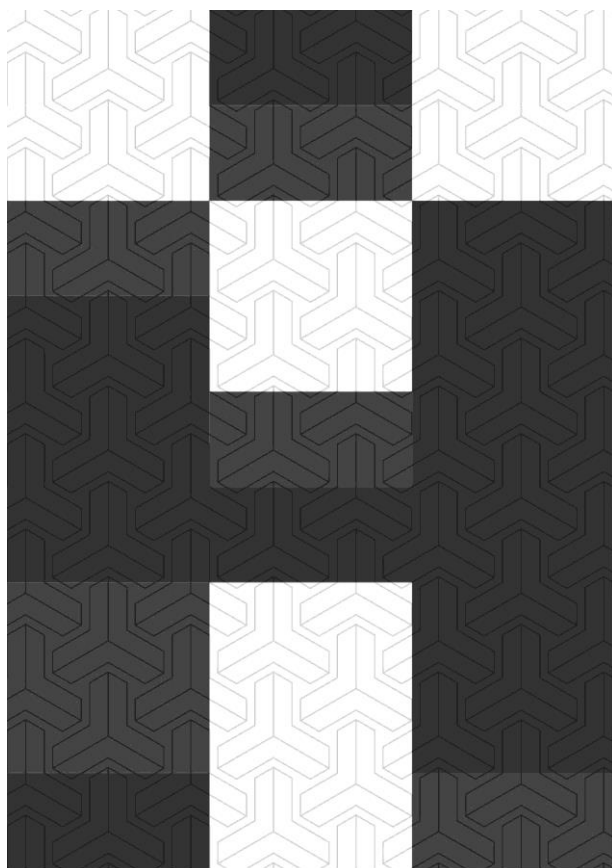


# 解答編

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# 解答

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## 1章 多項式 [1]

- 1 (1)  $6a^2+2ab$   
(2)  $8x^2-20xy$   
(3)  $-7x^2y+xy^2$   
(4)  $-4a^2b+2ab^2-ab$
- 2 (1)  $5a^2$   
(2)  $-2x^2-x$   
(3)  $6x^2-5xy-3y^2$
- 3 (1)  $3x-4y$   
(2)  $5a+1$   
(3)  $4x-3$   
(4)  $-2x+3y$

## 1章 多項式 [2]

- 1 (1)  $xy+x+3y+3$   
(2)  $ab-3a+2b-6$   
(3)  $xy-4x-y+4$   
(4)  $8ab-12a+2b-3$   
(5)  $6xy+2x-9y-3$
- 2 (1)  $2a^2+9a+4$   
(2)  $3a^2-22a-16$   
(3)  $x^2+2xy-3y^2$   
(4)  $6a^2-ab-b^2$   
(5)  $-8x^2+10xy-3y^2$
- 3 (1)  $2a^2-ab+7a-2b+6$   
(2)  $x^2-2xy+x+6y-12$   
(3)  $a^2-4ab+3b^2-a+b$

## 1章 多項式 [3]

- 1 (1)  $x^2+5x+4$   
(2)  $x^2-9x+18$   
(3)  $x^2+9x+14$   
(4)  $x^2+6x-55$   
(5)  $x^2-4x-117$   
(6)  $x^2+2x-48$   
(7)  $a^2-12a+35$   
(8)  $a^2-a-2$   
(9)  $a^2-13a+40$   
(10)  $x^2+4x-140$   
(11)  $x^2-18x-63$   
(12)  $x^2+4x-320$   
(13)  $x^2+x-110$
- 2 (1)  $x^2-\frac{1}{3}x-\frac{2}{9}$   
(2)  $x^2-\frac{4}{3}x+\frac{5}{12}$

## 1章 多項式 [4]

- 1 (1)  $x^2+2x+1$   
(2)  $x^2-14x+49$   
(3)  $x^2+18x+81$   
(4)  $a^2-6a+9$   
(5)  $a^2-a+\frac{1}{4}$
- 2 (1)  $x^2-1$   
(2)  $x^2-9$   
(3)  $x^2-64$   
(4)  $4-a^2$   
(5)  $x^2-\frac{4}{9}$

1章 多項式 [5]

