

# 教科書の復習問題

範 囲 : 教科書 P 1 2 ~ P 2 1 の問・練習問題

提出日 : 4 月 1 3 日 (月)  
※登校日に提出する

- 注 意 :
- ☞ 途中式をこの用紙に書きこむこと
  - ☞ 問題を写し答えを書くこと
  - ☞ 答えのみの記入で提出しないこと
  - ☞ 提出期限を守ること
  - ☞ 提出期限前に提出してもよい

組 番 氏名

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問 1 (1)

$$\begin{aligned} & (2x+y) \times 7x \\ &= 2x \times 7x + y \times 7x \\ &= 14x^2 + 7xy. \end{aligned}$$

問 1 (2)

$$\begin{aligned} & (3a-b) \times 4a \\ &= 3a \times 4a - b \times 4a \\ &= 12a^2 - 4ab. \end{aligned}$$

問 1 (3)

$$\begin{aligned} & (5a-6b) \times (-2b) \\ &= 5a \times (-2b) - 6b \times (-2b) \\ &= -10ab + 12b^2. \end{aligned}$$

問 1 (4)

$$\begin{aligned} & 4x(2x-1) \\ &= 4x \times 2x - 4x \times 1 \\ &= 8x^2 - 4x. \end{aligned}$$

問 1 (5)

$$\begin{aligned} & 2x(x+3y) \\ &= 2x \times x + 2x \times 3y \\ &= 2x^2 + 6xy. \end{aligned}$$

問 1 (6)

$$\begin{aligned} & -3a(8a+7b) \\ &= -3a \times 8a - 3a \times 7b \\ &= -24a^2 - 21ab. \end{aligned}$$

問 1 (7)

$$\begin{aligned} & -2x(-3x+2y) \\ &= -2x \times (-3x) + (-2x) \times 2y \\ &= 6x^2 - 4xy. \end{aligned}$$

問 1 (8)

$$\begin{aligned} & (x-3y-2) \times 4x \\ &= x \times 4x - 3y \times 4x - 2 \times 4x \\ &= 4x^2 - 12xy - 8x. \end{aligned}$$

問 1 (9)

$$\begin{aligned} & -3x(4x-3y+2) \\ &= -3x \times 4x - 3x \times (-3y) - 3x \times 2 \\ &= -12x^2 + 9xy - 6x. \end{aligned}$$

問 1 (10)

$$\begin{aligned} & 3a(-a+2b-1) \\ &= 3a \times (-a) + 3a \times 2b + 3a \times (-1) \\ &= -3a^2 + 6ab - 3a. \end{aligned}$$

問 2 (1)

$$\begin{aligned} & (5x^2 - 10x) \div 5x \\ &= (5x^2 - 10x) \times \frac{1}{5x} \\ &= \frac{5x^2}{5x} - \frac{10x}{5x} \\ &= x - 2 \end{aligned}$$

問 2 (2)

$$\begin{aligned} & (8a^2 - 2a) \div 2a \\ &= (8a^2 - 2a) \times \frac{1}{2a} \\ &= \frac{8a^2}{2a} - \frac{2a}{2a} \\ &= 4a - 1 \end{aligned}$$

問 2 (3)

$$\begin{aligned} & (6ax+3ay) \div (-3a) \\ &= (6ax+3ay) \times \left(-\frac{1}{3a}\right) \\ &= -\frac{6ax}{3a} - \frac{3ay}{3a} \\ &= -2x - y \end{aligned}$$

問 2 (4)

$$\begin{aligned} & (-10x^2+x) \div \frac{x}{2} \\ &= (-10x^2+x) \times \frac{2}{x} \\ &= -\frac{10x^2 \times 2}{x} + \frac{x \times 2}{x} \\ &= -20x + 2 \end{aligned}$$

