

★ 乗法公式④を利用して、多項式と多項式の積を展開しよう! (P14.15)

Point

$(x+a)(x+b)$ を展開する

$$\begin{aligned} & (x+a)(x+b) \\ &= x^2 + bx + ax + ab \\ &= x^2 + (a+b)x + ab \end{aligned}$$

公式④

$$\begin{aligned} & (x+a)(x+b) \\ &= x^2 + \underbrace{(a+b)}_{\text{和}}x + \underbrace{ab}_{\text{積}} \end{aligned}$$

例1

$$\begin{aligned} & (x+2)(x+7) \\ &= x^2 + (2+7)x + 2 \times 7 \\ &= x^2 + 9x + 14 \end{aligned}$$

$$\begin{aligned} & (x+2)(x+7) \\ &= x^2 + 9x + 14 \end{aligned}$$

和と積の計算をすれば簡単に展開することができる!!

例2

$$\begin{aligned} & (x-5)(x+3) \\ &= x^2 + (-5+3)x + (-5) \times 3 \\ &= x^2 - 2x - 15 \end{aligned}$$

$$\begin{aligned} & (x-5)(x+3) \\ &= x^2 - 2x - 15 \end{aligned}$$

P14 7-1 ための①

$$\begin{aligned} (1) & (x+3)(x+6) \\ &= x^2 + (3+6)x + 3 \times 6 \\ &= x^2 + 9x + 18 \end{aligned}$$

$$\begin{aligned} & (x+3)(x+6) \\ &= x^2 + 9x + 18 \end{aligned}$$

$$\begin{aligned} (2) & (x+10)(x+2) \\ &= x^2 + (10+2)x + 10 \times 2 \\ &= x^2 + 12x + 20 \end{aligned}$$

$$\begin{aligned} & (x+10)(x+2) \\ &= x^2 + 12x + 20 \end{aligned}$$

※ 途中の式はかかなくてもいいのでOK

計算の考えをしっかりかくことはとても大切ですよ!!

P15 f: L 始め②

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

$$\begin{aligned}
 (2) & (x-2)(x-8) \\
 & = x^2 + (-2-8)x + (-2) \times (-8) \\
 & = x^2 - 10x + 16
 \end{aligned}$$

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

和 積

$$\begin{aligned}
 & (x-2)(x-8) \\
 & = x^2 - 10x + 16
 \end{aligned}$$

和 積

P15 問題1

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

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

$$\begin{aligned}
 (3) & (x-3)(x-4) \\
 & = x^2 + (-3-4)x + (-3) \times (-4) \\
 & = x^2 - 7x + 12
 \end{aligned}$$

$$\begin{aligned}
 (4) & (y+3)(y+5) \\
 & = y^2 + (3+5)y + 3 \times 5 \\
 & = y^2 + 8y + 15
 \end{aligned}$$

$$\begin{aligned}
 (5) & (a-8)(a-7) \\
 & = a^2 + (-8-7)a + (-8) \times (-7) \\
 & = a^2 - 15a + 56
 \end{aligned}$$

$$\begin{aligned}
 (6) & (x-6)(x+5) \\
 & = x^2 + (-6+5)x + (-6) \times 5 \\
 & = x^2 - x - 30
 \end{aligned}$$

$$\begin{aligned}
 (7) & (x-0.2)(x+0.4) \\
 & = x^2 + (-0.2+0.4)x + (-0.2) \times 0.4 \\
 & = x^2 + 0.2x - 0.08
 \end{aligned}$$

$$\begin{aligned}
 (8) & \left(y - \frac{2}{3}\right)\left(y + \frac{1}{3}\right) \\
 & = y^2 + \left(-\frac{2}{3} + \frac{1}{3}\right)y + \left(-\frac{2}{3}\right) \times \frac{1}{3} \\
 & = y^2 - \frac{1}{3}y - \frac{2}{9}
 \end{aligned}$$

小数の計算
ミスしないように!

※ 文字は x だけでなくあります。 y や a, b などを使うからかまろがえん!!