

<乗法公式2・3>

●平方公式

$$(a \pm b)^2 = a^2 \pm 2ab + b^2$$

積 2倍
2乗 2乗

問1 次の式を展開しなさい。

$$\begin{array}{lll} \textcircled{1} (x-3)^2 & \textcircled{2} (x+5)^2 & \textcircled{3} (y+4)^2 \\ = x^2 - 6x + 9 & = x^2 + 10x + 25 & = y^2 + 8y + 16 \end{array}$$

$$\begin{array}{lll} \textcircled{4} (a+10)^2 & \textcircled{5} (a+b)^2 & \textcircled{6} (x-y)^2 \\ = a^2 + 20a + 100 & = a^2 + 2ab + b^2 & = x^2 - 2xy + y^2 \end{array}$$

$$\begin{array}{lll} \textcircled{7} \left(y + \frac{1}{2}\right)^2 & \textcircled{8} \left(a - \frac{1}{3}\right)^2 & \textcircled{9} \left(b + \frac{1}{4}\right)^2 \\ = y^2 + y + \frac{1}{4} & = a^2 - \frac{2}{3}a + \frac{1}{9} & = b^2 + \frac{1}{2}b + \frac{1}{16} \end{array}$$

<乗法公式4>

●和と差の式

$$(a+b)(a-b) = a^2 - b^2$$

問2 次の式を展開しなさい。

$$\begin{array}{lll} \textcircled{1} (x+3)(x-3) & \textcircled{2} (a-5)(a+5) & \textcircled{3} (y+4)(y-4) \\ = x^2 - 9 & = a^2 - 25 & = y^2 - 16 \end{array}$$

$$\begin{array}{lll} \textcircled{4} (a+b)(a-b) & \textcircled{5} (x-y)(x+y) & \textcircled{6} \left(x + \frac{2}{3}\right)\left(x - \frac{2}{3}\right) \\ = a^2 - b^2 & = x^2 - y^2 & = x^2 - \frac{4}{9} \end{array}$$

$$\begin{array}{ll} \textcircled{7} (3x+5y)(3x-5y) & \textcircled{8} (-2a+3b)(-2a-3b) \\ = 9x^2 - 25y^2 & = 4a^2 - 9b^2 \end{array}$$