問 2 (5)

$$\begin{aligned} & (3x^2+6xy) \div \left(-\frac{3}{4}x\right) \\ &= (3x^2+6xy) \times \left(-\frac{4}{3x}\right) \\ &= -\frac{3x^2 \times 4}{3x} - \frac{6xy \times 4}{3x} \\ &= -4x - 8y \end{aligned}$$

問 2 (6)

$$\begin{aligned} & (15x^2y-9xy^2) \div \frac{3}{2}xy \\ &= (15x^2y-9xy^2) \times \frac{2}{3xy} \\ &= \frac{5 \times 15x^2y \times 2}{3xy} - \frac{3 \times 9xy^2 \times 2}{3xy} \\ &= 10x - 6y \end{aligned}$$

問 3 (1)

$$\begin{aligned} & (a+b)(c-d) \\ &= a(c-d) + b(c-d) \\ &= ac - ad + bc - bd \end{aligned}$$

問 3 (2)

$$\begin{aligned} & (a-b)(c-d) \\ &= a(c-d) - b(c-d) \\ &= ac - ad - bc + bd \end{aligned}$$

問 3 (3)

$$\begin{aligned} & (x+2)(y+3) \\ &= x(y+3) + 2(y+3) \\ &= xy + 3x + 2y + 6 \end{aligned}$$

問 3 (4)

$$\begin{aligned} & (x-1)(y+4) \\ &= x(y+4) - (y+4) \\ &= xy + 4x - y - 4 \end{aligned}$$

問 4 (1)

$$\begin{aligned} & (x-2)(x-6) \\ &= x(x-6) - 2(x-6) \\ &= x^2 - 6x - 2x + 12 \\ &= x^2 - 8x + 12 \end{aligned}$$

問 4 (2)

$$\begin{aligned} & (x-4)(x+5) \\ &= x(x+5) - 4(x+5) \\ &= x^2 + 5x - 4x - 20 \\ &= x^2 + x - 20 \end{aligned}$$

問 4 (3)

$$\begin{aligned} & (2a+1)(a+4) \\ &= 2a(a+4) + 1(a+4) \\ &= 2a^2 + 8a + a + 4 \\ &= 2a^2 + 9a + 4 \end{aligned}$$

問 4 (4)

$$\begin{aligned} & (3x+5)(4x-7) \\ &= 3x(4x-7) + 5(4x-7) \\ &= 12x^2 - 21x + 20x - 35 \\ &= 12x^2 - x - 35 \end{aligned}$$

問5 (1)

$$\begin{aligned} & (3a+2b)(2a+3b) \\ &= 3a(2a+3b)+2b(2a+3b) \\ &= 6a^2 + \underline{9ab} + \underline{4ab} + 6b^2 \\ &= 6a^2 + 13ab + 6b^2 \end{aligned}$$

問5 (2)

$$\begin{aligned} & (9a-2b)(5a+6b) \\ &= 9a(5a+6b)-2b(5a+6b) \\ &= 45a^2 + \underline{54ab} - \underline{10ab} - 12b^2 \\ &= 45a^2 + 44ab - 12b^2 \end{aligned}$$

問5 (3)

$$\begin{aligned} & (7x+4y)(x-5y) \\ &= 7x(x-5y)+4y(x-5y) \\ &= 7x^2 - \underline{35xy} + \underline{4xy} - 20y^2 \\ &= 7x^2 - 31xy - 20y^2 \end{aligned}$$

問5 (4)

$$\begin{aligned} & (2x-3y)(8x-4) \\ &= 2x(8x-4)-3y(8x-4) \\ &= 16x^2 - \underline{2xy} - \underline{24xy} + 3y^2 \\ &= 16x^2 - 26xy + 3y^2 \end{aligned}$$

問6 (1)

$$\begin{aligned} & (a+1)(a+b-1) \\ &= a(a+b-1)+1 \cdot (a+b-1) \\ &= a^2 + \underline{ab} - \underline{a} + \underline{a} + \underline{b} - 1 \\ &= a^2 + ab + b - 1 \end{aligned}$$

