



1. 次の方程式を解きなさい。

$$\begin{aligned} (1) \quad x^2 - 9 &= 0 \\ x^2 &= 9 \\ x &= \pm\sqrt{9} \\ &= \pm 3 \end{aligned}$$

$$\begin{aligned} (2) \quad x^2 - 7 &= 0 \\ x^2 &= 7 \\ x &= \pm\sqrt{7} \end{aligned}$$

$$\begin{aligned} (3) \quad 9x^2 - 16 &= 0 \\ 9x^2 &= 16 \\ x^2 &= \frac{16}{9} \\ x &= \pm\sqrt{\frac{16}{9}} = \pm\frac{\sqrt{16}}{\sqrt{9}} \\ &= \pm\frac{4}{3} \end{aligned}$$

$$\begin{aligned} (4) \quad 5x^2 - 21 &= 0 \\ 5x^2 &= 21 \\ x^2 &= \frac{21}{5} \\ x &= \pm\sqrt{\frac{21}{5}} \end{aligned}$$

$$\begin{aligned} (5) \quad 2x^2 - 10 &= 0 \\ 2x^2 &= 10 \\ x^2 &= 5 \\ x &= \pm\sqrt{5} \end{aligned}$$

$$\begin{aligned} (6) \quad x^2 - 121 &= 0 \\ x^2 &= 121 \\ x &= \pm\sqrt{121} \\ &= \pm 11 \end{aligned}$$

(1) $x = \pm 3$	(2) $x = \pm\sqrt{7}$	(3) $x = \pm\frac{4}{3}$
(4) $x = \pm\sqrt{\frac{21}{5}}$	(5) $x = \pm\sqrt{5}$	(6) $x = \pm 11$

2. 次の方程式を解きなさい。

$$\begin{aligned} (1) \quad (x+1)^2 &= 16 \\ (x+1) &= \pm\sqrt{16} \\ &= \pm 4 \\ x &= -1 \pm 4 \end{aligned}$$

$$\begin{aligned} (2) \quad (x-7)^2 &= 25 \\ (x-7) &= \pm\sqrt{25} \\ &= \pm 5 \\ x &= 7 \pm 5 \end{aligned}$$

$$\begin{aligned} (3) \quad (x-5)^2 &= 2 \\ (x-5) &= \pm\sqrt{2} \\ x &= 5 \pm\sqrt{2} \end{aligned}$$

$$\begin{aligned} (4) \quad (x-2)^2 - 12 &= 0 \\ (x-2)^2 &= 12 \\ (x-2) &= \pm\sqrt{12} \\ &= \pm 2\sqrt{3} \\ x &= 2 \pm 2\sqrt{3} \end{aligned}$$

$$\begin{aligned} (5) \quad (x+3)^2 &= 15 \\ (x+3) &= \pm\sqrt{15} \\ x &= -3 \pm\sqrt{15} \end{aligned}$$

$$\begin{aligned} (6) \quad (x+2)^2 - 5 &= 0 \\ (x+2)^2 &= 5 \\ (x+2) &= \pm\sqrt{5} \\ x &= -2 \pm\sqrt{5} \end{aligned}$$

(1) $x = -5, x = 3$	(2) $x = 2, x = 12$	(3) $x = 5 \pm\sqrt{2}$
(4) $x = 2 \pm 2\sqrt{3}$	(5) $x = -3 \pm\sqrt{15}$	(6) $x = -2 \pm\sqrt{5}$