

$$\text{乗法公式2} \quad (\bullet + \triangle)^2 = \overset{\textcircled{1}}{\bullet^2} + \overset{\textcircled{2}}{\bullet \times \triangle \times 2} + \overset{\textcircled{3}}{\triangle^2}$$

$$\text{乗法公式3} \quad (\bullet - \triangle)^2 = \overset{\textcircled{1}}{\bullet^2} + \overset{\textcircled{2}}{\bullet \times (-\triangle) \times 2} + \overset{\textcircled{3}}{(-\triangle)^2}$$

例題1

$$\begin{aligned} & (x+4)^2 \\ &= \overset{2\text{乗}}{x^2} + \overset{2\text{乗}}{x \times 4 \times 2} + 4^2 \\ &= x^2 + 8x + 16 \end{aligned}$$

例題2

$$\begin{aligned} & (x-3)^2 \\ &= \overset{2\text{乗}}{x^2} + \overset{2\text{乗}}{x \times (-3) \times 2} + \overset{2\text{乗}}{(-3)^2} \\ &= x^2 - 6x + 9 \end{aligned}$$

例題3

$$\begin{aligned} & (2a+7)^2 \\ &= \overset{2\text{乗}}{(2a)^2} + \overset{2\text{乗}}{2a \times 7 \times 2} + 7^2 \\ &= 4a^2 + 28a + 49 \end{aligned}$$

例題4

$$\begin{aligned} & (3x+5y)^2 \\ &= \overset{2\text{乗}}{(3x)^2} + \overset{2\text{乗}}{3x \times 5y \times 2} + \overset{2\text{乗}}{(5y)^2} \\ &= 9x^2 + 30xy + 25y^2 \end{aligned}$$

例題5

$$\begin{aligned} & (-3a-8b)^2 \\ &= \overset{2\text{乗}}{(-3a)^2} + \overset{2\text{乗}}{(-3a) \times (-8b) \times 2} + \overset{2\text{乗}}{(-8b)^2} \\ &= 9a^2 + 48ab + 64b^2 \end{aligned}$$

例題6

$$\begin{aligned} & \left(\frac{1}{2}x - \frac{3}{5}y\right)^2 \\ &= \overset{2\text{乗}}{\left(\frac{1}{2}x\right)^2} + \overset{2\text{乗}}{\frac{1}{2}x \times \left(-\frac{3}{5}y\right) \times 2} + \overset{2\text{乗}}{\left(-\frac{3}{5}y\right)^2} \\ &= \frac{1}{4}x^2 - \frac{3}{5}xy + \frac{9}{25}y^2 \end{aligned}$$