

乗法公式③ 解答と解説

1 解答 (1) x^2+7x+6 (2) x^2+x-12 (3) $x^2-4x-12$ (4) $x^2-11x+28$
(5) y^2+y-6 (6) $t^2-13t+40$

$$(1) (x+1)(x+6) = x^2 + (1+6)x + 1 \times 6 \\ = x^2 + 7x + 6$$

$$(2) (x-3)(x+4) = x^2 + \{(-3)+4\}x + (-3) \times 4 \\ = x^2 + x - 12$$

$$(3) (x+2)(x-6) = x^2 + \{2+(-6)\}x + 2 \times (-6) \\ = x^2 - 4x - 12$$

$$(4) (x-7)(x-4) = x^2 + \{(-7)+(-4)\}x + (-7) \times (-4) \\ = x^2 - 11x + 28$$

$$(5) (y+3)(y-2) = y^2 + \{3+(-2)\}y + 3 \times (-2) \\ = y^2 + y - 6$$

$$(6) (t-5)(t-8) = t^2 + \{(-5)+(-8)\}t + (-5) \times (-8) \\ = t^2 - 13t + 40$$

2 解答 (1) $x^2+3x-40$ (2) $a^2-9a-36$ (3) $t^2-\frac{1}{2}t+\frac{1}{16}$
(4) $-x^2+36$

$$(1) (x-5)(x+8) = x^2 + \{(-5)+8\}x + (-5) \times 8 \\ = x^2 + 3x - 40$$

$$(2) (a+3)(a-12) = a^2 + \{3+(-12)\}a + 3 \times (-12) \\ = a^2 - 9a - 36$$

$$(3) \left(t - \frac{1}{4}\right)^2 = t^2 - 2 \times \frac{1}{4} \times t + \left(\frac{1}{4}\right)^2 \\ = t^2 - \frac{1}{2}t + \frac{1}{16}$$

$$(4) (6-x)(6+x) = 6^2 - x^2 \\ = 36 - x^2 \\ = -x^2 + 36$$