

■ 次の2次方程式を解きなさい。

(1)  $x^2 - x - 3 = 0$

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

(3)  $x^2 + 8x + 5 = 0$

(4)  $2x^2 - 9x + 3 = 0$

(5)  $2x^2 + 8x + 1 = 0$

(6)  $2x^2 - 4x - 3 = 0$

(7)  $3x^2 + 3x - 5 = 0$

(8)  $3x^2 - 2x - 2 = 0$

(9)  $4x^2 + 8x + 1 = 0$

(10)  $5x^2 - 2x - 2 = 0$

■ 次の2次方程式を解きなさい。

(1)  $x^2 - x - 3 = 0$

$$x = \frac{1 \pm \sqrt{1+12}}{2}$$
$$= \frac{1 \pm \sqrt{13}}{2}$$

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

$$x = \frac{-2 \pm \sqrt{4+16}}{2}$$
$$= \frac{-2 \pm 2\sqrt{5}}{2}$$
$$= -1 \pm \sqrt{5}$$

(3)  $x^2 + 8x + 5 = 0$

$$x = \frac{-8 \pm \sqrt{64-20}}{2}$$
$$= \frac{-8 \pm 2\sqrt{11}}{2}$$
$$= -4 \pm \sqrt{11}$$

(4)  $2x^2 - 9x + 3 = 0$

$$x = \frac{9 \pm \sqrt{81-24}}{4}$$
$$= \frac{9 \pm \sqrt{57}}{4}$$

(5)  $2x^2 + 8x + 1 = 0$

$$x = \frac{-8 \pm \sqrt{64-8}}{4}$$
$$= \frac{-8 \pm 2\sqrt{14}}{4}$$
$$= \frac{-4 \pm \sqrt{14}}{2}$$

(6)  $2x^2 - 4x - 3 = 0$

$$x = \frac{4 \pm \sqrt{16+24}}{4}$$
$$= \frac{4 \pm 2\sqrt{10}}{4}$$
$$= \frac{2 \pm \sqrt{10}}{2}$$

(7)  $3x^2 + 3x - 5 = 0$

$$x = \frac{-3 \pm \sqrt{9+60}}{6}$$
$$= \frac{-3 \pm \sqrt{69}}{6}$$

(8)  $3x^2 - 2x - 2 = 0$

$$x = \frac{2 \pm \sqrt{4+24}}{6}$$
$$= \frac{2 \pm 2\sqrt{7}}{6}$$
$$= \frac{1 \pm \sqrt{7}}{3}$$

(9)  $4x^2 + 8x + 1 = 0$

$$x = \frac{-8 \pm \sqrt{64-16}}{8}$$
$$= \frac{-8 \pm 4\sqrt{3}}{8}$$
$$= \frac{-2 \pm \sqrt{3}}{2}$$

(10)  $5x^2 - 2x - 2 = 0$

$$x = \frac{2 \pm \sqrt{4+40}}{10}$$
$$= \frac{2 \pm 2\sqrt{11}}{10}$$
$$= \frac{1 \pm \sqrt{11}}{5}$$