

3043

⑥

$$5(2x^2 - y^2) - x^2(x^2 - y) - x^2y - x^4$$

$$= 5(4x - 2y) - 2x(2x - y) - 2xy - 4x$$

X

⑦

X

⑧

$$i \quad \sqrt[3]{x} = x^{\frac{1}{3}}$$

$$ii \quad \frac{1}{x} = x^{-1}$$

(3)

$$i. \quad x^2 + 10x + 21 = 0$$

$$a.c = 21 \quad \frac{3}{1} \quad \frac{7}{1}$$

$$b = 10$$

$$x = -3 \text{ or } -7$$

$$ii. \quad x^2 - 3x + 2 = 0$$

$$a.c = 2 \quad \frac{-2}{1} \quad \frac{-1}{1}$$

$$b = -3$$

$$x = 2 \text{ or } 1$$

$$iii. \quad x^2 + 12x + 20 = 0$$

$$a.c = 20 \quad \frac{2}{1} \quad \frac{10}{1}$$

$$b = 12$$

$$x = -2 \text{ or } -10$$

$$iv. \quad x^2 - 64 = 0$$

$$x^2 - 64 + 64 = 0 + 64$$

$$x^2 = 64$$

$$x = \pm \sqrt{64}$$

$$x = 8 \text{ or } -8$$

$$v. \quad 2x^2 + 9x + 10 = 0$$

$$(2x + 5)(x + 2) = 0$$

$$2x + 5 = 0$$

$$x = -2 \text{ or } -\frac{5}{2}$$

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①

$$\begin{aligned} \text{i. } x^4 \times x^6 \times x^2 &= x^{12} \\ \text{ii. } 2x^2 \times x^3 \times 3x^3 \times 2x^3 &= 12x^6 \\ \text{iii. } 2x^2 \times x^3 \times 3x^3 \times 2x^3 &= 12x^6 \end{aligned}$$

$$\begin{aligned} \text{iv. } (3x^2)^3 &= 9x^2 \\ \text{v. } \sqrt{x} \times \sqrt{x} &= x \end{aligned}$$

②

$$\text{i. } 15x - 2 = 12x + 9$$

$$15x - 2 + 2 = 12x + 9 + 2$$

$$-12 = 3x + 9$$

$$x = 3$$

$$\text{ii. } 3(7x - 1) = 6(x + 3)$$

$$21x - 3 = 6x + 18$$

$$+3 \quad 21x = 6x + 18$$

$$-6 \quad 15x = 18 \quad x = \frac{18}{15}$$

$$\text{iii. } \frac{5x + 3}{4} = \frac{2x - 1}{9}$$

$$9(5x + 3) = 4(2x - 1)$$

$$45x + 27 = 8x - 4$$

$$45x = 8x - 31$$

$$37x = -31$$

$$x = \frac{-31}{37}$$