

方程式すべて 21

年 組 番・氏名

◆次の一次方程式、二次方程式、連立方程式を解け。

① $4x+8=x+14$

$$\begin{aligned} 4x-x &= 14-8 \\ 3x &= 6 \\ x &= 2 \end{aligned}$$

② $2x+6=7x+21$

$$\begin{aligned} 2x-7x &= 21-6 \\ -5x &= 15 \\ x &= -3 \end{aligned}$$

③ $x^2-9=0$

$$\begin{aligned} (x+3)(x-3) &= 0 \\ x &= \pm 3 \end{aligned}$$

④ $x^2-8x+15=0$

$$\begin{aligned} (x-3)(x-5) &= 0 \\ x &= 3, 5 \end{aligned}$$

⑤ $x^2-12x+36=0$

$$\begin{aligned} (x-6)^2 &= 0 \\ x &= 6 \end{aligned}$$

⑥ $\begin{cases} 2x-y=5 \\ 3x-2y=7 \end{cases}$

$$\begin{aligned} &① \times 2 \\ 4x-2y &= 10 \cdots ①' \end{aligned}$$

$$\begin{aligned} &①' - ② \\ x &= 3 \end{aligned}$$

$x=3$ を①に代入

$$\begin{aligned} 2 \times 3 - y &= 5 \\ 6 - y &= 5 \\ -y &= 5 - 6 \\ -y &= -1 \\ y &= 1 \end{aligned}$$

$$(x, y) = (3, 1)$$

方程式すべて 22

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◆次の一次方程式、二次方程式、連立方程式を解け。

① $6x-3=2x+13$

$$\begin{aligned} 6x-2x &= 13+3 \\ 4x &= 16 \\ x &= 4 \end{aligned}$$

② $5x+9=7x+15$

$$\begin{aligned} 5x-7x &= 15-9 \\ -2x &= 6 \\ x &= -3 \end{aligned}$$

③ $x^2-4x+4=0$

$$\begin{aligned} (x-2)^2 &= 0 \\ x &= 2 \end{aligned}$$

④ $x^2+7x=0$

$$\begin{aligned} x(x+7) &= 0 \\ x &= 0, -7 \end{aligned}$$

⑤ $x^2-3x-40=0$

$$\begin{aligned} (x+5)(x-8) &= 0 \\ x &= -5, 8 \end{aligned}$$

⑥ $\begin{cases} 5x-y=3 \\ 7x-2y=3 \end{cases}$

$$\begin{aligned} &① \times 2 \\ 10x-2y &= 6 \cdots ①' \end{aligned}$$

$$\begin{aligned} &①' - ② \\ 3x &= 3 \\ x &= 1 \end{aligned}$$

$x=1$ を①に代入

$$\begin{aligned} 5 \times 1 - y &= 3 \\ 5 - y &= 3 \\ -y &= 3 - 5 \\ -y &= -2 \\ y &= 2 \end{aligned}$$

$$(x, y) = (1, 2)$$

方程式すべて 23

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◆次の一次方程式、二次方程式、連立方程式を解け。

① $8x+6=3x+31$

$$\begin{aligned} 8x-3x &= 31-6 \\ 5x &= 25 \\ x &= 5 \end{aligned}$$

② $2x-7=5x+11$

$$\begin{aligned} 2x-5x &= 11+7 \\ -3x &= 18 \\ x &= -6 \end{aligned}$$

③ $x^2-81=0$

$$\begin{aligned} (x+9)(x-9) &= 0 \\ x &= \pm 9 \end{aligned}$$

④ $x^2-5x+6=0$

$$\begin{aligned} (x-2)(x-3) &= 0 \\ x &= 2, 3 \end{aligned}$$

⑤ $x^2+18x+81=0$

$$\begin{aligned} (x+9)^2 &= 0 \\ x &= -9 \end{aligned}$$

⑥ $\begin{cases} 5x-2y=4 \\ 2x-y=1 \end{cases}$

$$\begin{aligned} &② \times 2 \\ &4x-2y=2 \cdots ②' \end{aligned}$$

$$\begin{aligned} &① - ②' \\ &x=2 \end{aligned}$$

$x=2$ を②に代入

$$\begin{aligned} 2 \times 2 - y &= 1 \\ 4 - y &= 1 \\ -y &= 1 - 4 \\ -y &= -3 \\ y &= 3 \end{aligned}$$

