二次方程式練習問題解答

(1) $x^2 - 6x + 9 = 0$

$(x-3)^2 = 0$

$x = 3$

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

$$x = \frac{1 \pm \sqrt{(-1)^2 - 4 \cdot 1 \cdot (-1)}}{2}$$

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

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

$$x = 3 \pm \sqrt{(-3)^2 - 1 \cdot 1}$$

$$x = 3 \pm 2\sqrt{2}$$

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

$$x = \frac{-2 \pm \sqrt{2^2 - 3 \cdot (-2)}}{3}$$

$$x = \frac{-2 \pm \sqrt{10}}{3}$$

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

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

$x = 1, 2$

(6) $25x^2 - 20x - 9 = 0$

$$x = \frac{10 \pm \sqrt{(-10)^2 - 25 \cdot (-9)}}{25}$$

$$x = \frac{10 \pm \sqrt{325}}{25}$$

$$x = \frac{10 \pm 5\sqrt{13}}{25}$$

$$x = \frac{2 \pm \sqrt{13}}{5}$$

(7) $3x^2 - 7x - 6 = 0$

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

$$x = -\frac{2}{3}, 3$$

(8) $3x^2 - 10x + 2 = 0$

$$x = \frac{5 \pm \sqrt{(-5)^2 - 3 \cdot 2}}{3}$$

$$x = \frac{5 \pm \sqrt{19}}{3}$$