aligned}
 (5) \quad x &= \frac{-3 \pm \sqrt{9 + 100}}{10} \\
 &= \frac{-3 \pm \sqrt{109}}{10}
 \end{aligned}$$

$$\begin{aligned}
 (6) \quad x &= \frac{-1 \pm \sqrt{1 + 8}}{4} \\
 &= \frac{-1 \pm \sqrt{9}}{4} = \frac{-1 + 3}{4}, \frac{-1 - 3}{4} \\
 &= -1, \frac{1}{2}
 \end{aligned}$$