$$(x, y) = (2, 3)$$

方程式すべて 24

年 組 番・氏名

◆次の一次方程式、二次方程式、連立方程式を解け。

① $9x+1=5x+21$

$$\begin{aligned} 9x-5x &= 21-1 \\ 4x &= 20 \\ x &= 5 \end{aligned}$$

② $2x+4=5x-14$

$$\begin{aligned} 2x-5x &= -14-4 \\ -3x &= -18 \\ x &= 6 \end{aligned}$$

③ $x^2-20x+100=0$

$$\begin{aligned} (x-10)^2 &= 0 \\ x &= 10 \end{aligned}$$

④ $x^2-9x=0$

$$\begin{aligned} x(x-9) &= 0 \\ x &= 0, 9 \end{aligned}$$

⑤ $x^2-x-72=0$

$$\begin{aligned} (x+8)(x-9) &= 0 \\ x &= -8, 9 \end{aligned}$$

⑥ $\begin{cases} 4x-3y=5 \\ 3x+2y=8 \end{cases}$

$$\begin{aligned} &① \times 2 \\ &8x-6y=10 \cdots ①' \end{aligned}$$

$$\begin{aligned} &② \times 3 \\ &9x+6y=24 \cdots ②' \end{aligned}$$

$$①' + ②'$$

$$\begin{aligned} 17x &= 34 \\ x &= 2 \end{aligned}$$

$x=2$ を②に代入

$$\begin{aligned} 3 \times 2 + 2y &= 8 \\ 6 + 2y &= 8 \\ 2y &= 8 - 6 \\ 2y &= 2 \\ y &= 1 \end{aligned}$$

$$(x, y) = (2, 1)$$

方程式すべて 25

年 組 番・氏名

◆次の一次方程式、二次方程式、連立方程式を解け。

① $7x - 5 = 3x - 15$

$$\begin{aligned} 7x - 3x &= 15 - 5 \\ 4x &= 20 \\ x &= 5 \end{aligned}$$

② $3x + 1 = 9x + 13$

$$\begin{aligned} 3x - 9x &= 13 - 1 \\ -6x &= 12 \\ x &= -2 \end{aligned}$$

③ $x^2 - 16 = 0$

$$\begin{aligned} (x+4)(x-4) &= 0 \\ x &= \pm 4 \end{aligned}$$

④ $x^2 + 11x + 24 = 0$

$$\begin{aligned} (x+3)(x+8) &= 0 \\ x &= -3, -8 \end{aligned}$$

⑤ $x^2 - 6x + 9 = 0$

$$\begin{aligned} (x-3)^2 &= 0 \\ x &= 3 \end{aligned}$$

⑥ $\begin{cases} x + y = 1 \\ 2x - 3y = 12 \end{cases}$

$$\begin{aligned} &① \times 3 \\ 3x + 3y &= 3 \cdots ①' \end{aligned}$$

$$\begin{aligned} &①' + ② \\ 5x &= 15 \\ x &= 3 \end{aligned}$$

$$\begin{aligned} x = 3 \text{ を } ① \text{ に代入} \\ 3 + y &= 1 \\ y &= 1 - 3 \\ y &= -2 \end{aligned}$$

