

# 『数が苦』を『数楽』に その1

2年 組 番 氏名

---

## 多項式の加法1 [ 同類項をまとめる ]

◎ 次の式 of 同類項をまとめて簡単にしなさい。

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

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

$$\begin{aligned} \textcircled{3} \quad & 4a - b - 5b - a \\ & = 3a - 6b \end{aligned}$$

$$\begin{aligned} \textcircled{4} \quad & 3x - 5y + 2y - 8x \\ & = -5x - 3y \end{aligned}$$

$$\begin{aligned} \textcircled{5} \quad & -2a^2 + a - 3a^2 - 2a \\ & = -5a^2 - a \end{aligned}$$

$$\begin{aligned} \textcircled{6} \quad & 6x + 8xy - 3x + 4xy \\ & = 3x + 12xy \end{aligned}$$

$$\begin{aligned} \textcircled{7} \quad & x^2y + 2xy^2 - 3x^2y + xy^2 \\ & = -2x^2y + 3xy^2 \end{aligned}$$

$$\begin{aligned} \textcircled{8} \quad & 3a^2 + 2a - a^2 - a - 5 \\ & = 2a^2 + a - 5 \end{aligned}$$

$$\begin{aligned} \textcircled{9} \quad & -\frac{5}{8}x - y + \frac{y}{3} - \frac{x}{4} \\ & = -\frac{5}{8}x - \frac{2}{8}x - \frac{3}{3}y + \frac{y}{3} \\ & = -\frac{7}{8}x - \frac{2}{3}y \end{aligned}$$

$$\begin{aligned} \textcircled{10} \quad & -a + \frac{2}{3}b - 3 - \frac{2}{5}a - \frac{b}{2} \\ & = -\frac{5}{5}a - \frac{2}{5}a + \frac{4}{6}b - \frac{3b}{6} - 3 \\ & = -\frac{7}{5}a + \frac{1}{6}b - 3 \end{aligned}$$

# 『数が苦』を『数楽』に その2

2年 組 番 氏名

---

## 多項式の加法2 [(多項式) + (多項式)]

◎ 次の計算をなさい。

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

$$\begin{aligned} \textcircled{2} \quad & (2a^2 + 3a - 12) + (a^2 - 2a + 8) \\ & = 2a^2 + a^2 + 3a - 2a - 12 + 8 \\ & = 3a^2 + a - 4 \end{aligned}$$

$$\begin{aligned} \textcircled{3} \quad & (3a - 4b + 6) + (-3a - 2b - 7) \\ & = 3a - 3a - 4b - 2b + 6 - 7 \\ & = -6b - 1 \end{aligned}$$

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

$$\begin{array}{r} \textcircled{5} \quad x^2 - 4x - 7 \\ +) -3x^2 + 10x - 4 \\ \hline -2x^2 + 6x - 11 \end{array}$$

◎ 次の2つの式をたしなさい。

$$\begin{aligned} \textcircled{6} \quad & 5x - 2y, \quad 4x + 7y \\ & = (5x - 2y) + (4x + 7y) \\ & = 5x + 4x - 2y + 7y \\ & = 9x + 5y \end{aligned}$$

$$\begin{aligned} \textcircled{7} \quad & 3a - 2b, \quad 5a + 4b \\ & = (3a - 2b) + (5a + 4b) \\ & = 3a + 5a - 2b + 4b \\ & = 8a + 2b \end{aligned}$$

$$\begin{aligned} \textcircled{8} \quad & 4x - 3y, \quad 3x + 4y \\ & = (4x - 3y) + (3x + 4y) \\ & = 4x + 3x - 3y + 4y \\ & = 7x + y \end{aligned}$$

$$\begin{aligned} \textcircled{9} \quad & -2x + 3y, \quad -3x - 7y \\ & = (-2x + 3y) + (-3x - 7y) \\ & = -2x - 3x + 3y - 7y \\ & = -5x - 4y \end{aligned}$$

$$\begin{aligned} \textcircled{10} \quad & 2x - 3y - 5, \quad 3x - 4y + 6 \\ & = (2x - 3y - 5) + (3x - 4y + 6) \\ & = 2x + 3x - 3y - 4y - 5 + 6 \\ & = 5x - 7y + 1 \end{aligned}$$