- 1 (1)  $4x^2 - 16x - 9$   
(2)  $9x^2 + 6x - 35$   
(3)  $36x^2 + 36x + 5$   
(4)  $16a^2 - 8a - 80$   
(5)  $9a^2 - 18a + 5$   
(6)  $49y^2 - 70y + 16$   
(7)  $a^2b^2 - 7ab + 12$   
(8)  $4x^2 - 8x - 5$   
(9)  $64a^2 + 32ab + 4b^2$   
(10)  $36x^2 - 12xy + y^2$   
(11)  $49a^2 - 56ab + 16b^2$   
(12)  $9a^2 - 24a + 16$   
(13)  $x^2 + 2xy + y^2$   
(14)  $81x^2 - 1$   
(15)  $9x^2 - 81y^2$   
(16)  $36x^2 - y^2$

1章 多項式 [7]

- 1 (1)  $2x^2 - 2x + 1$   
(2)  $2x^2 - 2xy$   
(3)  $15a^2 - 7ab + 3b^2$   
(4)  $2a - 2$   
(5)  $12x^2 + 12x - 6$   
(6)  $2x^2 + 8xy + 15y^2$   
(7)  $26x^2 - 12x + 2$   
(8)  $41x^2 - 14x + 9$
- 2 (1)  $13a^2 - 14a - 2$   
(2)  $-39x^2 + 64x + 48$

1章 多項式 [6]

- 1 (1)  $x^2 + 2xy + y^2 - 4x - 4y - 5$   
(2)  $a^2 + 2ab + b^2 - 10a - 10b + 21$   
(3)  $x^2 - 2xy + y^2 + 2x - 2y - 8$   
(4)  $a^2 + 2ab + b^2 - 2a - 2b + 1$   
(5)  $a^2 + 2ab + b^2 + 18a + 18b + 81$   
(6)  $x^2 - 2xy + y^2 - 9$
- 2 (1)  $a^2 - b^2 + 2b - 1$   
(2)  $a^2 - b^2 - 14a - 49$

1章 多項式 [8]

- 1 (1)  $a(4 - b)$   
(2)  $x(x + 1)$   
(3)  $a(b - 2)$   
(4)  $a(b - c - 2)$   
(5)  $-3a(1 - 2b)$   
(6)  $3n(m - 4x + 3)$   
(7)  $x(x^2 + x - 1)$   
(8)  $x(ax + 6)$   
(9)  $5x(y^2 - 3)$   
(10)  $-x(x - 4)$
- 2 (1)  $-5m(m + 4)$   
(2)  $ab(6a - 8 - b)$   
(3)  $-4m(2 + m + 3m^2)$   
(4)  $xy(xy - x + y)$

1章 多項式 [9]

- 1 (1)  $(x+1)(x+2)$
- (2)  $(x-4)(x+2)$
- (3)  $(x+1)(x+5)$
- (4)  $(x+2)(x-5)$
- (5)  $(x+8)(x-5)$
- (6)  $(x+1)(x+12)$
- (7)  $(x+3)(x-4)$
- (8)  $(x-3)(x+7)$
- (9)  $(x+2)(x-11)$
- 10  $(x+4)(x-6)$
- 11  $(x-4)(x-10)$
- 12  $(x+5)(x-6)$
- 13  $(x+3)(x+15)$
- 14  $(x-2)(x-3)$
- 15  $(x-6)(x+9)$
- 16  $(x-4)(x-7)$

1章 多項式 [11]

- 1 (1)  $-3(x+2)(x-2)$
- (2)  $4(x+1)^2$
- (3)  $-5(x-3)^2$
- (4)  $4x(x-1)^2$
- 2 (1)  $(3a-1)^2$
- (2)  $(4x-3)^2$
- (3)  $(2x+3y)^2$
- (4)  $(5a-3b)^2$
- (5)  $(2x+11)(2x-11)$
- (6)  $(2a+3b)(2a-3b)$
- (7)  $(4+7x)(4-7x)$
- (8)  $(-x+9)(x+9)$

1章 多項式 [10]