$$(x, y) = (3, -2)$$

方程式すべて 26

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◆次の一次方程式、二次方程式、連立方程式を解け。

① $8x - 9 = x + 12$

$$\begin{aligned} 8x - x &= 12 + 9 \\ 7x &= 21 \\ x &= 3 \end{aligned}$$

② $4x - 8 = 9x + 12$

$$\begin{aligned} 4x - 9x &= 12 + 8 \\ -5x &= 20 \\ x &= -4 \end{aligned}$$

③ $x^2 + 12x + 36 = 0$

$$\begin{aligned} (x+6)^2 &= 0 \\ x &= -6 \end{aligned}$$

④ $x^2 - 5x = 0$

$$\begin{aligned} x(x-5) &= 0 \\ x &= 0, 5 \end{aligned}$$

⑤ $x^2 - 2x - 35 = 0$

$$\begin{aligned} (x+5)(x-7) &= 0 \\ x &= -5, 7 \end{aligned}$$

⑥ $\begin{cases} 3x + y = 10 \\ x - 2y = 1 \end{cases}$

$$\begin{aligned} &① \times 2 \\ 6x + 2y &= 20 \cdots ①' \end{aligned}$$

$$\begin{aligned} &①' + ② \\ 7x &= 21 \\ x &= 3 \end{aligned}$$

$$\begin{aligned} x = 3 \text{ を } ① \text{ に代入} \\ 3 \times 3 + y &= 10 \\ 9 + y &= 10 \\ y &= 10 - 9 \\ y &= 1 \end{aligned}$$

$$(x, y) = (3, 1)$$

方程式すべて 27

年 組 番・氏名

◆次の一次方程式、二次方程式、連立方程式を解け。

① $11x + 1 = 2x + 28$

$$\begin{aligned} 11x - 2x &= 28 - 1 \\ 9x &= 27 \\ x &= 3 \end{aligned}$$

② $3x - 3 = 5x + 15$

$$\begin{aligned} 3x - 5x &= 15 + 3 \\ -2x &= 18 \\ x &= -9 \end{aligned}$$

③ $x^2 - 100 = 0$

$$\begin{aligned} (x+10)(x-10) &= 0 \\ x &= \pm 10 \end{aligned}$$

④ $x^2 - 6x + 5 = 0$

$$\begin{aligned} (x-5)(x-1) &= 0 \\ x &= 5, 1 \end{aligned}$$

⑤ $x^2 - 14x + 49 = 0$

$$\begin{aligned} (x-7)^2 &= 0 \\ x &= 7 \end{aligned}$$

⑥ $\begin{cases} 2x + 3y = 4 \\ 3x + y = 13 \end{cases}$

$$\begin{aligned} &② \times 3 \\ 9x + 3y &= 39 \cdots ②' \end{aligned}$$

$$\begin{aligned} &① - ②' \\ -7x &= -35 \\ x &= 5 \end{aligned}$$

$$\begin{aligned} x=5 \text{を} ② \text{に代入} \\ 3 \times 5 + y &= 13 \\ 15 + y &= 13 \\ y &= 13 - 15 \\ y &= -2 \end{aligned}$$

$$(x, y) = (5, -2)$$

方程式すべて 28

年 組 番・氏名

◆次の一次方程式、二次方程式、連立方程式を解け。

① $9x + 5 = 7x - 7$

$$\begin{aligned} 9x - 7x &= -7 - 5 \\ 2x &= -12 \\ x &= -6 \end{aligned}$$

② $3x + 7 = 7x - 13$

$$\begin{aligned} 3x - 7x &= -13 - 7 \\ -4x &= -20 \\ x &= 5 \end{aligned}$$

③ $x^2 + 2x + 1 = 0$

$$\begin{aligned} (x+1)^2 &= 0 \\ x &= -1 \end{aligned}$$

④ $x^2 - 6x = 0$

$$\begin{aligned} x(x-6) &= 0 \\ x &= 0, 6 \end{aligned}$$

⑤ $x^2 - x - 42 = 0$

$$\begin{aligned} (x+6)(x-7) &= 0 \\ x &= -6, 7 \end{aligned}$$

⑥ $\begin{cases} 2x - 3y = 9 \\ 5x + 2y = 13 \end{cases}$

$$\begin{aligned} &① \times 2 \\ 4x - 6y &= 18 \cdots ①' \end{aligned}$$

$$\begin{aligned} &② \times 3 \\ 15x + 6y &= 39 \cdots ②' \\ ①' + ②' & \end{aligned}$$