# 『数が苦』を『数楽』に その3

2年 組 番 氏名

---

多項式の減法 [(多項式) - (多項式)]

◎ 次の計算をなさい。

$$\begin{aligned} \textcircled{1} \quad (8x + 4y) - (2x - 5y) \\ = 8x + 4y - 2x + 5y \\ = 6x + 9y \end{aligned}$$

$$\begin{aligned} \textcircled{2} \quad (6x - 5y) - (3x - 4y) \\ = 6x - 5y - 3x + 4y \\ = 3x - y \end{aligned}$$

$$\begin{aligned} \textcircled{3} \quad (2a + 3b) - (-4a + 5b) \\ = 2a + 3b + 4a - 5b \\ = 6a - 2b \end{aligned}$$

$$\begin{aligned} \textcircled{4} \quad (4x^2 + 5x - 6) - (7x^2 + 9x - 3) \\ = 4x^2 + 5x - 6 - 7x^2 - 9x + 3 \\ = -3x^2 - 4x - 3 \end{aligned}$$

$$\begin{aligned} \textcircled{5} \quad (2a + 4b - 8) - (-3b + 4 + 7a) \\ = 2a + 4b - 8 + 3b - 4 - 7a \\ = -5a + 7b - 12 \end{aligned}$$

◎ 次の左の式から右の式をひきなさい。

$$\begin{aligned} \textcircled{6} \quad 6a - 3b, \quad 2a - 5b \\ = (6a - 3b) - (2a - 5b) \\ = 6a - 3b - 2a + 5b \\ = 4a + 2b \end{aligned}$$

$$\begin{aligned} \textcircled{7} \quad 3x + 2y, \quad 5x - 6y \\ = (3x + 2y) - (5x - 6y) \\ = 3x + 2y - 5x + 6y \\ = -2x + 8y \end{aligned}$$

$$\begin{aligned} \textcircled{8} \quad -4x + 2y + 3, \quad 4x + 2y - 5 \\ = (-4x + 2y + 3) - (4x + 2y - 5) \\ = -4x + 2y + 3 - 4x - 2y + 5 \\ = -8x + 8 \end{aligned}$$

$$\begin{array}{r} \textcircled{9} \quad 8a + 6b \\ -) 4a - 2b \\ \hline 4a + 8b \end{array} \quad \begin{array}{r} \textcircled{10} \quad 8x - 6y + 4 \\ +) -12x + 3y + 3 \\ \hline -4x - 3y + 7 \end{array}$$

# 『数が苦』を『数楽』に その4

2年 組 番 氏名

---

多項式と数の乗法1 [(多項式) × (数) ①]

◎ 次の計算をなさい。

$$\begin{aligned} \textcircled{1} \quad (x - 2y) \times (-4) \\ = -4x + 8y \end{aligned}$$

$$\begin{aligned} \textcircled{2} \quad 4(6x - 5y) \\ = 24x - 20y \end{aligned}$$

$$\begin{aligned} \textcircled{3} \quad -3(7a + 8b) \\ = -21a - 24b \end{aligned}$$

$$\begin{aligned} \textcircled{4} \quad (4x - 2y) \times (-6) \\ = -24x + 12y \end{aligned}$$

$$\begin{aligned} \textcircled{5} \quad \left(\frac{x}{3} - \frac{y}{4}\right) \times 12 \\ = \frac{x}{3} \times 12 - \frac{y}{4} \times 12 \\ = 4x - 3y \end{aligned}$$

$$\begin{aligned} \textcircled{6} \quad -\frac{1}{5}(10a - 15b) \\ = -\frac{10}{5}a + \frac{15}{5}b \\ = -2a + 3b \end{aligned}$$

