

## 式の展開

年 組 名前

/12

■ 次の式を計算しなさい。

①  $-2(-9+a)+(a-1)(a-6)$

⑦  $x(x-2)-9(7-3x)$

②  $a(a+3b)-(a+7b)^2$

⑧  $(a+4)(a-7)-2(a+8)(a-2)$

③  $(x+3)(x-4)+6(-2x-1)$

⑨  $(a-1)(a+9)+(a+4)(a+3)$

④  $(a-8)(a+2)+(a+8)^2$

⑩  $(x-8)(x+4)+3(x+4)(x+1)$

⑤  $-3(x+2)(x+9)+(x+5)(x+3)$

⑪  $-5(a-8b)(a+b)+(a+4b)(a-6b)$

⑥  $2(a-2)^2+(a+4)(a-5)$

⑫  $(x-y)(x+2y)+6(x+y)(x-2y)$

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■ 次の式を計算しなさい。

$$\begin{aligned}\textcircled{1} & -2(-9+a)+(a-1)(a-6) \\ & = -2(-9+a)+(a^2-7a+6) \\ & = 18-2a+a^2-7a+6 \\ & = a^2-9a+24\end{aligned}$$

$$\begin{aligned}\textcircled{2} & a(a+3b)-(a+7b)^2 \\ & = (a^2+3ab)-(a^2+14ab+49b^2) \\ & = a^2+3ab-a^2-14ab-49b^2 \\ & = -11ab-49b^2\end{aligned}$$

$$\begin{aligned}\textcircled{3} & (x+3)(x-4)+6(-2x-1) \\ & = (x^2-x-12)+6(-2x-1) \\ & = x^2-x-12-12x-6 \\ & = x^2-13x-18\end{aligned}$$

$$\begin{aligned}\textcircled{4} & (a-8)(a+2)+(a+8)^2 \\ & = (a^2-6a-16)+(a^2+16a+64) \\ & = a^2-6a-16+a^2+16a+64 \\ & = 2a^2+10a+48\end{aligned}$$

$$\begin{aligned}\textcircled{5} & -3(x+2)(x+9)+(x+5)(x+3) \\ & = -3(x^2+11x+18)+(x^2+8x+15) \\ & = -3x^2-33x-54+x^2+8x+15 \\ & = -2x^2-25x-39\end{aligned}$$

$$\begin{aligned}\textcircled{6} & 2(a-2)^2+(a+4)(a-5) \\ & = 2(a^2-4a+4)+(a^2-a-20) \\ & = 2a^2-8a+8+a^2-a-20 \\ & = 3a^2-9a-12\end{aligned}$$

$$\begin{aligned}\textcircled{7} & x(x-2)-9(7-3x) \\ & = (x^2-2x)-9(7-3x) \\ & = x^2-2x-63+27x \\ & = x^2+25x-63\end{aligned}$$

$$\begin{aligned}\textcircled{8} & (a+4)(a-7)-2(a+8)(a-2) \\ & = (a^2-3a-28)-2(a^2+6a-16) \\ & = a^2-3a-28-2a^2-12a+32 \\ & = -a^2-15a+4\end{aligned}$$

$$\begin{aligned}\textcircled{9} & (a-1)(a+9)+(a+4)(a+3) \\ & = (a^2+8a-9)+(a^2+7a+12) \\ & = a^2+8a-9+a^2+7a+12 \\ & = 2a^2+15a+3\end{aligned}$$

$$\begin{aligned}\textcircled{10} & (x-8)(x+4)+3(x+4)(x+1) \\ & = (x^2-4x-32)+3(x^2+5x+4) \\ & = x^2-4x-32+3x^2+15x+12 \\ & = 4x^2+11x-20\end{aligned}$$

$$\begin{aligned}\textcircled{11} & -5(a-8b)(a+b)+(a+4b)(a-6b) \\ & = -5(a^2-7ab-8b^2)+(a^2-2ab-24b^2) \\ & = -5a^2+35ab+40b^2+a^2-2ab-24b^2 \\ & = -4a^2+33ab+16b^2\end{aligned}$$

$$\begin{aligned}\textcircled{12} & (x-y)(x+2y)+6(x+y)(x-2y) \\ & = (x^2+xy-2y^2)+6(x^2-xy-2y^2) \\ & = x^2+xy-2y^2+6x^2-6xy-12y^2 \\ & = 7x^2-5xy-14y^2\end{aligned}$$