数学I
第1章　数と式
整式の乗法

指数法則

① $a^m \times a^n = a^{m+n}$

② $(a^m)^n = a^{m \times n}$

③ $(ab)^n = a^n \times b^n$

分配法則

① $A(B+C) = AB + AC$

② $(A+B)C = AC + BC$
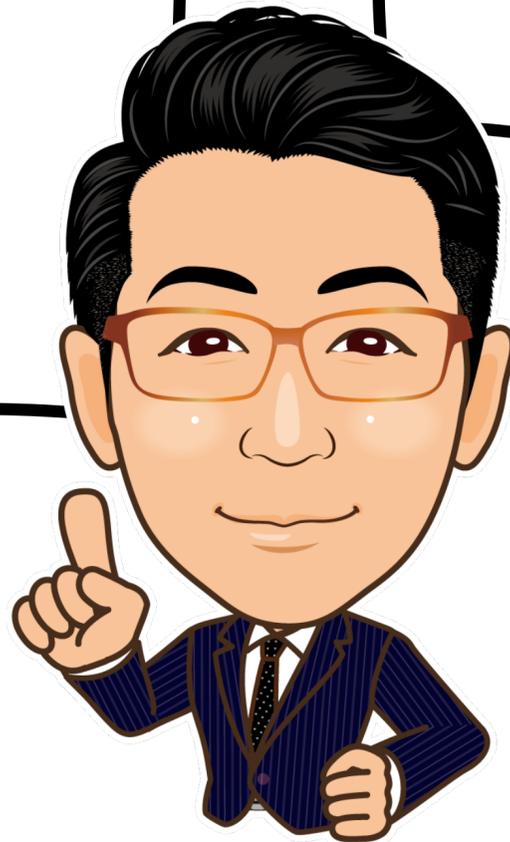
展開公式

① $(a+b)^2 = a^2 + 2ab + b^2$, $(a-b)^2 = a^2 - 2ab + b^2$

② $(a+b)(a-b) = a^2 - b^2$

③ $(x+a)(x+b) = x^2 + (a+b)x + ab$

④ $(ax+b)(cx+d) = acx^2 + (ad+bc)x + bd$

(ex)

(1) $2x^3 y \times (-5xy^2)$

$= 2 \times (-5) \times x^3 \times x \times y \times y^2$

$= -10 \times x^4 \times y^3$

$= -10x^4 y^3$

(2) $(4x^2 + 1 - 3x)(2 + x)$

$= (4x^2 - 3x + 1)(x + 2)$

$= 4x^3 - 3x^2 + x +$

$\qquad 8x^2 - 6x + 2$

$= 4x^3 + 5x^2 - 5x + 2$

(ex)

(3) $(x+2y)^2$

$= x^2 + 2 \cdot x \cdot 2y + (2y)^2$

$= x^2 + 4xy + 4y^2$

(4) $(3x-5y)(2x+3y)$

$= 6x^2 + (9-10)xy - 15y^2$

$= 6x^2 - xy - 15y^2$