問6 (2)

$$\begin{aligned} & (a+2b)(2a+b+1) \\ &= a(2a+b+1)+2b(2a+b+1) \\ &= 2a^2 + \underline{ab} + \underline{a} + \underline{4ab} + 2b^2 + 2b \\ &= 2a^2 + 5ab + a + 2b^2 + 2b \end{aligned}$$

問6 (3)

$$\begin{aligned} & (x+2y-1)(2x-4) \\ &= (x+2y-1) \times 2x + (x+2y-1) \times (-4) \\ &= 2x^2 + \underline{4xy} - 2x - \underline{4y} + 4 \\ &= 2x^2 + 3xy - 2x - 4y + 4 \end{aligned}$$

問6 (4)

$$\begin{aligned} & (x-y+3)(3x-2y) \\ &= (x-y+3) \times 3x + (x-y+3) \times (-2y) \\ &= 3x^2 - \underline{3xy} + 9x - \underline{2xy} + 2y^2 - 6y \\ &= 3x^2 - 5xy + 9x + 2y^2 - 6y \end{aligned}$$

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問1 (1)

$$\begin{aligned} & (x+2)(x+3) \\ &= x^2 + (2+3)x + 2 \times 3 \\ &= x^2 + 5x + 6 \end{aligned}$$

問1 (2)

$$\begin{aligned} & (x-6)(x-4) \\ &= x^2 + \{(-6)+(-4)\}x + (-6) \times (-4) \\ &= x^2 - 10x + 24 \end{aligned}$$

問1 (3)

$$\begin{aligned} & (x+9)(x-5) \\ &= x^2 + (9-5)x + 9 \times (-5) \\ &= x^2 + 4x - 45 \end{aligned}$$

問1 (4)

$$\begin{aligned} & (x+5)(x-8) \\ &= x^2 + (5-8)x + 5 \times (-8) \\ &= x^2 - 3x - 40 \end{aligned}$$

問 1 (5)

$$\begin{aligned} & (a-1)(a+2) \\ &= a^2 + (-1+2)a + (-1) \times 2. \\ &= a^2 + a - 2. \end{aligned}$$

問 1 (6)

$$\begin{aligned} & (y+2)(y-6) \\ &= y^2 + (2-6)y + 2 \times (-6) \\ &= y^2 - 4y - 12 \end{aligned}$$

問 2 (1)

$$\begin{aligned} & (a+3)^2 \\ &= a^2 + 2 \times 3 \times a + 3^2 \\ &= a^2 + 6a + 9. \end{aligned}$$

問 2 (2)

$$\begin{aligned} & (x-7)^2 \\ &= x^2 - 2 \times 7 \times x + (-7)^2 \\ &= x^2 - 14x + 49. \end{aligned}$$

問 2 (3)

$$\begin{aligned} & (y+4)^2 \\ &= y^2 + 2 \times 4 \times y + 4^2 \\ &= y^2 + 8y + 16. \end{aligned}$$

問 3 (1)

$$\begin{aligned} & (x-5y)^2 \\ &= x^2 + 2 \times x \times (-5y) + (-5y)^2 \\ &= x^2 - 10xy + 25y^2. \end{aligned}$$

問 3 (2)

$$\begin{aligned} & (a+4b)^2 \\ &= a^2 + 2 \times a \times 4b + (4b)^2 \\ &= a^2 + 8ab + 16b^2. \end{aligned}$$

問 3 (3)

$$\begin{aligned} & (4x-y)^2 \\ &= (4x)^2 + 2 \times 4x \times (-y) + (-y)^2 \\ &= 16x^2 - 8xy + y^2. \end{aligned}$$

問 3 (4)

$$\begin{aligned} & (2x+3y)^2 \\ &= (2x)^2 + 2 \times (2x) \times 3y + (3y)^2 \\ &= 4x^2 + 12xy + 9y^2. \end{aligned}$$