$$\begin{aligned} 19x &= 57 \\ x &= 3 \end{aligned}$$

$$\begin{aligned} x=3 \text{を} ② \text{に代入} \\ 5 \times 3 + 2y &= 13 \\ 15 + 2y &= 13 \\ 2y &= 13 - 15 \\ 2y &= -2 \\ y &= -1 \end{aligned}$$

$$(x, y) = (3, -1)$$

方程式すべて 29

年 組 番・氏名

◆次の一次方程式、二次方程式、連立方程式を解け。

① $13x - 5 = 6x + 16$

$$\begin{aligned} 13x - 6x &= 16 + 5 \\ 7x &= 21 \\ x &= 3 \end{aligned}$$

② $2x + 5 = 8x + 17$

$$\begin{aligned} 2x - 8x &= 17 - 5 \\ -6x &= 12 \\ x &= -2 \end{aligned}$$

③ $x^2 - 1 = 0$

$$\begin{aligned} (x+1)(x-1) &= 0 \\ x &= \pm 1 \end{aligned}$$

④ $x^2 + 12x + 20 = 0$

$$\begin{aligned} (x+2)(x+10) &= 0 \\ x &= -2, -10 \end{aligned}$$

⑤ $x^2 - 10x + 25 = 0$

$$\begin{aligned} (x-5)^2 &= 0 \\ x &= 5 \end{aligned}$$

⑥ $\begin{cases} x + 3y = 5 \\ 3x + y = 7 \end{cases}$

$$\begin{aligned} &② \times 3 \\ 9x + 3y &= 21 \cdots ②' \end{aligned}$$

$$\begin{aligned} &① - ②' \\ -8x &= -16 \\ x &= 2 \end{aligned}$$

$$\begin{aligned} x = 2 \text{ を } ② \text{ に代入} \\ 3 \times 2 + y &= 7 \\ 6 + y &= 7 \\ y &= 7 - 6 \\ y &= 1 \end{aligned}$$

$$(x, y) = (2, 1)$$

方程式すべて 30

年 組 番・氏名

◆次の一次方程式、二次方程式、連立方程式を解け。

① $5x - 14 = 2x + 7$

$$\begin{aligned} 5x - 2x &= 7 + 14 \\ 3x &= 21 \\ x &= 7 \end{aligned}$$

② $2x + 7 = 8x - 23$

$$\begin{aligned} 2x - 8x &= -23 - 7 \\ -6x &= -30 \\ x &= 5 \end{aligned}$$

③ $x^2 - 14x + 49 = 0$

$$\begin{aligned} (x-7)^2 &= 0 \\ x &= 7 \end{aligned}$$

④ $x^2 + 8x = 0$

$$\begin{aligned} x(x+8) &= 0 \\ x &= 0, -8 \end{aligned}$$

⑤ $x^2 - 5x - 36 = 0$

$$\begin{aligned} (x+4)(x-9) &= 0 \\ x &= -4, 9 \end{aligned}$$

⑥ $\begin{cases} 3x + y = 7 \\ x - 2y = 7 \end{cases}$

$$\begin{aligned} &① \times 2 \\ 6x + 2y &= 14 \cdots ①' \end{aligned}$$

$$\begin{aligned} &①' + ② \\ 7x &= 21 \\ x &= 3 \end{aligned}$$

$$\begin{aligned} x = 3 \text{ を } ① \text{ に代入} \\ 3 \times 3 + y &= 7 \\ 9 + y &= 7 \\ y &= 7 - 9 \\ y &= -2 \end{aligned}$$