$$\begin{aligned} \textcircled{7} \quad -8(-x + 4y + 3) \\ = 8x - 32y - 24 \end{aligned}$$

$$\begin{aligned} \textcircled{8} \quad \frac{2}{3}(6a - 3b + 12) \\ = 4a - 2b + 8 \end{aligned}$$

$$\begin{aligned} \textcircled{9} \quad (4x^2 + 12x - 8) \times \left(-\frac{1}{4}\right) \\ = -\frac{4}{4}x^2 - \frac{12}{4}x + \frac{8}{4} \\ = -x^2 - 3x + 2 \end{aligned}$$

$$\begin{aligned} \textcircled{10} \quad \frac{1}{9}(-6a - 18b) \\ = -\frac{6}{9}a - \frac{18}{9}b \\ = -\frac{2}{3}a - 2b \end{aligned}$$

$$\begin{aligned} \textcircled{11} \quad (-2a + 3b - 1) \times \left(-\frac{5}{6}\right) \\ = \frac{10}{6}a - \frac{15}{6}b + \frac{5}{6} \\ = \frac{5}{3}a - \frac{5}{2}b + \frac{5}{6} \end{aligned}$$

$$\begin{aligned} \textcircled{12} \quad -\frac{3}{4}(-6x + 4y + 2) \\ = \frac{9}{2}x - 3y - \frac{3}{2} \end{aligned}$$

# 『数が苦』を『数楽』に その5

2年 組 番 氏名

---

多項式と数の乗法2 [ (多項式) × (数) ② ]

◎ 次の計算をなさい。

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

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

$$\begin{aligned} \textcircled{2} \quad & 2(2x + 4y) - 3(5x - 3y) \\ &= 4x + 8y - 15x + 9y \\ &= -11x + 17y \end{aligned}$$

$$\begin{aligned} \textcircled{4} \quad & 4(3x + 2y) + 5(x - 3y) \\ &= 12x + 8y + 5x - 15y \\ &= 17x - 7y \end{aligned}$$

$$\begin{aligned} \textcircled{5} \quad & 3(5m - 2n) - 2(2m + 4n) \\ &= 15m - 6n - 4m - 8n \\ &= 11m - 14n \end{aligned}$$

$$\begin{aligned} \textcircled{6} \quad & 5(x - 4y + 3) + 2(x + 3y - 1) \\ &= 5x - 20y + 15 + 2x + 6y - 2 \\ &= 7x - 14y + 13 \end{aligned}$$

$$\begin{aligned} \textcircled{7} \quad & 4(a + 5b - 2) - 3(a - b - 3) \\ &= 4a + 20b - 8 - 3a + 3b + 9 \\ &= a + 23b + 1 \end{aligned}$$

$$\begin{aligned} \textcircled{8} \quad & 8x + \frac{1}{3}(12x - 15y) \\ &= 8x + 4x - 5y \\ &= 12x - 5y \end{aligned}$$

$$\begin{aligned} \textcircled{9} \quad & 7a - \frac{1}{3}(6a - 3b) \\ &= 7a - 2a + b \\ &= 5a + b \end{aligned}$$

$$\begin{aligned} \textcircled{10} \quad & -4(4a - 5b) - 6(-8a + 6b - 1) \\ &= -16a + 20b + 48a - 36b + 6 \\ &= 32a - 16b + 6 \end{aligned}$$

# 『数が苦』を『数楽』に その6

2年 組 番 氏名

---

## 多項式と数の除法1 [(多項式) ÷ (数)]

◎ 次の計算をなさい。

$$\begin{aligned} \textcircled{1} \quad (8x + 20y) \div 4 \\ = 2x + 5y \end{aligned}$$

$$\begin{aligned} \textcircled{2} \quad (-6x + 9y) \div 3 \\ = -2x + 3y \end{aligned}$$

$$\begin{aligned} \textcircled{3} \quad (-15x - 40y) \div (-5) \\ = 3x + 8y \end{aligned}$$

$$\begin{aligned} \textcircled{4} \quad (16x - 8y) \div (-8) \\ = -2x + y \end{aligned}$$