- 1 (1)  $(x+2)^2$
- (2)  $(x-1)^2$
- (3)  $(x+6)^2$
- (4)  $(x-8)^2$
- (5)  $(x+9)^2$
- (6)  $(x-7)^2$
- (7)  $(x+11)^2$
- 2 (1)  $(x+1)(x-1)$
- (2)  $(x+2)(x-2)$
- (3)  $(x+9)(x-9)$
- (4)  $(x+6)(x-6)$
- (5)  $(x+7)(x-7)$
- (6)  $(x+13)(x-13)$
- (7)  $(8+x)(8-x)$

1章 多項式 [12]

- 1 (1)  $(x+y+3)(x+y+6)$
- (2)  $(x-y+3)(x-y-5)$
- (3)  $(a-b+8)(a-b-8)$
- (4)  $(5x+3)(x-y)$
- 2 (1)  $(b-a)(ab+c)$
- (2)  $(x-1)(y+1)$
- (3)  $(a+b-1)(a+b-3)$

## 2章 平方根 [1]

- 1 (1) 1  
(2) 8  
(3) 10  
(4) -4  
(5)  $\frac{2}{3}$   
(6)  $\frac{1}{11}$   
(7)  $\frac{11}{4}$   
(8)  $-\frac{7}{9}$

- (9) 2.5  
(10) 4  
(11) -14  
(12)  $-\frac{2}{5}$

- 2 (1) 17  
(2) -13  
(3)  $\frac{7}{3}$   
(4) 0.31

## 2章 平方根 [2]

- 1 (1)  $\sqrt{18}$   
(2)  $\sqrt{75}$   
(3)  $\sqrt{32}$   
(4)  $\sqrt{135}$   
(5)  $\sqrt{320}$   
(6)  $\sqrt{363}$   
(7)  $\sqrt{288}$

- 2 (1)  $2\sqrt{2}$   
(2)  $2\sqrt{3}$   
(3)  $3\sqrt{3}$   
(4)  $2\sqrt{7}$   
(5)  $4\sqrt{2}$   
(6)  $5\sqrt{2}$   
(7)  $3\sqrt{7}$   
(8)  $6\sqrt{2}$   
(9)  $5\sqrt{3}$   
(10)  $4\sqrt{6}$   
(11)  $6\sqrt{3}$   
(12)  $5\sqrt{5}$

## 2章 平方根 [3]

- 1 (1)  $\frac{\sqrt{3}}{3}$   
(2)  $\frac{2\sqrt{5}}{5}$   
(3)  $\frac{\sqrt{2}}{4}$   
(4)  $\frac{\sqrt{70}}{10}$   
(5)  $\frac{\sqrt{10}}{2}$   
(6)  $\frac{2\sqrt{6}}{3}$   
(7)  $\frac{\sqrt{30}}{10}$   
(8)  $\frac{\sqrt{6}}{2}$   
(9)  $\frac{3}{4}$   
(10)  $\frac{\sqrt{15}}{6}$   
(11)  $\frac{3\sqrt{2}}{2}$   
(12)  $\frac{\sqrt{10}}{5}$

## 2章 平方根 [4]

- 1 (1)  $2\sqrt{3}$   
 (2)  $4\sqrt{3}$   
 (3)  $3\sqrt{6}$   
 (4)  $4\sqrt{6}$   
 (5)  $4\sqrt{5}$   
 (6)  $15\sqrt{2}$   
 (7) 12  
 (8)  $9\sqrt{7}$   
 (9)  $8\sqrt{5}$   
 (10)  $9\sqrt{10}$
- 2 (1)  $\frac{\sqrt{30}}{6}$   
 (2)  $\frac{2\sqrt{6}}{9}$   
 (3)  $-\frac{2\sqrt{5}}{5}$   
 (4)  $\frac{2\sqrt{14}}{7}$   
 (5)  $\frac{\sqrt{15}}{2}$   
 (6)  $\frac{\sqrt{2}}{4}$

## 2章 平方根 [7]

- 1 (1)  $-10 - \sqrt{2}$   
 (2)  $8 + 4\sqrt{5}$   
 (3)  $7 + 4\sqrt{3}$   
 (4) 4  
 (5)  $-13 + 2\sqrt{10}$   
 (6)  $47 - 6\sqrt{10}$   
 (7) -2  
 (8)  $-2 + 6\sqrt{2}$   
 (9) -12
- 2 (1)  $11 - 8\sqrt{2}$   
 (2)  $21 - 8\sqrt{5}$   
 (3)  $\frac{57}{2} - 2\sqrt{14}$   
 (4)  $\frac{55}{3} - 2\sqrt{6}$

