

文字と式（同類項をまとめる）解答と解説

1 解答 (1)  $6x+y$  (2)  $-2a-6b$  (3)  $4x^2+4x$  (4)  $7a^2-8a$

$$(1) \quad 3x-y+3x+2y=3x+3x-y+2y \\ = (3+3)x + (-1+2)y = 6x+y$$

$$(2) \quad -4a+3b-9b+2a=-4a+2a+3b-9b \\ = (-4+2)a + (3-9)b \\ = -2a-6b$$

$$(3) \quad 6x^2-x-2x^2+5x=6x^2-2x^2-x+5x \\ = (6-2)x^2 + (-1+5)x \\ = 4x^2+4x$$

$$(4) \quad 8a^2-5a-3a-a^2=8a^2-a^2-5a-3a \\ = (8-1)a^2 + (-5-3)a \\ = 7a^2-8a$$

2 解答 (1)  $10ab-13a$  (2)  $3y+3$  (3)  $-x^2+9x-3$  (4)  $-4a^2-4a-2$

$$(1) \quad 8ab-6a-7a+2ab=8ab+2ab-6a-7a \\ = (8+2)ab + (-6-7)a \\ = 10ab-13a$$

$$(2) \quad 5x-4y+3-5x+7y=5x-5x-4y+7y+3 \\ = (5-5)x + (-4+7)y + 3 \\ = 3y+3$$

$$(3) \quad 4x^2+3x-1-5x^2+6x-2=4x^2-5x^2+3x+6x-1-2 \\ = (4-5)x^2 + (3+6)x + (-1-2) \\ = -x^2+9x-3$$

$$(4) \quad 2a^2-9-8a+7+4a-6a^2=2a^2-6a^2-8a+4a-9+7 \\ = (2-6)a^2 + (-8+4)a + (-9+7) \\ = -4a^2-4a-2$$

3 解答 (1)  $11x$  (2)  $-3x-7y$  (3)  $x^2-5x$

$$(1) \quad 8x+3x=(8+3)x=11x$$

$$(2) \quad 3x-2y-6x-5y=(3-6)x+(-2-5)y=-3x-7y$$

$$(3) \quad 2x^2+4x-x^2-9x=(2-1)x^2+(4-9)x=x^2-5x$$

- 4 解答 (1)  $4a$  (2)  $-3x$  (3)  $-3mn$  (4)  $-4pq$  (5)  $-8x+4y$   
 (6)  $6a-3b$  (7)  $11s+2t$  (8)  $7p-9q$  (9)  $-5x+4y$   
 (10)  $-x+6y-2$  (11)  $4a+3b+9$  (12)  $5s-15t-2$   
 (13)  $3x-30y-22$  (14)  $-41p-2q+51$

(1)  $6a-2a=(6-2)a=4a$   
 (2)  $3x+2x-8x=(3+2-8)x=-3x$   
 (3)  $4mn-7mn=(4-7)mn=-3mn$   
 (4)  $-3pq-pq=(-3-1)pq=-4pq$   
 (5)  $x-3y-9x+7y=x-9x-3y+7y=(1-9)x+(-3+7)y=-8x+4y$   
 (6)  $-a+2b+7a-5b=-a+7a+2b-5b$   
 $=(-1+7)a+(2-5)b=6a-3b$   
 (7)  $2s-4t+9s+6t=2s+9s-4t+6t$   
 $=(2+9)s+(-4+6)t=11s+2t$   
 (8)  $5p-8q+2p-q=5p+2p-8q-q$   
 $=(5+2)p+(-8-1)q=7p-9q$   
 (9)  $-8x+6y-2y+3x=-8x+3x+6y-2y$   
 $=(-8+3)x+(6-2)y$   
 $=-5x+4y$   
 (10)  $3x-y+3+7y-4x-5=3x-4x-y+7y+3-5$   
 $=(3-4)x+(-1+7)y+(3-5)$   
 $=-x+6y-2$   
 (11)  $5a+6b+8-a-3b+1=5a-a+6b-3b+8+1$   
 $=(5-1)a+(6-3)b+(8+1)$   
 $=4a+3b+9$   
 (12)  $-s-8t+2+6s-7t-4=-s+6s-8t-7t+2-4$   
 $=(-1+6)s+(-8-7)t+(2-4)$   
 $=5s-15t-2$   
 (13)  $26x-17y+12-23x-13y-34=26x-23x-17y-13y+12-34$   
 $=(26-23)x+(-17-13)y+(12-34)$   
 $=3x-30y-22$   
 (14)  $-16p+29q+37-31q-25p+14=-16p-25p+29q-31q+37+14$   
 $=(-16-25)p+(29-31)q+(37+14)$   
 $=-41p-2q+51$

- 5 解答 (1)  $x^2+3x-4$  (2)  $-x^3-x^2-x+3$  (3)  $5a^2+5ab-3b^2$   
 (4)  $6x^2-2y^2$  (5)  $-ab-10bc-5ca$  (6)  $3x^2-xy+y^2+3x$

(1)  $7x^2-3x-2-6x^2+6x-2=7x^2-6x^2-3x+6x-2-2$   
 $=x^2+3x-4$   
 (2)  $2x^3-5x+3+4x-3x^3-x^2=2x^3-3x^3-x^2-5x+4x+3$   
 $=-x^3-x^2-x+3$   
 (3)  $a^2+2ab-2b^2+3ab+4a^2-b^2=a^2+4a^2+2ab+3ab-2b^2-b^2$   
 $=5a^2+5ab-3b^2$   
 (4)  $-3xy+x^2+2y^2-4y^2+5x^2+3xy=-3xy+3xy+x^2+5x^2+2y^2-4y^2$   
 $=6x^2-2y^2$   
 (5)  $5ab-3bc-6ab+2ca-7bc-7ca=5ab-6ab-3bc-7bc+2ca-7ca$   
 $=-ab-10bc-5ca$   
 (6)  $4x^2-5xy-y^2+3x+4xy+2y^2-x^2=4x^2-x^2-5xy+4xy-y^2+2y^2+3x$   
 $=3x^2-xy+y^2+3x$

- 6 解答 (1)  $5a-b$  (2)  $-4x-4y$  (3)  $-3x^2+2x$  (4)  $-11ab$   
 (5)  $\frac{1}{5}x^2+\frac{5}{2}x+\frac{3}{2}$

(1)  $-3a+6b+8a-7b=(-3+8)a+(6-7)b$   
 $=5a-b$   
 (2)  $2x-7y-6x+3y=(2-6)x+(-7+3)y$   
 $=-4x-4y$   
 (3)  $-5x^2-x+2x^2+3x=(-5+2)x^2+(-1+3)x$   
 $=-3x^2+2x$   
 (4)  $3a^2-9ab-2ab-3a^2=(3-3)a^2+(-9-2)ab$   
 $=-11ab$   
 (5)  $\frac{3}{5}x^2+\frac{7}{2}x+2-\frac{2}{5}x^2-x-\frac{1}{2}=\left(\frac{3}{5}-\frac{2}{5}\right)x^2+\left(\frac{7}{2}-1\right)x+\left(2-\frac{1}{2}\right)$   
 $=\frac{1}{5}x^2+\frac{5}{2}x+\frac{3}{2}$