

式の計算④ 解答と解説

- 1 解答**
- (1) $ab - 2a + 8b - 16$ (2) $x^2 + 10x + 25$ (3) $x^2 + 6x - 27$
 (4) $x^2 - 9$ (5) $x^2 + 10x + 21$ (6) $x^2 - x - 90$ (7) $x^2 - 8x + 16$
 (8) $y^2 - 4y - 21$ (9) $x^2 - 2x - 48$ (10) $3x^2 - 16x + 5$
 (11) $x^2 - 2xy + y^2$ (12) $x^2 - 64$ (13) $6x^2 + xy - 15y^2$
 (14) $x^2 - 3x - 40$ (15) $4a^2 + 12a + 9$ (16) $x^2 - \frac{1}{4}$ (17) $x^2 + 3x + 2$
 (18) $a^2 - 2a - 15$ (19) $x^2 - xy + \frac{1}{4}y^2$ (20) $x^2 - 11x + 10$
 (21) $a^2 + 12a + 36$ (22) $x^2 + \frac{1}{6}x - \frac{1}{6}$ (23) $x^2 - 9x + 14$
 (24) $x^2 - 36$ (25) $2a^2 - 17a + 8$ (26) $x^2 + 5x - 6$
 (27) $x^2 + 14x + 49$ (28) $a^2 - 49b^2$
- (1) $(a+8)(b-2) = ab - 2a + 8b - 16$
 (2) $(x+5)^2 = x^2 + 2 \times 5 \times x + 5 \times 5 = x^2 + 10x + 25$
 (3) $(x-3)(x+9) = x^2 + (-3+9)x - 3 \times 9 = x^2 + x - 27$
 (4) $(x+3)(x-3) = x^2 - 3^2 = x^2 - 9$
 (5) $(x+3)(x+7) = x^2 + (3+7)x + 3 \times 7 = x^2 + 10x + 21$
 (6) $(x+9)(x-10) = x^2 + (9-10)x + 9 \times (-10) = x^2 - x - 90$
 (7) $(x-4)^2 = x^2 - 2 \times 4 \times x + 4 \times 4 = x^2 - 8x + 16$
 (8) $(y-7)(y+3) = y^2 + (-7+3)y - 7 \times 3 = y^2 - 4y - 21$
 (9) $(x+6)(x-8) = x^2 + (6-8)x + 6 \times (-8) = x^2 - 2x - 48$
 (10) $(3x-1)(x-5) = 3x^2 + 3x \times (-5) + (-1) \times x - 1 \times (-5)$
 $= 3x^2 - 15x - x + 5 = 3x^2 - 16x + 5$
 (11) $(x-y)^2 = x^2 - 2 \times x \times y + y \times y = x^2 - 2xy + y^2$
 (12) $(x+8)(x-8) = x^2 - 8^2 = x^2 - 64$
 (13) $(2x-3y)(3x+5y) = 2x \times 3x + 2x \times 5y - 3y \times 3x - 3y \times 5y$
 $= 6x^2 + 10xy - 9xy - 15y^2 = 6x^2 + xy - 15y^2$
 (14) $(x-8)(x+5) = x^2 + (-8+5)x - 8 \times 5 = x^2 - 3x - 40$
 (15) $(2a+3)^2 = (2a)^2 + 2 \times 2a \times 3 + 3 \times 3 = 4a^2 + 12a + 9$

- (16) $(x+\frac{1}{2})(x-\frac{1}{2}) = x^2 - (\frac{1}{2})^2 = x^2 - \frac{1}{4}$
 (17) $(x+1)(x+2) = x^2 + (1+2)x + 1 \times 2 = x^2 + 3x + 2$
 (18) $(a-5)(a+2) = a^2 + (-5+3)a - 5 \times 3 = a^2 - 2a - 15$
 (19) $(x-\frac{1}{2}y)^2 = x^2 - 2 \times x \times \frac{1}{2}y + \frac{1}{2}y \times \frac{1}{2}y = x^2 - xy + \frac{1}{4}y^2$
 (20) $(x-1)(x-10) = x^2 + (-1-10)x - 1 \times (-10) = x^2 - 11x + 10$
 (21) $(a+6)^2 = a^2 + 2 \times 6 \times a + 6 \times 6 = a^2 + 12a + 36$
 (22) $(x-\frac{1}{3})(x+\frac{1}{2}) = x^2 + (-\frac{1}{3}+\frac{1}{2})x - \frac{1}{3} \times \frac{1}{2} = x^2 + \frac{1}{6}x - \frac{1}{6}$
 (23) $(x-7)(x-2) = x^2 + (-7-2)x - 7 \times (-2) = x^2 - 9x + 14$
 (24) $(6+x)(x-6) = (x+6)(x-6) = x^2 - 6^2 = x^2 - 36$
 (25) $(2a-1)(a-8) = 2a \times a + 2a \times (-8) + a \times (-1) + (-1) \times (-8) = 2a^2 - 17a + 8$
 (26) $(x-1)(x+6) = x^2 + (-1+6)x + (-1) \times 6 = x^2 + 5x - 6$
 (27) $(x+7)^2 = x^2 + 2 \times 7 \times x + 7 \times 7 = x^2 + 14x + 49$
 (28) $(7b+a)(a-7b) = (a+7b)(a-7b) = a^2 - (7b)^2 = a^2 - 49b^2$