

文字と式③

- 1 解答 (1)  $4a + 20b$  (2)  $-12a + 21b$  (3)  $7a - 6b$  (4)  $-12p + 18q$   
 (5)  $-3s - 5t$  (6)  $-15x + 21y - 12$  (7)  $-6p + 30q + 18$   
 (8)  $10x^2 + 15xy - 5y^2$  (9)  $14a^2 + 28ab - 21bc$  (10)  $-2m^2 + 4m + 7$

$$(1) 4(a + 5b) = 4 \times a + 4 \times 5b \\ = 4a + 20b$$

$$(2) -3(4a - 7b) = (-3) \times 4a + (-3) \times (-7b) \\ = -12a + 21b$$

$$(3) 14\left(\frac{1}{2}a - \frac{3}{7}b\right) = 14 \times \frac{1}{2}a + 14 \times \left(-\frac{3}{7}b\right) \\ = 7a - 6b$$

$$(4) 27\left(-\frac{4}{9}p + \frac{2}{3}q\right) = 27 \times \left(-\frac{4}{9}p\right) + 27 \times \frac{2}{3}q \\ = -12p + 18q$$

$$(5) -\frac{1}{6}(18s + 30t) = \left(-\frac{1}{6}\right) \times 18s + \left(-\frac{1}{6}\right) \times 30t \\ = -3s - 5t$$

$$(6) -3(5x - 7y + 4) = (-3) \times 5x + (-3) \times (-7y) + (-3) \times 4 \\ = -15x + 21y - 12$$

$$(7) 6(-p + 5q + 3) = 6 \times (-p) + 6 \times 5q + 6 \times 3 \\ = -6p + 30q + 18$$

$$(8) (2x^2 + 3xy - y^2) \times 5 = 2x^2 \times 5 + 3xy \times 5 + (-y^2) \times 5 \\ = 10x^2 + 15xy - 5y^2$$

$$(9) \frac{7}{3}(6a^2 + 12ab - 9bc) = \frac{7}{3} \times 6a^2 + \frac{7}{3} \times 12ab + \frac{7}{3} \times (-9bc) \\ = 14a^2 + 28ab - 21bc$$

$$(10) (4m^2 - 8m - 14) \times \left(-\frac{1}{2}\right) = 4m^2 \times \left(-\frac{1}{2}\right) + (-8m) \times \left(-\frac{1}{2}\right) + (-14) \times \left(-\frac{1}{2}\right) \\ = -2m^2 + 4m + 7$$

- 2 解答 (1)  $12a - 3b$  (2)  $36x - 21y$  (3)  $8a - 16b + 12$  (4)  $9m - 6n - 15$

$$(1) \frac{4a - b}{3} \times 9 = (4a - b) \times 3 \\ = 12a - 3b$$

$$(2) \frac{-12x + 7y}{5} \times (-15) = (-12x + 7y) \times (-3) \\ = (-12x) \times (-3) + 7y \times (-3) \\ = 36x - 21y$$

$$(3) 12\left(\frac{2a - 4b + 3}{3}\right) = 4(2a - 4b + 3) \\ = 8a - 16b + 12$$

$$(4) \frac{3m - 2n - 5}{12} \times 36 = (3m - 2n - 5) \times 3 \\ = 9m - 6n - 15$$

- 3 解答 (1)  $3a + b$  (2)  $3p + 5q$  (3)  $2x - 3y$  (4)  $-3m + 2n$   
 (5)  $2a^2 + 3a$  (6)  $2x^2 + 3y^2$

$$(1) (12a + 4b) \div 4 = (12a + 4b) \times \frac{1}{4} \\ = 3a + b$$

$$(2) (6p + 10q) \div 2 = (6p + 10q) \times \frac{1}{2} \\ = 3p + 5q$$

$$(3) (12x - 18y) \div 6 = (12x - 18y) \times \frac{1}{6} \\ = 2x - 3y$$

$$(4) (21m - 14n) \div (-7) = (21m - 14n) \times \left(-\frac{1}{7}\right) \\ = -3m + 2n$$

$$(5) (-18a^2 - 27a) \div (-9) = (-18a^2 - 27a) \times \left(-\frac{1}{9}\right) \\ = 2a^2 + 3a$$

$$(6) (32x^2 + 48y^2) \div 16 = (32x^2 + 48y^2) \times \frac{1}{16} \\ = 2x^2 + 3y^2$$