

乗法公式4

$$\left\{ \begin{array}{l} (\bullet + \triangle)(\bullet - \triangle) = \bullet^2 - \triangle^2 \\ \text{符号だけがちがう式} \\ (-\bullet + \triangle)(-\bullet - \triangle) = (-\bullet)^2 - \triangle^2 \\ \text{符号だけがちがう式} \end{array} \right.$$

例題1

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

例題2

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

例題3

$$\begin{aligned} & (4x + 0.2)(4x - 0.2) \\ &= (4x)^2 - (0.2)^2 \\ &= 16x^2 - 0.04 \end{aligned}$$

$\left. \begin{array}{l} 0.2 \\ \times 0.2 \\ \hline 0.04 \end{array} \right\}$

例題4

$$\begin{aligned} & \left(\frac{a}{2} + \frac{1}{3}\right)\left(\frac{a}{2} - \frac{1}{3}\right) \\ &= \left(\frac{a}{2}\right)^2 - \left(\frac{1}{3}\right)^2 \\ &= \frac{a^2}{4} - \frac{1}{9} \end{aligned}$$

$\left. \begin{array}{l} \frac{a}{2} \times \frac{a}{2} = \frac{a^2}{4} \\ \frac{1}{3} \times \frac{1}{3} = \frac{1}{9} \end{array} \right\}$

例題5

$$\begin{aligned} & (-x + mn)(-x - mn) \\ &= (-x)^2 - (mn)^2 \\ &= \underline{x^2} - m^2n^2 \end{aligned}$$

$\left. \begin{array}{l} (mn)^2 = mn \times mn = m^2n^2 \\ \text{こっこの2乗を忘れない} \end{array} \right\}$

m^2n^2

プラスになる

例題6

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

乗法公式4が使えるように
並べかえる
 $(\bullet + \triangle)(\bullet - \triangle)$
 $= \bullet^2 - \triangle^2$

プラスになる