

■ 次の2次方程式を解きなさい。

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

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

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

(4) $2x^2 + 2x - 1 = 0$

(5) $2x^2 + 6x + 3 = 0$

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

(7) $3x^2 + 5x + 1 = 0$

(8) $3x^2 - 6x + 2 = 0$

(9) $4x^2 - x - 1 = 0$

(10) $4x^2 - 2x - 3 = 0$

■ 次の2次方程式を解きなさい。

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

$$x = \frac{-3 \pm \sqrt{9-4}}{2}$$
$$= \frac{-3 \pm \sqrt{5}}{2}$$

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

$$x = \frac{-6 \pm \sqrt{36-8}}{2}$$
$$= \frac{-6 \pm 2\sqrt{7}}{2}$$
$$= -3 \pm \sqrt{7}$$

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

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

$$(4) 2x^2 + 2x - 1 = 0$$

$$x = \frac{-2 \pm \sqrt{4+8}}{4}$$
$$= \frac{-2 \pm 2\sqrt{3}}{4}$$
$$= \frac{-1 \pm \sqrt{3}}{2}$$

$$(5) 2x^2 + 6x + 3 = 0$$

$$x = \frac{-6 \pm \sqrt{36-24}}{4}$$
$$= \frac{-6 \pm 2\sqrt{3}}{4}$$
$$= \frac{-3 \pm \sqrt{3}}{2}$$

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

$$x = \frac{1 \pm \sqrt{1+32}}{4}$$
$$= \frac{1 \pm \sqrt{33}}{4}$$

$$(7) 3x^2 + 5x + 1 = 0$$

$$x = \frac{-5 \pm \sqrt{25-12}}{6}$$
$$= \frac{-5 \pm \sqrt{13}}{6}$$

$$(8) 3x^2 - 6x + 2 = 0$$

$$x = \frac{6 \pm \sqrt{36-24}}{6}$$
$$= \frac{6 \pm 2\sqrt{3}}{6}$$
$$= \frac{3 \pm \sqrt{3}}{3}$$

$$(9) 4x^2 - x - 1 = 0$$

$$x = \frac{1 \pm \sqrt{1+16}}{8}$$
$$= \frac{1 \pm \sqrt{17}}{8}$$

$$(10) 4x^2 - 2x - 3 = 0$$

$$x = \frac{2 \pm \sqrt{4+48}}{8}$$
$$= \frac{2 \pm 2\sqrt{13}}{8}$$
$$= \frac{1 \pm \sqrt{13}}{4}$$