## 2章 平方根 [5]

- 1 (1)  $5\sqrt{2}$   
 (2)  $-2\sqrt{3}$   
 (3)  $-3\sqrt{5}$   
 (4)  $-\sqrt{7}$
- 2 (1)  $6\sqrt{3}$   
 (2)  $11\sqrt{7}$   
 (3)  $-\sqrt{2}$   
 (4)  $8\sqrt{5}$   
 (5)  $14\sqrt{2}$   
 (6)  $-4\sqrt{10} - 9\sqrt{2}$
- 3 (1)  $9\sqrt{3}$   
 (2)  $-\sqrt{6}$   
 (3)  $-\frac{2\sqrt{3}}{3}$

## 3章 2次方程式 [1]

- 1 (1)  $x = \pm 1$   
 (2)  $x = \pm 7$   
 (3)  $x = \pm 2$   
 (4)  $x = \pm 1$   
 (5)  $x = \pm 5$   
 (6)  $x = \pm \frac{\sqrt{3}}{2}$   
 (7)  $x = \pm \frac{2\sqrt{15}}{15}$
- 2 (1)  $x = 7, x = -1$   
 (2)  $x = 1 \pm \sqrt{6}$   
 (3)  $x = -6, x = -8$   
 (4)  $x = -9$   
 (5)  $x = 1 \pm \sqrt{15}$

## 2章 平方根 [6]

- 1 (1)  $4\sqrt{7} - \sqrt{14}$   
 (2)  $\sqrt{15} + 5\sqrt{3}$   
 (3)  $3 + \sqrt{3}$   
 (4)  $4 - \sqrt{2}$   
 (5)  $3\sqrt{2}$   
 (6)  $-6 + 2\sqrt{5}$   
 (7)  $9\sqrt{2}$   
 (8)  $7\sqrt{6} - 3\sqrt{7}$   
 (9)  $6\sqrt{5} - 9$   
 (10)  $3\sqrt{10} - 2\sqrt{3}$   
 (11)  $4\sqrt{3} + 4\sqrt{10}$   
 (12)  $3\sqrt{30} - 9\sqrt{5}$   
 (13)  $40\sqrt{3} - 120\sqrt{2}$   
 (14)  $2\sqrt{6}$

## 3章 2次方程式 [2]

- 1 (1)  $x = \frac{-3 \pm \sqrt{29}}{2}$   
 (2)  $x = \frac{3 \pm \sqrt{17}}{4}$   
 (3)  $x = \frac{7 \pm \sqrt{13}}{6}$   
 (4)  $x = \frac{-5 \pm \sqrt{33}}{4}$   
 (5)  $x = \frac{3 \pm \sqrt{21}}{2}$   
 (6)  $x = \frac{9 \pm \sqrt{97}}{4}$
- 2 (1)  $x = -1 \pm \sqrt{6}$   
 (2)  $x = \frac{-2 \pm \sqrt{7}}{3}$   
 (3)  $x = \frac{1 \pm \sqrt{15}}{2}$   
 (4)  $x = \frac{4 \pm \sqrt{6}}{5}$   
 (5)  $x = 1 \pm \sqrt{5}$   
 (6)  $x = \frac{5 \pm \sqrt{7}}{3}$

3章 2次方程式 [3]

- 1 (1)  $x=3, x=-\frac{5}{2}$   
 (2)  $x=1, x=\frac{1}{3}$   
 (3)  $x=-\frac{1}{2}, x=-\frac{7}{2}$   
 (4)  $x=\frac{3}{5}, x=-\frac{1}{2}$   
 (5)  $x=\frac{1}{4}, x=-\frac{2}{3}$
- 2 (1)  $x=\frac{3}{2}$   
 (2)  $x=-\frac{7}{3}$   
 (3)  $x=-\frac{9}{2}$   
 (4)  $x=\frac{4}{5}$   
 (5)  $x=\frac{5}{9}$

