

チェックテスト

2A

乗法公式

得点

/ 100

1 次の式を展開しなさい。 **ステップ 1**

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

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

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

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

$$\textcircled{5} \left(x + \frac{3}{4}\right) \left(x - \frac{1}{2}\right) \\ = x^2 + \left(\frac{3}{4} - \frac{1}{2}\right)x + \frac{3}{4} \times \left(-\frac{1}{2}\right)$$

$$\textcircled{6} (x+0.2)(x-0.9) \\ = x^2 + (0.2-0.9)x + 0.2 \times (-0.9)$$

$$\textcircled{7} (x-5y)(x+3y) \\ = x^2 + (-5y+3y)x + (-5y) \times 3y$$

$$\textcircled{8} (3x-2)(3x+7) \\ = (3x)^2 + (-2+7) \times 3x + (-2) \times 7$$

2 次の式を展開しなさい。 **ステップ 2**

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

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

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

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

3 次の式を展開しなさい。 **ステップ 3**

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

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

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

$$\textcircled{4} \left(x + \frac{1}{2}y\right) \left(x - \frac{1}{2}y\right) \\ = x^2 - \left(\frac{1}{2}y\right)^2$$

4 次の式を展開しなさい。 **ステップ 4**

$$\textcircled{1} (-x-6)^2 \\ = (-x)^2 - 2 \times (-x) \times 6 + 6^2$$

$$\textcircled{2} (-2a+3b)^2 \\ = (-2a)^2 + 2 \times (-2a) \times 3b + (3b)^2$$

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

$$\textcircled{4} (-3x+8y)(-8y-3x) \\ = (-3x+8y)(-3x-8y) \\ = (-3x)^2 - (8y)^2$$

1 5点×8

$$\textcircled{1} x^2 + 7x + 10$$

$$\textcircled{2} x^2 + 8x + 7$$

$$\textcircled{3} x^2 - 9x + 18$$

$$\textcircled{4} x^2 + 3x - 4$$

$$\textcircled{5} x^2 + \frac{1}{4}x - \frac{3}{8}$$

$$\textcircled{6} x^2 - 0.7x - 0.18$$

$$\textcircled{7} x^2 - 2xy - 15y^2$$

$$\textcircled{8} 9x^2 + 15x - 14$$

2 5点×4

$$\textcircled{1} x^2 + 4x + 4$$

$$\textcircled{2} 9x^2 - 24x + 16$$

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

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

3 5点×4

$$\textcircled{1} x^2 - 25$$

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

$$\textcircled{3} 4x^2 - 25y^2$$

$$\textcircled{4} x^2 - \frac{1}{4}y^2$$

4 5点×4

$$\textcircled{1} x^2 + 12x + 36$$

$$\textcircled{2} 4a^2 - 12ab + 9b^2$$

$$\textcircled{3} x^2 - 49$$

$$\textcircled{4} 9x^2 - 64y^2$$