問 3 (5)

$$\begin{aligned} & \left(a + \frac{1}{2}b\right)^2 \\ &= a^2 + 2 \times a \times \frac{1}{2}b + \left(\frac{1}{2}b\right)^2 \\ &= a^2 + ab + \frac{1}{4}b^2. \end{aligned}$$

問 3 (6)

$$\begin{aligned} & (-x+2y)^2 \\ &= (-x)^2 + 2 \times (-x) \times 2y + (2y)^2 \\ &= x^2 - 4xy + 4y^2 \end{aligned}$$

問 4 (1)

$$\begin{aligned} & (x+8)(x-8) \\ &= x^2 - 8^2 \\ &= x^2 - 64. \end{aligned}$$

問 4 (2)

$$\begin{aligned} & (3-a)(3+a) \\ &= 3^2 - a^2 \\ &= 9 - a^2. \end{aligned}$$

問 4 (3)

$$\begin{aligned} & (5x+1)(5x-1) \\ &= (5x)^2 - 1^2 \\ &= 25x^2 - 1. \end{aligned}$$

問 4 (4)

$$\begin{aligned} & (3x+2y)(3x-2y) \\ &= (3x)^2 - (2y)^2 \\ &= 9x^2 - 4y^2. \end{aligned}$$

問 4 (5)

$$\begin{aligned} & \left(x - \frac{1}{3}\right)\left(x + \frac{1}{3}\right) \\ &= x^2 - \left(\frac{1}{3}\right)^2 \\ &= x^2 - \frac{1}{9}. \end{aligned}$$

問 4 (6)

$$\begin{aligned} & (a-6b)(a+6b) \\ &= a^2 - (6b)^2 \\ &= a^2 - 36b^2. \end{aligned}$$

問 5 (1)

$$\begin{aligned} & (x-3)^2 + (x-1)(x+7) \\ &= (x^2 - 6x + 9) + (x^2 + 6x - 7) \\ &= \underline{x^2 - 6x + 9} + \underline{x^2 + 6x - 7} \\ &= \underline{2x^2 + 2} \end{aligned}$$

問 5 (2)

$$\begin{aligned} & (x+2)(x+9) - x(x+10) \\ &= (x^2 + 11x + 18) - x^2 - 10x \\ &= \underline{x^2 + 11x + 18} - \underline{x^2 - 10x} \\ &= \underline{x + 18} \end{aligned}$$

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① (1)

$$\begin{aligned} & (x+7)(x+4) \\ &= x^2 + (7+4)x + 7 \times 4 \\ &= x^2 + 11x + 28 \end{aligned}$$

① (2)

$$\begin{aligned} & (x+10)(x-2) \\ &= x^2 + (10-2)x + 10 \times (-2) \\ &= x^2 + 8x - 20. \end{aligned}$$

①(3)

$$\begin{aligned} & (x-8)(x+1) \\ &= x^2 + (-8+1)x + (-8) \times 1 \\ &= x^2 - 7x - 8 \end{aligned}$$

①(4)

$$\begin{aligned} & (x-4y)(x-9y) \\ &= x^2 + (-4y-9y)x + (-4y) \times (-9y) \\ &= x^2 - 13xy + 36y^2 \end{aligned}$$

①(5)

$$\begin{aligned} & (x+4)^2 \\ &= x^2 + 2 \times 4 \times x + 4^2 \\ &= x^2 + 8x + 16 \end{aligned}$$

①(6)

$$\begin{aligned} & (3x-2)^2 \\ &= (3x)^2 - 2 \times 3x \times 2 + (-2)^2 \\ &= 9x^2 - 12x + 4 \end{aligned}$$

①(7)

$$\begin{aligned} & (4x-3y)^2 \\ &= (4x)^2 - 2 \times 4x \times 3y + (-3y)^2 \\ &= 16x^2 - 24xy + 9y^2 \end{aligned}$$