$$\begin{aligned} \textcircled{5} \quad (72a + 45b) \div 9 \\ = 8a + 5b \end{aligned}$$

$$\begin{aligned} \textcircled{6} \quad (-6x + 12y + 3) \div 3 \\ = -2x + 4y + 1 \end{aligned}$$

$$\begin{aligned} \textcircled{7} \quad (-9a - 27b + 18) \div (-9) \\ = a + 3b - 2 \end{aligned}$$

$$\begin{aligned} \textcircled{8} \quad (2a - 8b - 4) \div \frac{1}{2} \\ = (2a - 8b - 4) \times 2 \\ = 4a - 16b - 8 \end{aligned}$$

$$\begin{aligned} \textcircled{9} \quad (2a - 6b + 2) \div \frac{2}{3} \\ = (2a - 6b + 2) \times \frac{3}{2} \\ = 3a - 9b + 3 \end{aligned}$$

$$\begin{aligned} \textcircled{10} \quad (3x^2 - 24x + 12) \div (-3) \\ = -x^2 + 8x - 4 \end{aligned}$$

$$\begin{aligned} \textcircled{11} \quad (6ab + 4b - 12) \div \left(-\frac{2}{3}\right) \\ = (6ab + 4b - 12) \times \left(-\frac{3}{2}\right) \\ = -9ab - 6b + 18 \end{aligned}$$

$$\begin{aligned} \textcircled{12} \quad \left(3x - \frac{9}{4}y - \frac{1}{2}\right) \div (-3) \\ = \left(3x - \frac{9}{4}y - \frac{1}{2}\right) \times \left(-\frac{1}{3}\right) \\ = -x + \frac{3}{4}y + \frac{1}{6} \end{aligned}$$

# 『数が苦』を『数楽』に その7

2年 組 番 氏名

---

多項式と数の除法2 [ 分数をふくむ式の計算 ]

◎ 次の計算をなさい。

$$\begin{aligned} \textcircled{1} \quad & \frac{6x-10y}{3} - 3x \\ & = \frac{6x-10y}{3} - \frac{9}{3}x = \frac{-3x-10y}{3} \end{aligned}$$

$$\begin{aligned} \textcircled{2} \quad & \frac{2a+b}{3} + \frac{a}{2} \\ & = \frac{4a+2b}{6} + \frac{3a}{6} = \frac{7a+2b}{6} \end{aligned}$$

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

$$\begin{aligned} \textcircled{4} \quad & \frac{x-3y}{2} - \frac{x+y}{3} \\ & = \frac{3x-9y}{6} - \frac{2x+2y}{6} = \frac{x-11y}{6} \end{aligned}$$

$$\begin{aligned} \textcircled{5} \quad & \frac{x-y}{3} - \frac{x-3y}{6} \\ & = \frac{2x-2y}{6} - \frac{x-3y}{6} \\ & = \frac{x+y}{6} \end{aligned}$$

$$\begin{aligned} \textcircled{6} \quad & \frac{4x-3y}{5} + \frac{x+y}{2} \\ & = \frac{8x-6y}{10} + \frac{5x+5y}{10} \\ & = \frac{13x-y}{10} \end{aligned}$$

$$\begin{aligned} \textcircled{7} \quad & \frac{a+2b}{4} + \frac{2a-b}{8} \\ & = \frac{2a+4b}{8} + \frac{2a-b}{8} = \frac{4a+3b}{8} \end{aligned}$$

$$\begin{aligned} \textcircled{8} \quad & \frac{3x-5y}{2} - \frac{4x-3y}{3} \\ & = \frac{9x-15y}{6} - \frac{8x-6y}{6} = \frac{x-9y}{6} \end{aligned}$$

$$\begin{aligned} \textcircled{9} \quad & \frac{3a-b}{3} - \frac{3a-2b}{4} \\ & = \frac{12a-4b}{12} - \frac{9a-6b}{12} \\ & = \frac{3a+2b}{12} \end{aligned}$$

$$\begin{aligned} \textcircled{10} \quad & \frac{x+y}{2} - \frac{3x+y}{7} \\ & = \frac{7x+7y}{14} - \frac{6x+2y}{14} \\ & = \frac{x+5y}{14} \end{aligned}$$