$$(x, y) = (3, -2)$$

方程式すべて 31

年 組 番・氏名

◆次の一次方程式、二次方程式、連立方程式を解け。

① $7x - 8 = 2x + 22$

$$\begin{aligned} 7x - 2x &= 22 + 8 \\ 5x &= 30 \\ x &= 6 \end{aligned}$$

② $8x + 14 = 9x + 5$

$$\begin{aligned} 8x - 9x &= 5 - 14 \\ -x &= -9 \\ x &= 9 \end{aligned}$$

③ $x^2 - 4 = 0$

$$\begin{aligned} (x+2)(x-2) &= 0 \\ x &= \pm 2 \end{aligned}$$

④ $x^2 + 8x + 16 = 0$

$$\begin{aligned} (x+4)^2 &= 0 \\ x &= -4 \end{aligned}$$

⑤ $x^2 - 9x + 20 = 0$

$$\begin{aligned} (x-4)(x-5) &= 0 \\ x &= 4, 5 \end{aligned}$$

⑥ $\begin{cases} 2x - y = 5 \\ x + 2y = 10 \end{cases}$

$$\begin{aligned} &① \times 2 \\ 4x - 2y &= 10 \cdots ①' \end{aligned}$$

$$\begin{aligned} &①' + ② \\ 5x &= 20 \\ x &= 4 \end{aligned}$$

$$\begin{aligned} x = 4 \text{ を } ① \text{ に代入} \\ 2 \times 4 - y &= 5 \\ 8 - y &= 5 \\ -y &= 5 - 8 \\ y &= -3 \\ y &= 3 \end{aligned}$$

$$(x, y) = (4, 3)$$

方程式すべて 32

年 組 番・氏名

◆次の一次方程式、二次方程式、連立方程式を解け。

① $8x + 4 = 5x + 22$

$$\begin{aligned} 8x - 5x &= 22 - 4 \\ 3x &= 18 \\ x &= 6 \end{aligned}$$

② $3x - 5 = 7x + 11$

$$\begin{aligned} 3x - 7x &= 11 + 5 \\ -4x &= 16 \\ x &= -4 \end{aligned}$$

③ $x^2 - 16x + 64 = 0$

$$\begin{aligned} (x-8)^2 &= 0 \\ x &= 8 \end{aligned}$$

④ $x^2 - 5x = 0$

$$\begin{aligned} x(x-5) &= 0 \\ x &= 0, 5 \end{aligned}$$

⑤ $x^2 - x - 2 = 0$

$$\begin{aligned} (x+1)(x-2) &= 0 \\ x &= -1, 2 \end{aligned}$$

⑥ $\begin{cases} 2x + y = 1 \\ 3x + 2y = 3 \end{cases}$

$$\begin{aligned} &① \times 2 \\ 4x + 2y &= 2 \cdots ①' \end{aligned}$$

$$\begin{aligned} &①' - ② \\ x &= -1 \end{aligned}$$

$$\begin{aligned} x = -1 \text{ を } ① \text{ に代入} \\ 2 \times (-1) + y &= 1 \\ -2 + y &= 1 \\ y &= 1 + 2 \\ y &= 3 \end{aligned}$$

