

- 1 解答 (1) $a^2 + a - 12$ (2) $18x^2 + 27x + 10$ (3) $12x^2 - 17x - 5$
 (4) $20n^2 - 13n - 21$ (5) $45a^2 - 67a + 24$ (6) $49a^2 + 28ab - 12b^2$
 (7) $10x^2 - 59xy + 63y^2$ (8) $-3a^2 + 7ab - 2b^2$ (9) $2x^2 + 7xy + 6y^2$

$$(1) (a-3)(a+4) = a^2 + 4a - 3a - 12 \\ = a^2 + a - 12$$

$$(2) (6x+5)(3x+2) = 18x^2 + 12x + 15x + 10 \\ = 18x^2 + 27x + 10$$

$$(3) (4x+1)(3x-5) = 12x^2 - 20x + 3x - 5 \\ = 12x^2 - 17x - 5$$

$$(4) (5n-7)(4n+3) = 20n^2 + 15n - 28n - 21 \\ = 20n^2 - 13n - 21$$

$$(5) (5a-3)(9a-8) = 45a^2 - 40a - 27a + 24 \\ = 45a^2 - 67a + 24$$

$$(6) (7a+6b)(7a-2b) = 49a^2 - 14ab + 42ab - 12b^2 \\ = 49a^2 + 28ab - 12b^2$$

$$(7) (2x-9y)(5x-7y) = 10x^2 - 14xy - 45xy + 63y^2 \\ = 10x^2 - 59xy + 63y^2$$

$$(8) (-3a+b)(a-2b) = -3a^2 + 6ab + ab - 2b^2 \\ = -3a^2 + 7ab - 2b^2$$

$$(9) (4x+8y)\left(\frac{1}{2}x + \frac{3}{4}y\right) = 2x^2 + 3xy + 4xy + 6y^2 \\ = 2x^2 + 7xy + 6y^2$$

- 2 解答 (1) $x^2 + 14x + 45$ (2) $a^2 + 11a + 24$ (3) $x^2 - 4x - 12$
 (4) $x^2 - 5x - 24$ (5) $p^2 + 3p - 70$ (6) $x^2 - 6x - 72$
 (7) $y^2 + 7y - 120$ (8) $x^2 - 12x + 27$ (9) $x^2 - 17x + 52$
 (10) $a^2 - 18a + 77$ (11) $x^2 - \frac{11}{6}x - \frac{5}{3}$ (12) $a^2 - a - 12$

$$(1) (x+9)(x+5) = x^2 + (9+5)x + 9 \times 5 \\ = x^2 + 14x + 45$$

$$(2) (a+3)(a+8) = a^2 + (3+8)a + 3 \times 8 \\ = a^2 + 11a + 24$$

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

$$(4) (x-8)(x+3) = x^2 + (-8+3)x + (-8) \times 3 \\ = x^2 - 5x - 24$$

$$(5) (p-7)(p+10) = p^2 + (-7+10)p + (-7) \times 10 \\ = p^2 + 3p - 70$$

$$(6) (x+6)(x-12) = x^2 + (6-12)x + 6 \times (-12) \\ = x^2 - 6x - 72$$

$$(7) (y+15)(y-8) = y^2 + (15-8)y + 15 \times (-8) \\ = y^2 + 7y - 120$$

$$(8) (x-9)(x-3) = x^2 + (-9-3)x + (-9) \times (-3) \\ = x^2 - 12x + 27$$

$$(9) (x-4)(x-13) = x^2 + (-4-13)x + (-4) \times (-13) \\ = x^2 - 17x + 52$$

$$(10) (a-11)(a-7) = a^2 + (-11-7)a + (-11) \times (-7) \\ = a^2 - 18a + 77$$

$$(11) \left(x + \frac{2}{3}\right)\left(x - \frac{5}{2}\right) = x^2 + \left(\frac{2}{3} - \frac{5}{2}\right)x + \frac{2}{3} \times \left(-\frac{5}{2}\right) \\ = x^2 - \frac{11}{6}x - \frac{5}{3}$$

$$(12) (3+a)(-4+a) = (a+3)(a-4) \\ = a^2 + (3-4)a + 3 \times (-4) \\ = a^2 - a - 12$$