

乗法公式② 解答と解説

1 解答 (1)  $x^2+4x+4$  (2)  $x^2-2x+1$  (3)  $x^2-4$  (4)  $a^2-9$

$$(1) (x+2)^2 = x^2 + 2 \times 2 \times x + 2^2 \\ = x^2 + 4x + 4$$

$$(2) (x-1)^2 = x^2 - 2 \times 1 \times x + 1^2 \\ = x^2 - 2x + 1$$

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

$$(4) (a-3)(a+3) = a^2 - 3^2 \\ = a^2 - 9$$

2 解答 (1)  $x^2+16x+64$  (2)  $x^2-18x+81$  (3)  $x^2-36$  (4)  $y^2+10y+25$

(5)  $a^2-8a+16$  (6)  $t^2-1$

$$(1) (x+8)^2 = x^2 + 2 \times 8 \times x + 8^2 \\ = x^2 + 16x + 64$$

$$(2) (x-9)^2 = x^2 - 2 \times 9 \times x + 9^2 \\ = x^2 - 18x + 81$$

$$(3) (x+6)(x-6) = x^2 - 6^2 \\ = x^2 - 36$$

$$(4) (y+5)^2 = y^2 + 2 \times 5 \times y + 5^2 \\ = y^2 + 10y + 25$$

$$(5) (a-4)^2 = a^2 - 2 \times 4 \times a + 4^2 \\ = a^2 - 8a + 16$$

$$(6) (t+1)(t-1) = t^2 - 1^2 \\ = t^2 - 1$$

3 解答 (1)  $x^2+16x+64$  (2)  $a^2-12a+36$  (3)  $x^2+x+\frac{1}{4}$  (4)  $25-x^2$

(5)  $1-p^2$

$$(1) (x+8)^2 = x^2 + 2 \times 8 \times x + 8^2 \\ = x^2 + 16x + 64$$

$$(2) (a-6)^2 = a^2 - 2 \times 6 \times a + 6^2 \\ = a^2 - 12a + 36$$

$$(3) \left(x + \frac{1}{2}\right)^2 = x^2 + 2 \times \frac{1}{2} \times x + \left(\frac{1}{2}\right)^2 \\ = x^2 + x + \frac{1}{4}$$

$$(4) (5+x)(5-x) = 5^2 - x^2 \\ = 25 - x^2$$

$$(5) (-p+1)(1+p) = (1-p)(1+p) \\ = 1^2 - p^2 \\ = 1 - p^2$$