$$(x, y) = (-1, 3)$$

方程式すべて 33

年 組 番・氏名

◆次の一次方程式、二次方程式、連立方程式を解け。

① $8x - 6 = x + 22$

$$\begin{aligned} 8x - x &= 22 + 6 \\ 7x &= 28 \\ x &= 4 \end{aligned}$$

② $3x - 2 = 8x + 13$

$$\begin{aligned} 3x - 8x &= 13 + 2 \\ -5x &= 15 \\ x &= -3 \end{aligned}$$

③ $x^2 - 16 = 0$

$$\begin{aligned} (x+4)(x-4) &= 0 \\ x &= \pm 4 \end{aligned}$$

④ $x^2 - 10x - 24 = 0$

$$\begin{aligned} (x+2)(x-12) &= 0 \\ x &= -2, 12 \end{aligned}$$

⑤ $x^2 - 6x + 9 = 0$

$$\begin{aligned} (x-3)^2 &= 0 \\ x &= 3 \end{aligned}$$

⑥ $\begin{cases} 5x - 3y = 12 \\ 2x - y = 5 \end{cases}$

$$\begin{aligned} &② \times 3 \\ 6x - 3y &= 15 \cdots ②' \end{aligned}$$

$$\begin{aligned} &① - ②' \\ -x &= -3 \\ x &= 3 \end{aligned}$$

$x = 3$ を②に代入

$$\begin{aligned} 2 \times 3 - y &= 5 \\ 6 - y &= 5 \\ -y &= 5 - 6 \\ -y &= -1 \\ y &= 1 \end{aligned}$$

$$(x, y) = (3, 1)$$

方程式すべて 34

年 組 番・氏名

◆次の一次方程式、二次方程式、連立方程式を解け。

① $7x - 6 = 2x + 9$

$$\begin{aligned} 7x - 2x &= 9 + 6 \\ 5x &= 15 \\ x &= 3 \end{aligned}$$

② $2x - 9 = 4x - 13$

$$\begin{aligned} 2x - 4x &= -13 + 9 \\ -2x &= -4 \\ x &= 2 \end{aligned}$$

③ $x^2 + 4x + 4 = 0$

$$\begin{aligned} (x+2)^2 &= 0 \\ x &= -2 \end{aligned}$$

④ $x^2 + 7x = 0$

$$\begin{aligned} x(x+7) &= 0 \\ x &= 0, -7 \end{aligned}$$

⑤ $x^2 - 2x - 63 = 0$

$$\begin{aligned} (x+7)(x-9) &= 0 \\ x &= -7, 9 \end{aligned}$$

⑥ $\begin{cases} 2x + y = 8 \\ 3x - 2y = 5 \end{cases}$

$$\begin{aligned} &① \times 2 \\ 4x + 2y &= 16 \cdots ①' \end{aligned}$$

$$\begin{aligned} &①' + ② \\ 7x &= 21 \\ x &= 3 \end{aligned}$$

$x = 3$ を①に代入

$$\begin{aligned} 2 \times 3 + y &= 8 \\ 6 + y &= 8 \\ y &= 8 - 6 \\ y &= 2 \end{aligned}$$

$$(x, y) = (3, 2)$$

方程式すべて 35

年 組 番・氏名

◆次の一次方程式、二次方程式、連立方程式を解け。

① $13x + 7 = 8x + 37$

$$\begin{aligned} 13x - 8x &= 37 - 7 \\ 5x &= 30 \\ x &= 6 \end{aligned}$$

② $3x - 4 = 5x + 6$

$$\begin{aligned} 3x - 5x &= 6 + 4 \\ -2x &= 10 \\ x &= -5 \end{aligned}$$

③ $x^2 - 36 = 0$

$$\begin{aligned} (x+6)(x-6) &= 0 \\ x &= \pm 6 \end{aligned}$$

④ $x^2 + 9x + 18 = 0$

$$\begin{aligned} (x+3)(x+6) &= 0 \\ x &= -3, -6 \end{aligned}$$

⑤ $x^2 - 14x + 49 = 0$

$$\begin{aligned} (x-7)^2 &= 0 \\ x &= 7 \end{aligned}$$

⑥ $\begin{cases} 3x + 2y = 7 \\ 7x - 3y = 1 \end{cases}$

$$\begin{aligned} &① \times 3 \\ &9x + 6y = 21 \cdots ①' \\ &② \times 2 \\ &14x - 6y = 2 \cdots ②' \\ &①' + ②' \end{aligned}$$

$$\begin{aligned} 23x &= 23 \\ x &= 1 \\ x = 1 \text{ を } ① \text{ に代入} \\ 3 \times 1 + 2y &= 7 \\ 3 + 2y &= 7 \\ 2y &= 7 - 3 \\ 2y &= 4 \\ y &= 2 \end{aligned}$$

