

1 多項式の計算(式の展開)

◆問題◆

⇒p.10~p.11

- 問題1 (1) $-3a^2-6ab$ (2) $8x^2-4x$
 (3) $10x^2-15xy$ (4) $-20ab+4b^2$
 (5) $8x^2-4xy+6x$
 (6) $-12a^2-4ab+16a$

- 問題2 (1) $2x-3$ (2) $3b+1$
 (3) $-3a-2b$ (4) $-2x+3y$
 (5) $4b-12c$ (6) $-4x+8$
 (7) $-10a+15$ (8) $21x^2+14xy$

- 問題3 (1) $5a^2+3a$ (2) $-3x^2+4x$
 (3) $2x^2+2xy$ (4) a^2+2ab

- 問題4 (1) $ax+ay+bx+by$
 (2) $ax+ay-bx-by$
 (3) $ax-ay+2x-2y$
 (4) $ab+4a-3b-12$
 (5) $xy-2x+4y-8$
 (6) $xy-x-6y+6$
 (7) $2xy-4x-5y+10$
 (8) $2ab-7a+6b-21$
 (9) $12ab-9a-8b+6$

- 問題5 (1) $a^2+9a+20$ (2) x^2-7x+6
 (3) m^2+m-6 (4) $2x^2-5x-3$
 (5) $2a^2+a-15$ (6) $3a^2-11a-4$
 (7) $6a^2-7a+2$ (8) $15x^2-17x-4$
 (9) $8x^2+18x+9$ (10) $2x^2+3xy-2y^2$
 (11) $2x^2-xy-3y^2$ (12) $5a^2-7ab+2b^2$

- 問題6 (1) $a^2-2ab+5a-4b+6$
 (2) $2x^2+xy+4x-y^2+4y$
 (3) $2x^2+x-2xy+3y-6$
 (4) $x^3-3x^2-11x+5$

解説

- 問題1 (3) 与式 $= 2x \times 5x - 3y \times 5x$
 (5) 与式 $= 2x \times 4x - 2x \times 2y + 2x \times 3$

- 問題2 (3) 与式 $= -\frac{15a^2}{5a} - \frac{10ab}{5a}$
 (6) 与式 $= -2x^2 \times \frac{2}{x} + 4x \times \frac{2}{x}$
 (7) 与式 $= 4a^2 \times \left(-\frac{5}{2a}\right) - 6a \times \left(-\frac{5}{2a}\right)$

- 問題3 (1) 与式 $= 2a^2-3a+3a^2+6a$
 (3) 与式 $= 4x^2-4xy-2x^2+6xy$

- 問題5 (1) 与式 $= a^2+4a+5a+20$
 (4) 与式 $= 2x^2+x-6x-3$
 (10) 与式 $= 2x^2-xy+4xy-2y^2$

- 問題6 (1) 与式 $= a(a-2b+3)+2(a-2b+3)$
 $= a^2-2ab+3a+2a-4b+6$
 (2) 与式 $= x(2x-y+4)+y(2x-y+4)$
 (3) 与式 $= x(2x-3)-y(2x-3)+2(2x-3)$
 (4) 与式 $= x^2(x-5)+2x(x-5)-(x-5)$

◆基本問題◆

⇒p.12

- 1 (1) $10a^2-15a$ (2) $-8x^2-2xy$
 (3) $12a^2-20ab$ (4) $3x^2-6xy$
 (5) $-2x^3+x^2-5x$ (6) $-3a^2-6ab+9ac$

- 2 (1) $8a+1$ (2) $-x+3$
 (3) $-2x+y$ (4) $-2a+1$
 (5) $10a-30$ (6) $-9x+3y$
 (7) $-6x+12y$ (8) $-7ab+14b$

- 3 (1) $-a^2+5a$ (2) $-2x^2-9x$
 (3) $6x^2-12$ (4) $-2a^2+5ab$

- 4 (1) $ax-ay+bx-by$
 (2) $ac-ad-bc+bd$
 (3) $xy+5x-2y-10$
 (4) $6xy-8x+3y-4$
 (5) $12ab+3a-4b-1$
 (6) $20ab-8a-15b+6$
 (7) $a^2-8a+12$ (8) x^2+x-56
 (9) m^2+3m-4 (10) $3x^2-13x-10$
 (11) $4a^2-3a-27$ (12) $6a^2+5a-4$
 (13) $3a^2+5ab+2b^2$ (14) $5x^2-8xy+3y^2$
 (15) $3a^2+5ab-2b^2$ (16) $6x^2+5xy-6y^2$
 (17) $4a^2-10ab-6b^2$ (18) $8x^2-2xy-y^2$

- 5 (1) $2a^2+ab-11a-3b+15$
 (2) x^3-2x^2-5x+6
 (3) $2x^2-3x-3xy+6y-2$
 (4) $9a^2+3ab-2b^2-3a+b$

解説

- 1 (6) 与式 $= a \times (-3a) + 2b \times (-3a) - 3c \times (-3a)$

- 2 (1) 与式 $= \frac{8a^2}{a} + \frac{a}{a}$
 (6) 与式 $= 3x^2 \times \left(-\frac{3}{x}\right) - xy \times \left(-\frac{3}{x}\right)$
 (7) 与式 $= 5xy \times \left(-\frac{6}{5y}\right) - 10y^2 \times \left(-\frac{6}{5y}\right)$

- 3 (1) 与式 $= a^2+3a-2a^2+2a$
 (3) 与式 $= 6x^2-4x+4x-12$
 (4) 与式 $= 4a^2-4ab-6a^2+9ab$