

年 組 番 名前

／ 1 2

次の式を、乗法公式を使って解きなさい。

$$\begin{aligned}
 [1] \quad & (x+5)(x+3) \\
 &= x^2 + (5+3)x + 3 \times 5 \\
 &= x^2 + 8x + 15
 \end{aligned}$$

$$\begin{aligned}
 [3] \quad & (x+3)^2 \\
 &= x^2 + 2 \times 3 \times x + 3^2 \\
 &= x^2 + 6x + 9
 \end{aligned}$$

$$\begin{aligned}
 [5] \quad & (x+1)(x-1) \\
 &= x^2 - 1^2 \\
 &= x^2 - 1
 \end{aligned}$$

2乗ひく2乗です！

$$\begin{aligned}
 [7] \quad & (x-4)(x+5) \\
 &= x^2 + (-4+5)x - 4 \times 5 \\
 &= x^2 + x - 20
 \end{aligned}$$

$$\begin{aligned}
 [9] \quad & (x+2)(x+5) \\
 &= x^2 + (2+5)x + 2 \times 5 \\
 &= x^2 + 7x + 10
 \end{aligned}$$

$$[11] \quad (2a+3b)(2a-b)$$

 $2a=A$  とおく

$$\begin{aligned}
 &= (A+3b)(A-b) \\
 &= A^2 + 2bA - 3b^2 \\
 &= (2a)^2 + 2b \times 2a - 3b^2 \\
 &= 4a^2 + 4ab - 3b^2
 \end{aligned}$$

公式①

$$\begin{aligned}
 [2] \quad & (x+1)(y+7) \\
 &= xy + 7x + y + 7
 \end{aligned}$$

文字が違いますね！

$$\begin{aligned}
 [4] \quad & (x-2)(x+6) \\
 &= x^2 + (-2+6)x - 2 \times 6 \\
 &= x^2 + 4x - 12
 \end{aligned}$$

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

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

$$\begin{aligned}
 [10] \quad & (x-2y)(x+2y) \\
 &= x^2 - (2y)^2 \\
 &= x^2 - 4y^2
 \end{aligned}$$

$$[12] \quad (a+b+c)^2$$

 $a+b=A$  とおく

$$\begin{aligned}
 &= (A+c)^2 \\
 &= A^2 + 2cA + c^2 \\
 &= (a+b)^2 + 2c(a+b) + c^2 \\
 &= a^2 + 2ab + b^2 + 2ac + 2bc + c^2
 \end{aligned}$$

公式②