

1 次の式を展開しなさい。

① $(x+4)(x+2)$

② $(x+7)^2$

③ $(x-6)^2$

④ $(x+9)(x-9)$

⑤ $(x+5)^2$

⑥ $(x-2)(x+7)$

⑦ $(x+7)(x-7)$

⑧ $(x+5)(x-2)$

⑨ $(x+0.9)^2$

⑩ $(x+0.4)(x-0.4)$

⑪ $\left(x - \frac{3}{7}\right)^2$

⑫ $\left(x + \frac{3}{5}\right)\left(x - \frac{3}{5}\right)$

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$$\begin{aligned} \textcircled{1} \quad & (x+4)(x+2) \\ & = x^2 + (4+2)x + 4 \times 2 \\ & = x^2 + 6x + 8 \end{aligned}$$

$$\begin{aligned} \textcircled{2} \quad & (x+7)^2 \\ & = x^2 + 2 \times 7 \times x + 7^2 \\ & = x^2 + 14x + 49 \end{aligned}$$

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

$$\begin{aligned} \textcircled{4} \quad & (x+9)(x-9) \\ & = x^2 - 9^2 \\ & = x^2 - 81 \end{aligned}$$

$$\begin{aligned} \textcircled{5} \quad & (x+5)^2 \\ & = x^2 + 2 \times 5 \times x + 5^2 \\ & = x^2 + 10x + 25 \end{aligned}$$

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

$$\begin{aligned} \textcircled{7} \quad & (x+7)(x-7) \\ & = x^2 - 7^2 \\ & = x^2 - 49 \end{aligned}$$

$$\begin{aligned} \textcircled{8} \quad & (x+5)(x-2) \\ & = x^2 + \{5 + (-2)\}x + 5 \times (-2) \\ & = x^2 + 3x - 10 \end{aligned}$$

$$\begin{aligned} \textcircled{9} \quad & (x+0.9)^2 \\ & = x^2 + 2 \times 0.9 \times x + 0.9^2 \\ & = x^2 + 1.8x + 0.81 \end{aligned}$$

$$\begin{aligned} \textcircled{10} \quad & (x+0.4)(x-0.4) \\ & = x^2 - 0.4^2 \\ & = x^2 - 0.16 \end{aligned}$$

$$\begin{aligned} \textcircled{11} \quad & \left(x - \frac{3}{7}\right)^2 \\ & = x^2 - 2 \times \left(\frac{3}{7}\right) \times x + \left(\frac{3}{7}\right)^2 \\ & = x^2 - \frac{6}{7}x + \frac{9}{49} \end{aligned}$$

$$\begin{aligned} \textcircled{12} \quad & \left(x + \frac{3}{5}\right) \left(x - \frac{3}{5}\right) \\ & = x^2 - \left(\frac{3}{5}\right)^2 \\ & = x^2 - \frac{9}{25} \end{aligned}$$