$(x, y) = (1, 2)$

方程式すべて 36

年 組 番・氏名

◆次の一次方程式、二次方程式、連立方程式を解け。

① $9x + 9 = 2x - 33$

$$\begin{aligned} 9x - 2x &= -33 - 9 \\ 7x &= -42 \\ x &= -6 \end{aligned}$$

② $2x - 7 = 5x - 16$

$$\begin{aligned} 2x - 5x &= -16 + 7 \\ -3x &= -9 \\ x &= 3 \end{aligned}$$

③ $x^2 - 6x + 9 = 0$

$$\begin{aligned} (x-3)^2 &= 0 \\ x &= 3 \end{aligned}$$

④ $x^2 - 3x = 0$

$$\begin{aligned} x(x-3) &= 0 \\ x &= 0, 3 \end{aligned}$$

⑤ $x^2 + x - 56 = 0$

$$\begin{aligned} (x+8)(x-7) &= 0 \\ x &= -8, 7 \end{aligned}$$

⑥ $\begin{cases} x - y = 7 \\ 2x + 3y = 4 \end{cases}$

$$\begin{aligned} &① \times 3 \\ &3x - 3y = 21 \cdots ①' \\ &①' + ② \\ &5x = 25 \\ x &= 5 \end{aligned}$$

$$\begin{aligned} x = 5 \text{ を } ① \text{ に代入} \\ 5 - y &= 7 \\ -y &= 7 - 5 \\ -y &= 2 \\ y &= -2 \end{aligned}$$

$(x, y) = (5, -2)$

方程式すべて 37

年 組 番・氏名

◆次の一次方程式、二次方程式、連立方程式を解け。

① $6x+23=x+8$

$$\begin{aligned} 6x-x &= 8-23 \\ 5x &= -15 \\ x &= -3 \end{aligned}$$

② $3x-3=7x+13$

$$\begin{aligned} 3x-7x &= 13+3 \\ -4x &= 16 \\ x &= -4 \end{aligned}$$

③ $x^2-81=0$

$$\begin{aligned} (x+9)(x-9) &= 0 \\ x &= \pm 9 \end{aligned}$$

④ $x^2-11x+18=0$

$$\begin{aligned} (x-2)(x-9) &= 0 \\ x &= 2, 9 \end{aligned}$$

⑤ $x^2-10x+25=0$

$$\begin{aligned} (x-5)^2 &= 0 \\ x &= 5 \end{aligned}$$

⑥ $\begin{cases} 2x+y=5 \\ 3x-2y=4 \end{cases}$

$$\begin{aligned} &① \times 2 \\ 4x+2y &= 10 \cdots ①' \end{aligned}$$

$$\begin{aligned} &①' + ② \\ 7x &= 14 \\ x &= 2 \end{aligned}$$

$$\begin{aligned} x=2 \text{を} ① \text{に代入} \\ 2 \times 2 + y &= 5 \\ 4 + y &= 5 \\ y &= 5 - 4 \\ y &= 1 \end{aligned}$$

