

式の展開

年 組 名前

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■ 次の式を計算しなさい。

① $(x-8)(x-5)-9(-9x-5)$

⑦ $(x+7)^2+6(-8-7x)$

② $(a-9b)(a+7b)+(a+9b)^2$

⑧ $a(a+8)+4(a+1)^2$

③ $-3(a-4)(a-3)+(a-8)(a+2)$

⑨ $-8(a-1)+(a+5)(a-1)$

④ $2(4+7a)+(a+9)(a-3)$

⑩ $(a+9)(a-5)+(a-6)(a-8)$

⑤ $(a-5)(a+4)-8(a+7)(a-1)$

⑪ $(x-6)^2+(x+6)(x+2)$

⑥ $(a-8b)(a-2b)-(a-3b)(a-9b)$

⑫ $(x-6)(x+7)+(x-1)(x-4)$

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$$\begin{aligned}\textcircled{1} (x-8)(x-5)-9(-9x-5) \\ &= (x^2-13x+40)-9(-9x-5) \\ &= x^2-13x+40+81x+45 \\ &= x^2+68x+85\end{aligned}$$

$$\begin{aligned}\textcircled{2} (a-9b)(a+7b)+(a+9b)^2 \\ &= (a^2-2ab-63b^2)+(a^2+18ab+81b^2) \\ &= a^2-2ab-63b^2+a^2+18ab+81b^2 \\ &= 2a^2+16ab+18b^2\end{aligned}$$

$$\begin{aligned}\textcircled{3} -3(a-4)(a-3)+(a-8)(a+2) \\ &= -3(a^2-7a+12)+(a^2-6a-16) \\ &= -3a^2+21a-36+a^2-6a-16 \\ &= -2a^2+15a-52\end{aligned}$$

$$\begin{aligned}\textcircled{4} 2(4+7a)+(a+9)(a-3) \\ &= 2(4+7a)+(a^2+6a-27) \\ &= 8+14a+a^2+6a-27 \\ &= a^2+20a-19\end{aligned}$$

$$\begin{aligned}\textcircled{5} (a-5)(a+4)-8(a+7)(a-1) \\ &= (a^2-a-20)-8(a^2+6a-7) \\ &= a^2-a-20-8a^2-48a+56 \\ &= -7a^2-49a+36\end{aligned}$$

$$\begin{aligned}\textcircled{6} (a-8b)(a-2b)-(a-3b)(a-9b) \\ &= (a^2-10ab+16b^2)-(a^2-12ab+27b^2) \\ &= a^2-10ab+16b^2-a^2+12ab-27b^2 \\ &= 2ab-11b^2\end{aligned}$$

$$\begin{aligned}\textcircled{7} (x+7)^2+6(-8-7x) \\ &= (x^2+14x+49)+6(-8-7x) \\ &= x^2+14x+49-48-42x \\ &= x^2-28x+1\end{aligned}$$

$$\begin{aligned}\textcircled{8} a(a+8)+4(a+1)^2 \\ &= (a^2+8a)+4(a^2+2a+1) \\ &= a^2+8a+4a^2+8a+4 \\ &= 5a^2+16a+4\end{aligned}$$

$$\begin{aligned}\textcircled{9} -8(a-1)+(a+5)(a-1) \\ &= -8(a-1)+(a^2+4a-5) \\ &= -8a+8+a^2+4a-5 \\ &= a^2-4a+3\end{aligned}$$

$$\begin{aligned}\textcircled{10} (a+9)(a-5)+(a-6)(a-8) \\ &= (a^2+4a-45)+(a^2-14a+48) \\ &= a^2+4a-45+a^2-14a+48 \\ &= 2a^2-10a+3\end{aligned}$$

$$\begin{aligned}\textcircled{11} (x-6)^2+(x+6)(x+2) \\ &= (x^2-12x+36)+(x^2+8x+12) \\ &= x^2-12x+36+x^2+8x+12 \\ &= 2x^2-4x+48\end{aligned}$$

$$\begin{aligned}\textcircled{12} (x-6)(x+7)+(x-1)(x-4) \\ &= (x^2+x-42)+(x^2-5x+4) \\ &= x^2+x-42+x^2-5x+4 \\ &= 2x^2-4x-38\end{aligned}$$