

1 次の式を展開しなさい。

① $(x+3)(x+7)$

② $(x+6)^2$

③ $(x-5)^2$

④ $(x+8)(x-8)$

⑤ $(x+4)^2$

⑥ $(x-8)(x+2)$

⑦ $(x+6)(x-6)$

⑧ $(x+4)(x-3)$

⑨ $(x+0.8)^2$

⑩ $(x+0.3)(x-0.3)$

⑪ $\left(x - \frac{2}{5}\right)^2$

⑫ $\left(x + \frac{1}{4}\right)\left(x - \frac{1}{4}\right)$

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$$\begin{aligned} \textcircled{1} \quad & (x+3)(x+7) \\ & = x^2 + (3+7)x + 3 \times 7 \\ & = x^2 + 10x + 21 \end{aligned}$$

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

$$\begin{aligned} \textcircled{3} \quad & (x-5)^2 \\ & = x^2 - 2 \times 5 \times x + 5^2 \\ & = x^2 - 10x + 25 \end{aligned}$$

$$\begin{aligned} \textcircled{4} \quad & (x+8)(x-8) \\ & = x^2 - 8^2 \\ & = x^2 - 64 \end{aligned}$$

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

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

$$\begin{aligned} \textcircled{7} \quad & (x+6)(x-6) \\ & = x^2 - 6^2 \\ & = x^2 - 36 \end{aligned}$$

$$\begin{aligned} \textcircled{8} \quad & (x+4)(x-3) \\ & = x^2 + \{4 + (-3)\}x + 4 \times (-3) \\ & = x^2 + x - 12 \end{aligned}$$

$$\begin{aligned} \textcircled{9} \quad & (x+0.8)^2 \\ & = x^2 + 2 \times 0.8 \times x + 0.8^2 \\ & = x^2 + 1.6x + 0.64 \end{aligned}$$

$$\begin{aligned} \textcircled{10} \quad & (x+0.3)(x-0.3) \\ & = x^2 - 0.3^2 \\ & = x^2 - 0.09 \end{aligned}$$

$$\begin{aligned} \textcircled{11} \quad & \left(x - \frac{2}{5}\right)^2 \\ & = x^2 - 2 \times \left(\frac{2}{5}\right) \times x + \left(\frac{2}{5}\right)^2 \\ & = x^2 - \frac{4}{5}x + \frac{4}{25} \end{aligned}$$

$$\begin{aligned} \textcircled{12} \quad & \left(x + \frac{1}{4}\right) \left(x - \frac{1}{4}\right) \\ & = x^2 - \left(\frac{1}{4}\right)^2 \\ & = x^2 - \frac{1}{16} \end{aligned}$$