$$(x, y) = (2, 1)$$

方程式すべて 38

年 組 番・氏名

◆次の一次方程式、二次方程式、連立方程式を解け。

① $6x+7=2x+19$

$$\begin{aligned} 6x-2x &= 19-7 \\ 4x &= 12 \\ x &= 3 \end{aligned}$$

② $2x+17=9x-25$

$$\begin{aligned} 2x-9x &= -25-17 \\ -7x &= -42 \\ x &= 6 \end{aligned}$$

③ $x^2+2x+1=0$

$$\begin{aligned} (x+1)^2 &= 0 \\ x &= -1 \end{aligned}$$

④ $x^2+6x=0$

$$\begin{aligned} x(x+6) &= 0 \\ x &= 0, -6 \end{aligned}$$

⑤ $x^2-3x-40=0$

$$\begin{aligned} (x+5)(x-8) &= 0 \\ x &= -5, 8 \end{aligned}$$

⑥ $\begin{cases} 5x+2y=11 \\ x-3y=9 \end{cases}$

$$\begin{aligned} &① \times 3 \\ 15x+6y &= 33 \cdots ①' \end{aligned}$$

$$\begin{aligned} &② \times 2 \\ 2x-6y &= 18 \cdots ②' \end{aligned}$$

$$①' + ②'$$

$$\begin{aligned} 17x &= 51 \\ x &= 3 \end{aligned}$$

$$\begin{aligned} x=3 \text{を} ① \text{に代入} \\ 5 \times 3 + 2y &= 11 \\ 15 + 2y &= 11 \\ 2y &= 11 - 15 \\ 2y &= -4 \\ y &= -2 \end{aligned}$$

$$(x, y) = (3, -2)$$

方程式すべて 39

年 組 番・氏名

◆次の一次方程式、二次方程式、連立方程式を解け。

① $7x+9=3x+17$

$$\begin{aligned} 7x-3x &= 17-9 \\ 4x &= 8 \\ x &= 2 \end{aligned}$$

② $2x-11=7x+29$

$$\begin{aligned} 2x-7x &= 29+11 \\ -5x &= 40 \\ x &= -8 \end{aligned}$$

③ $x^2-25=0$

$$\begin{aligned} (x+5)(x-5) &= 0 \\ x &= \pm 5 \end{aligned}$$

④ $x^2-6x-27=0$

$$\begin{aligned} (x+3)(x-9) &= 0 \\ x &= -3, 9 \end{aligned}$$

⑤ $x^2+12x+36=0$

$$\begin{aligned} (x+6)^2 &= 0 \\ x &= -6 \end{aligned}$$

⑥ $\begin{cases} 5x+2y=1 \\ 2x+3y=7 \end{cases}$

$$\begin{aligned} &① \times 3 \\ 15x+6y &= 3 \cdots ①' \end{aligned}$$

$$\begin{aligned} &② \times 2 \\ 4x+6y &= 14 \cdots ②' \end{aligned}$$

$$\begin{aligned} &①' - ②' \\ 11x &= -11 \\ x &= -1 \end{aligned}$$

$$\begin{aligned} x &= \text{を①に代入} \\ 5 \times (-1) + 2y &= 1 \\ -5 + 2y &= 1 \\ 2y &= 1 + 5 \\ 2y &= 6 \\ y &= 3 \end{aligned}$$

$$(x, y) = (-1, 3)$$

方程式すべて 40

年 組 番・氏名

◆次の一次方程式、二次方程式、連立方程式を解け。

① $14x-24=5x+21$

$$\begin{aligned} 14x-5x &= 21+24 \\ 9x &= 45 \\ x &= 5 \end{aligned}$$

② $2x-6=7x+19$

$$\begin{aligned} 2x-7x &= 19+6 \\ -5x &= 25 \\ x &= -5 \end{aligned}$$

③ $x^2-8x+16=0$

$$\begin{aligned} (x-4)^2 &= 0 \\ x &= 4 \end{aligned}$$

④ $x^2-x=0$

$$\begin{aligned} x(x-1) &= 0 \\ x &= 0, 1 \end{aligned}$$

⑤ $x^2-5x-24=0$

$$\begin{aligned} (x+3)(x-8) &= 0 \\ x &= -3, 8 \end{aligned}$$

⑥ $\begin{cases} x+y=7 \\ 3x-2y=6 \end{cases}$

$$\begin{aligned} &① \times 2 \\ 2x+2y &= 14 \cdots ①' \end{aligned}$$

$$\begin{aligned} &①' + ② \\ 5x &= 20 \\ x &= 4 \end{aligned}$$

$$\begin{aligned} x=4 & \text{を①に代入} \\ 4+y &= 7 \\ y &= 7-4 \\ y &= 3 \end{aligned}$$

$$(x, y) = (4, 3)$$