展開　説明編　解答

公式確認問題

以下の式を展開せよ.

(1) $(s-t)^2$

$$(s-t)^2 = s^2 - 2st + t^2$$

(2) $(x+1)(x+2)$

$$\begin{aligned}(x+1)(x+2) &= x^2 + (1+2)x + 1 \times 2 \\ &= x^2 + 3x + 2\end{aligned}$$

(3) $(x+1)(x^2-x+1)$

$$\begin{aligned}(x+1)(x^2-x+1) &= (x+1)(x^2 - x \times 1 + 1^2) \\ &= x^3 + 1\end{aligned}$$

(4) $(a+2)(a-2)$

$$\begin{aligned}(a+2)(a-2) &= a^2 - 2^2 \\ &= a^2 - 4\end{aligned}$$

(5) $(2x+1)(x-3)$

$$\begin{aligned}(2x+1)(x-3) &= (2 \times 1)x^2 + \{2 \times (-3) + 1 \times 1\}x + 1 \times (-3) \\ &= 2x^2 - 5x - 3\end{aligned}$$