

式の展開

年 組 名前

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■ 次の式を計算しなさい。

① $(a-8)(a-3)+4(-4-5a)$

⑦ $(a+4)(a-6)+(a-4)(a-9)$

② $(x-1)(x+2)+2(x-5)(x-7)$

⑧ $(a+4)(a-3)-6(3-a)$

③ $7(x-2y)(x-5y)+(x+6y)(x-8y)$

⑨ $-5(6x-7)+(x-8)^2$

④ $(x-8y)(x-6y)+(x-3y)(x+2y)$

⑩ $(a-9b)(a+6b)+(a+9b)(a-2b)$

⑤ $3(2a-3)+a(a+4)$

⑪ $(x+5)(x+1)-(x-9)(x+5)$

⑥ $(a-5)(a+5)+(a-1)(a+8)$

⑫ $-8(9a+4)+(a-8)(a+3)$

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■ 次の式を計算しなさい。

$$\begin{aligned} \textcircled{1} & (a-8)(a-3)+4(-4-5a) \\ & = (a^2-11a+24)+4(-4-5a) \\ & = a^2-11a+24-16-20a \\ & = a^2-31a+8 \end{aligned}$$

$$\begin{aligned} \textcircled{2} & (x-1)(x+2)+2(x-5)(x-7) \\ & = (x^2+x-2)+2(x^2-12x+35) \\ & = x^2+x-2+2x^2-24x+70 \\ & = 3x^2-23x+68 \end{aligned}$$

$$\begin{aligned} \textcircled{3} & 7(x-2y)(x-5y)+(x+6y)(x-8y) \\ & = 7(x^2-7xy+10y^2)+(x^2-2xy-48y^2) \\ & = 7x^2-49xy+70y^2+x^2-2xy-48y^2 \\ & = 8x^2-51xy+22y^2 \end{aligned}$$

$$\begin{aligned} \textcircled{4} & (x-8y)(x-6y)+(x-3y)(x+2y) \\ & = (x^2-14xy+48y^2)+(x^2-xy-6y^2) \\ & = x^2-14xy+48y^2+x^2-xy-6y^2 \\ & = 2x^2-15xy+42y^2 \end{aligned}$$

$$\begin{aligned} \textcircled{5} & 3(2a-3)+a(a+4) \\ & = 3(2a-3)+(a^2+4a) \\ & = 6a-9+a^2+4a \\ & = a^2+10a-9 \end{aligned}$$

$$\begin{aligned} \textcircled{6} & (a-5)(a+5)+(a-1)(a+8) \\ & = (a^2-25)+(a^2+7a-8) \\ & = a^2-25+a^2+7a-8 \\ & = 2a^2+7a-33 \end{aligned}$$

$$\begin{aligned} \textcircled{7} & (a+4)(a-6)+(a-4)(a-9) \\ & = (a^2-2a-24)+(a^2-13a+36) \\ & = a^2-2a-24+a^2-13a+36 \\ & = 2a^2-15a+12 \end{aligned}$$

$$\begin{aligned} \textcircled{8} & (a+4)(a-3)-6(3-a) \\ & = (a^2+a-12)-6(3-a) \\ & = a^2+a-12-18+6a \\ & = a^2+7a-30 \end{aligned}$$

$$\begin{aligned} \textcircled{9} & -5(6x-7)+(x-8)^2 \\ & = -5(6x-7)+(x^2-16x+64) \\ & = -30x+35+x^2-16x+64 \\ & = x^2-46x+99 \end{aligned}$$

$$\begin{aligned} \textcircled{10} & (a-9b)(a+6b)+(a+9b)(a-2b) \\ & = (a^2-3ab-54b^2)+(a^2+7ab-18b^2) \\ & = a^2-3ab-54b^2+a^2+7ab-18b^2 \\ & = 2a^2+4ab-72b^2 \end{aligned}$$

$$\begin{aligned} \textcircled{11} & (x+5)(x+1)-(x-9)(x+5) \\ & = (x^2+6x+5)-(x^2-4x-45) \\ & = x^2+6x+5-x^2+4x+45 \\ & = 10x+50 \end{aligned}$$

$$\begin{aligned} \textcircled{12} & -8(9a+4)+(a-8)(a+3) \\ & = -8(9a+4)+(a^2-5a-24) \\ & = -72a-32+a^2-5a-24 \\ & = a^2-77a-56 \end{aligned}$$