

チェックテスト

2B

乗法公式

得点

/ 100

1 次の式を展開しなさい。 **ステップ 1**

$$\textcircled{1} (x+3)(x+4) \\ = x^2 + (3+4)x + 3 \times 4$$

$$\textcircled{2} (x+2)(x+9) \\ = x^2 + (2+9)x + 2 \times 9$$

$$\textcircled{3} (x-6)(x-5) \\ = x^2 + (-6-5)x + (-6) \times (-5)$$

$$\textcircled{4} (x+4)(x-7) \\ = x^2 + (4-7)x + 4 \times (-7)$$

$$\textcircled{5} \left(x - \frac{2}{3}\right) \left(x - \frac{3}{4}\right) \\ = x^2 + \left(-\frac{2}{3} - \frac{3}{4}\right)x + \left(-\frac{2}{3}\right) \times \left(-\frac{3}{4}\right)$$

$$\textcircled{6} (x-0.2)(x+0.8) \\ = x^2 + (-0.2+0.8)x + (-0.2) \times 0.8$$

$$\textcircled{7} (x+3y)(x-6y) \\ = x^2 + (3y-6y)x + 3y \times (-6y)$$

$$\textcircled{8} (5x+y)(5x-3y) \\ = (5x)^2 + (y-3y) \times 5x + y \times (-3y)$$

2 次の式を展開しなさい。 **ステップ 2**

$$\textcircled{1} (x+9)^2 \\ = x^2 + 2 \times x \times 9 + 9^2$$

$$\textcircled{2} (2x-7)^2 \\ = (2x)^2 - 2 \times 2x \times 7 + 7^2$$

$$\textcircled{3} (3x+5y)^2 \\ = (3x)^2 + 2 \times 3x \times 5y + (5y)^2$$

$$\textcircled{4} \left(x - \frac{2}{3}y\right)^2 \\ = x^2 - 2 \times x \times \frac{2}{3}y + \left(\frac{2}{3}y\right)^2$$

3 次の式を展開しなさい。 **ステップ 3**

$$\textcircled{1} (x+7)(x-7) \\ = x^2 - 7^2$$

$$\textcircled{2} (x+9y)(x-9y) \\ = x^2 - (9y)^2$$

$$\textcircled{3} (7x+2y)(7x-2y) \\ = (7x)^2 - (2y)^2$$

$$\textcircled{4} \left(x + \frac{3}{5}y\right) \left(x - \frac{3}{5}y\right) \\ = x^2 - \left(\frac{3}{5}y\right)^2$$

4 次の式を展開しなさい。 **ステップ 4**

$$\textcircled{1} (-x-5)^2 \\ = (-x)^2 - 2 \times (-x) \times 5 + 5^2$$

$$\textcircled{2} (-4a+5b)^2 \\ = (-4a)^2 + 2 \times (-4a) \times 5b + (5b)^2$$

$$\textcircled{3} (-x+10)(-x-10) \\ = (-x)^2 - 10^2$$

$$\textcircled{4} (9y-2x)(-2x-9y) \\ = (-2x+9y)(-2x-9y) \\ = (-2x)^2 - (9y)^2$$

1 5点×8

$$\textcircled{1} \underline{x^2 + 7x + 12}$$

$$\textcircled{2} \underline{x^2 + 11x + 18}$$

$$\textcircled{3} \underline{x^2 - 11x + 30}$$

$$\textcircled{4} \underline{x^2 - 3x - 28}$$

$$\textcircled{5} \underline{x^2 - \frac{17}{12}x + \frac{1}{2}}$$

$$\textcircled{6} \underline{x^2 + 0.6x - 0.16}$$

$$\textcircled{7} \underline{x^2 - 3xy - 18y^2}$$

$$\textcircled{8} \underline{25x^2 - 10xy - 3y^2}$$

2 5点×4

$$\textcircled{1} \underline{x^2 + 18x + 81}$$

$$\textcircled{2} \underline{4x^2 - 28x + 49}$$

$$\textcircled{3} \underline{9x^2 + 30xy + 25y^2}$$

$$\textcircled{4} \underline{x^2 - \frac{4}{3}xy + \frac{4}{9}y^2}$$

3 5点×4

$$\textcircled{1} \underline{x^2 - 49}$$

$$\textcircled{2} \underline{x^2 - 81y^2}$$

$$\textcircled{3} \underline{49x^2 - 4y^2}$$

$$\textcircled{4} \underline{x^2 - \frac{9}{25}y^2}$$

4 5点×4

$$\textcircled{1} \underline{x^2 + 10x + 25}$$

$$\textcircled{2} \underline{16a^2 - 40ab + 25b^2}$$

$$\textcircled{3} \underline{x^2 - 100}$$

$$\textcircled{4} \underline{4x^2 - 81y^2}$$