

1

次の計算をなさい。

多項式の減法は、引くほうの多項式の各項の符号を変えて加えます。

$$\begin{aligned} (1) \quad & 2 \times (-4^2) \\ & = 2 \times (-4 \times 4) \\ & = 2 \times (-16) \\ & = -32 \end{aligned}$$

$$\begin{aligned} (2) \quad & (5x - 2) - (3x + 2) \\ & = 5x - 2 - 3x - 2 \\ & = 5x - 3x - 2 - 2 \\ & = 2x - 4 \end{aligned}$$

2

次の方程式を解きなさい。

$$\begin{aligned} (1) \quad & -2x = 3 - x \\ & -2x + x = 3 \\ & -x = 3 \\ & x = -3 \end{aligned}$$

$$\begin{aligned} (2) \quad & 2x + 12 = 7 - 3x \\ & 2x + 3x = 7 - 12 \\ & 5x = -5 \\ & x = -1 \end{aligned}$$

$$x = -3$$

$$x = -1$$

3

次の計算をなさい。

$$\begin{aligned} (1) \quad & (-3b)^2 \times 2a^2b \\ & = (-3b) \times (-3b) \times 2a^2b \\ & = 9b^2 \times 2a^2b \\ & = 18a^2b^3 \end{aligned}$$

$$\begin{aligned} (2) \quad & (-10xy) \div \frac{5}{2}x \\ & = -\frac{10xy}{1} \div \frac{5x}{2} \\ & = -\frac{\cancel{10}^2 \cancel{xy}^1}{1} \times \frac{2}{\cancel{5}^1 \cancel{x}^1} \\ & = -4y \end{aligned}$$

$$\begin{aligned} (3) \quad & 2(5x + 9y) - 5(2x + 3y) \\ & = 10x + 18y - 10x - 15y \\ & = 10x - 10x + 18y - 15y \\ & = 3y \end{aligned}$$

$$\begin{aligned} (4) \quad & ab^2 \div ab \times 4a \\ & = \frac{ab^2 \times 4a}{ab} \\ & = 4ab \end{aligned}$$

※次のページにも問題があります。

4

次の方程式を解きなさい。

$$\begin{aligned}
 (1) \quad & -2x = 3 - x \\
 & -2x + x = 3 \\
 & -x = 3 \\
 & x = -3
 \end{aligned}$$

$$x = -3$$

$$(2) \quad \begin{cases} -2x + 3y = 4 & \dots \textcircled{1} \\ 2x + 5y = 28 & \dots \textcircled{2} \end{cases}$$

① + ②より

$$\begin{array}{r}
 -2x + 3y = 4 \\
 +) \quad 2x + 5y = 28 \\
 \hline
 8y = 32 \\
 y = 4 \quad \dots \textcircled{3}
 \end{array}$$

③を②に代入すると

$$\begin{aligned}
 2x + 5 \times 4 &= 28 \\
 2x + 20 &= 28 \\
 2x &= 8 \\
 x &= 4
 \end{aligned}$$

$$x = 4, y = 4$$

$$(3) \quad \begin{cases} 2x - 3y = 1 & \dots \textcircled{1} \\ 3x + 2y = 8 & \dots \textcircled{2} \end{cases}$$

① × 2 + ② × 3より

$$\begin{array}{r}
 4x - 6y = 2 \\
 +) \quad 9x + 6y = 24 \\
 \hline
 13x = 26 \\
 x = 2 \quad \dots \textcircled{3}
 \end{array}$$

③を②に代入すると

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

$$x = 2, y = 1$$

$$(4) \quad \begin{cases} y = 2x - 1 & \dots \textcircled{1} \\ y = x + 3 & \dots \textcircled{2} \end{cases}$$

②に①を代入すると

$$\begin{aligned}
 2x - 1 &= x + 3 \\
 2x - x &= 3 + 1 \\
 x &= 4 \quad \dots \textcircled{3}
 \end{aligned}$$

③を②に代入すると

$$\begin{aligned}
 y &= 4 + 3 \\
 y &= 7
 \end{aligned}$$

$$x = 4, y = 7$$