①(8)

$$\begin{aligned} & \left(\frac{1}{2}x+2\right)^2 \\ &= \left(\frac{1}{2}x\right)^2 + 2 \times \frac{1}{2}x \times 2 + 2^2 \\ &= \frac{1}{4}x^2 + 2x + 4 \end{aligned}$$

①(9)

$$\begin{aligned} & (x+1)(x-1) \\ &= x^2 - 1^2 \\ &= x^2 - 1 \end{aligned}$$

①(10)

$$\begin{aligned} & (x-7y)(x+7y) \\ &= x^2 - (7y)^2 \\ &= x^2 - 49y^2 \end{aligned}$$

②(1)

$$\begin{aligned} & \left(x+\frac{2}{3}\right)\left(x-\frac{1}{3}\right) \\ &= x^2 + \left(\frac{2}{3}-\frac{1}{3}\right)x + \frac{2}{3} \times \left(-\frac{1}{3}\right) \\ &= x^2 + \frac{1}{3}x - \frac{2}{9} \end{aligned}$$

②(2)

$$\begin{aligned} & \left(a-\frac{1}{2}\right)\left(a-\frac{1}{4}\right) \\ &= a^2 + \left(-\frac{1}{2}-\frac{1}{4}\right)a + \left(-\frac{1}{2}\right) \times \left(-\frac{1}{4}\right) \\ &= a^2 - \frac{3}{4}a + \frac{1}{8} \end{aligned}$$

②(3)

$$\begin{aligned} & (1-x)^2 \\ &= 1 - 2 \times x \times 1 + (-x)^2 \\ &= 1 - 2x + x^2 \end{aligned}$$

②(4)

$$\begin{aligned} & (5-x)(5+x) \\ &= 5^2 - x^2 \\ &= 25 - x^2 \end{aligned}$$

② (5)

$$\begin{aligned} & (-5x+1)(5x+1) \\ &= (1-5x)(1+5x) \\ &= 1^2 - (5x)^2 \\ &= 1 - 25x^2 \end{aligned}$$

② (6)

$$\begin{aligned} & (2x + \frac{1}{2}y)(2x - \frac{1}{2}y) \\ &= (2x)^2 - (\frac{1}{2}y)^2 \\ &= 4x^2 - \frac{1}{4}y^2 \end{aligned}$$

③ (1)

$$\begin{aligned} & (x-7)(x+7) - (x-6)^2 \\ &= x^2 - 7^2 - \{x^2 - 2 \times 6 \times x + (-6)^2\} \\ &= x^2 - 49 - (x^2 - 12x + 36) \\ &= \underline{x^2 - 49} - \underline{x^2 + 12x - 36} \\ &= 12x - 85 \end{aligned}$$

③ (2)

$$\begin{aligned} & (x+1)(x+5) + (x-2)(x-4) \\ &= (x^2 + 6x + 5) + (x^2 - 6x + 8) \\ &= \underline{x^2 + 6x + 5} + \underline{x^2 - 6x + 8} \\ &= 2x^2 + 13 \end{aligned}$$

③ (3)

$$\begin{aligned} & (x+2)(x+3) - (x-6)(x+1) \\ &= (x^2 + 5x + 6) - (x^2 - 5x - 6) \\ &= \underline{x^2 + 5x + 6} - \underline{x^2 + 5x + 6} \\ &= 10x + 12 \end{aligned}$$

③ (4)

$$\begin{aligned} & (a+b)^2 - (a-b)^2 \\ &= (a^2 + 2ab + b^2) - (a^2 - 2ab + b^2) \\ &= \underline{a^2 + 2ab + b^2} - \underline{a^2 + 2ab + b^2} \\ &= 4ab \end{aligned}$$

③ (5)

$$\begin{aligned} & (2x+y)^2 - (x-3y)(x+3y) \\ &= (4x^2 + 4xy + y^2) - (x^2 - 9y^2) \\ &= \underline{4x^2 + 4xy + y^2} - \underline{x^2 + 9y^2} \\ &= 3x^2 + 4xy + 10y^2 \end{aligned}$$