

チェックテスト

3B

いろいろな式の展開

得点

/ 100

1 次の式を簡単にしなさい。 **ステップ 1**

$$\begin{aligned} \textcircled{1} \quad & (x-4)(x-5) + 2x(x+8) \\ & = x^2 - 9x + 20 + 2x^2 + 16x \end{aligned}$$

$$\begin{aligned} \textcircled{2} \quad & (x+7)(x-9) - 5x(x-3) \\ & = x^2 - 2x - 63 - 5x^2 + 15x \end{aligned}$$

$$\begin{aligned} \textcircled{3} \quad & (x+6)^2 + (x-2)(x-8) \\ & = x^2 + 12x + 36 + x^2 - 10x + 16 \end{aligned}$$

$$\begin{aligned} \textcircled{4} \quad & (x-3)(x+3) + (x+6)^2 \\ & = x^2 - 9 + x^2 + 12x + 36 \end{aligned}$$

2 次の式を簡単にしなさい。 **ステップ 1**

$$\begin{aligned} \textcircled{1} \quad & 2(x-6)^2 - (x-3)(x+4) \\ & = 2(x^2 - 12x + 36) - (x^2 + x - 12) \\ & = 2x^2 - 24x + 72 - x^2 - x + 12 \end{aligned}$$

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

$$\begin{aligned} \textcircled{3} \quad & (x-7y)(x+7y) - 5(x+2y)^2 \\ & = x^2 - 49y^2 - 5(x^2 + 4xy + 4y^2) \\ & = x^2 - 49y^2 - 5x^2 - 20xy - 20y^2 \end{aligned}$$

3 次の式を展開しなさい。 **ステップ 2**

$$\begin{aligned} \textcircled{1} \quad & (x+2y-4)(x+2y+4) \\ & x+2y=Aとおくと \\ & \text{与式}=(A-4)(A+4) \\ & =A^2-16 \\ & =(x+2y)^2-16 \end{aligned}$$

$$\begin{aligned} \textcircled{2} \quad & (a+b-3)^2 \\ & a+b=Aとおくと \\ & \text{与式}=(A-3)^2 \\ & =A^2-6A+9 \\ & =(a+b)^2-6(a+b)+9 \end{aligned}$$

$$\begin{aligned} \textcircled{3} \quad & (2x-y+1)(2x+y-1) \\ & y-1=Aとおくと \\ & \text{与式}=(2x-A)(2x+A) \\ & =4x^2-A^2 \\ & =4x^2-(y-1)^2 \\ & =4x^2-(y^2-2y+1) \end{aligned}$$

1 10点×4

$$\textcircled{1} \quad 3x^2 + 7x + 20$$

$$\textcircled{2} \quad -4x^2 + 13x - 63$$

$$\textcircled{3} \quad 2x^2 + 2x + 52$$

$$\textcircled{4} \quad 2x^2 + 12x + 27$$

2 10点×3

$$\textcircled{1} \quad x^2 - 25x + 84$$

$$\textcircled{2} \quad -2x^2 + 9x - 13$$

$$\textcircled{3} \quad -4x^2 - 20xy - 69y^2$$

3 10点×3

$$\textcircled{1} \quad x^2 + 4xy + 4y^2 - 16$$

$$\textcircled{2} \quad a^2 + 2ab + b^2 - 6a - 6b + 9$$

$$\textcircled{3} \quad 4x^2 - y^2 + 2y - 1$$