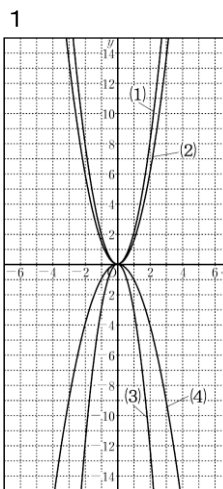
4章 関数 $y=ax^2$  [1]

- 1 (1)  $y=5x^2$   
 (2)  $y=x^2$   
 (3)  $y=-\frac{1}{2}x^2$   
 (4)  $y=\frac{2}{49}x^2$
- 2 (1) 9  
 (2) 27  
 (3) -128  
 (4) -18

3章 2次方程式 [4]

- 1 (1)  $x=-1, x=-5$   
 (2)  $x=-4, x=6$   
 (3)  $x=-\frac{7}{3}, x=\frac{1}{2}$   
 (4)  $x=-9, x=0$
- 2 (1)  $x=-6, x=7$   
 (2)  $x=-6, x=3$   
 (3)  $x=2, x=3$   
 (4)  $x=-2$   
 (5)  $x=\pm 5$   
 (6)  $x=0, x=\frac{1}{3}$

4章 関数 $y=ax^2$  [2]



- 2 (1)  $y=\frac{1}{3}x^2$   
 (2)  $y=-\frac{1}{2}x^2$   
 (3)  $y=\frac{1}{4}x^2$   
 (4)  $y=-3x^2$

4章 関数 $y=ax^2$  [3]

- 1 (1) 1  
 (2) 6  
 (3) -3  
 (4) -3
- 2 (1) -10  
 (2) 10  
 (3) 6  
 (4) -24

4章 関数 $y=ax^2$  [4]

- 1 (1)  $5 \leq y \leq 9$   
 (2)  $-1 \leq y < 14$   
 (3)  $1 < y < 9$   
 (4)  $0 \leq y \leq \frac{1}{3}$   
 (5)  $-50 \leq y \leq 0$
- 2 (1) 最大値 10  
 最小値 2  
 (2) 最大値 0  
 最小値 -9
- 3  $b = \frac{4}{3}$

5章 相似な図形 [1]

- 1 (1)  $1850 \leq a < 1950$   
 (2)  $5095 \leq a < 5105$   
 (3) 74
- 2 (1)①  $6.2 \times 10^3 \text{ m}$   
 ②  $6.20 \times 10^3 \text{ m}$   
 (2) 2, 9, 8, 0

5章 相似な図形 [2]

- 1 (1)  $x=2, y=12$   
 (2)  $x=3, y=15$   
 (3)  $x = \frac{15}{4}, y = \frac{25}{3}$   
 (4)  $x=6, y = \frac{8}{3}$   
 (5)  $x=6$   
 (6)  $x=6$   
 (7)  $x=4$   
 (8)  $x=3, y=6$
- 2 (1)  $\frac{21}{2}$   
 (2)  $\frac{21}{4}$
- 3  $3a$

5章 相似な図形 [3]

- 1 (1)  $x=9$   
 (2)  $x=15$   
 (3)  $x = \frac{24}{5}, y = \frac{15}{2}$   
 (4)  $x=9$   
 (5)  $x = \frac{32}{3}$   
 (6)  $x = \frac{21}{2}, y=8$
- 2 (1)  $\frac{18}{5}$   
 (2)  $\frac{27}{5}$
- 3 (1) 4  
 (2)  $\frac{18}{5}$
- 4 72

5章 相似な図形 [4]

- 1 (1) 1:2  
 (2) 1:2  
 (3) 1:4  
 (4)  $20\text{cm}^2$
- 2 (1) 4:9  
 (2) 8:27  
 (3)  $54\text{cm}^2$   
 (4)  $32\text{cm}^3$
- 3 (1) 相似比 1:2  
 面積比 1:4  
 (2) 4倍  
 (3)①  $\square ABCD$   
 $20\text{cm}^2$   
 ② 台形APCD  
 $15\text{cm}^2$
- 4  $105\pi \text{ cm}^3$