

## 平方根を利用した解法

NO.2

名前

/ 点

1

次の2次方程式を解きなさい。

①  $x^2 = 1$

②  $x^2 = 81$

③  $x^2 = 6$

④  $x^2 = 13$

⑤  $2x^2 = 50$

⑥  $5x^2 = 35$

⑦  $3x^2 - 12 = 0$

⑧  $9x^2 - 10 = 0$

2

次の2次方程式を解きなさい。

①  $(x + 2)^2 = 16$

②  $(x - 3)^2 = 20$

③  $(x + 2)^2 - 81 = 0$

④  $(x - 7)^2 - 24 = 0$

解答

1

$$\begin{aligned} \textcircled{1} \quad x^2 &= 1 \\ x &= \pm 1 \end{aligned}$$

$$\begin{aligned} \textcircled{2} \quad x^2 &= 81 \\ x &= \pm 9 \end{aligned}$$

$$\begin{aligned} \textcircled{3} \quad x^2 &= 6 \\ x &= \pm \sqrt{6} \end{aligned}$$

$$\begin{aligned} \textcircled{4} \quad x^2 &= 13 \\ x &= \pm \sqrt{13} \end{aligned}$$

$$\begin{aligned} \textcircled{5} \quad 2x^2 &= 50 \\ x^2 &= 25 \\ x &= \pm 5 \end{aligned}$$

$$\begin{aligned} \textcircled{6} \quad 5x^2 &= 35 \\ x^2 &= 7 \\ x &= \pm \sqrt{7} \end{aligned}$$

$$\begin{aligned} \textcircled{7} \quad 3x^2 - 12 &= 0 \\ 3x^2 &= 12 \\ x^2 &= 4 \\ x &= \pm 2 \end{aligned}$$

$$\begin{aligned} \textcircled{8} \quad 9x^2 - 10 &= 0 \\ 9x^2 &= 10 \\ x^2 &= \frac{10}{9} \\ x &= \pm \frac{\sqrt{10}}{3} \end{aligned}$$

2

$$\begin{aligned} \textcircled{1} \quad (x + 2)^2 &= 16 \\ x + 2 &= \pm 4 \\ x + 2 = 4 \quad \text{のとき} & \quad x = 2 \\ x + 2 = -4 \quad \text{のとき} & \quad x = -6 \end{aligned}$$

$$\begin{aligned} \textcircled{2} \quad (x - 1)^2 &= 20 \\ x - 1 &= \pm \sqrt{20} \\ x &= 1 \pm 2\sqrt{5} \end{aligned}$$

$$\begin{aligned} \textcircled{3} \quad (x + 2)^2 &= 81 \\ x + 2 &= \pm 9 \\ x + 2 = 9 \quad \text{のとき} & \quad x = 7 \\ x + 2 = -9 \quad \text{のとき} & \quad x = -11 \end{aligned}$$

$$\begin{aligned} \textcircled{4} \quad (x - 7)^2 &= 24 \\ x - 7 &= \pm \sqrt{24} \\ x &= 7 \pm 2\sqrt{6} \end{aligned}$$