# 『数が苦』を『数楽』に その8

2年 組 番 氏名

---

単項式の乗法1 [(単項式) × (単項式)]

◎ 次の計算をなさい。

$$\begin{aligned} \textcircled{1} \quad & 3a \times 4b \\ & = 12ab \end{aligned}$$

$$\begin{aligned} \textcircled{2} \quad & (-6x) \times 7y \\ & = -42xy \end{aligned}$$

$$\begin{aligned} \textcircled{3} \quad & x \times 4y \\ & = 4xy \end{aligned}$$

$$\begin{aligned} \textcircled{4} \quad & 4x \times (-8y) \\ & = -32xy \end{aligned}$$

$$\begin{aligned} \textcircled{5} \quad & (-5a) \times (-3b) \\ & = 15ab \end{aligned}$$

$$\begin{aligned} \textcircled{6} \quad & 9x \times \frac{1}{3}y \\ & = 3xy \end{aligned}$$

$$\begin{aligned} \textcircled{7} \quad & \left(-\frac{a}{3}\right) \times 20b \\ & = -\frac{20}{3}ab \end{aligned}$$

$$\begin{aligned} \textcircled{8} \quad & (-7abc) \times 2c \\ & = -14abc \end{aligned}$$

$$\begin{aligned} \textcircled{9} \quad & 12ab \times \left(-\frac{1}{3}a\right) \\ & = -4a^2b \end{aligned}$$

$$\begin{aligned} \textcircled{10} \quad & \frac{2}{3}xy \times \frac{1}{2}y \\ & = \frac{1}{3}xy^2 \end{aligned}$$

$$\begin{aligned} \textcircled{11} \quad & (-4x) \times xy \\ & = -4x^2y \end{aligned}$$

$$\begin{aligned} \textcircled{12} \quad & (-2xy) \times \left(-\frac{3}{8}y\right) \\ & = \frac{3}{4}xy^2 \end{aligned}$$



# 『数が苦』を『数楽』に その9

2年 組 番 氏名

---

## 単項式の乗法2 [累乗]

◎ 次の計算をなさい。

$$\begin{aligned} \textcircled{1} \quad 6a \times (-3a) \\ = -18a^2 \end{aligned}$$

$$\begin{aligned} \textcircled{2} \quad (-4x)^2 \\ = 16x^2 \end{aligned}$$

$$\begin{aligned} \textcircled{3} \quad (-5x) \times 3x \\ = -15x^2 \end{aligned}$$

$$\begin{aligned} \textcircled{4} \quad (-9a)^2 \\ = 81a^2 \end{aligned}$$

$$\begin{aligned} \textcircled{5} \quad 5ab^2 \times (-2a) \\ = -10a^2b^2 \end{aligned}$$

$$\begin{aligned} \textcircled{6} \quad 3a^2b \times 2ab \\ = 6a^3b^2 \end{aligned}$$

$$\begin{aligned} \textcircled{7} \quad (-3x)^2 \times xy \\ = 9x^2 \times xy \\ = 9x^3y \end{aligned}$$

$$\begin{aligned} \textcircled{8} \quad \frac{5}{2}x \times (-5x)^2 \\ = \frac{5}{2}x \times 25x^2 \\ = \frac{125}{2}x^3 \end{aligned}$$

$$\begin{aligned} \textcircled{9} \quad 2xy \times (-y)^2 \\ = 2xy^3 \end{aligned}$$

$$\begin{aligned} \textcircled{10} \quad (-2xy)^2 \times \left(-\frac{3}{8}y\right) \\ = 4x^2y^2 \times \left(-\frac{3}{8}y\right) \\ = -\frac{3}{2}x^2y^3 \end{aligned}$$

$$\begin{aligned} \textcircled{11} \quad (-2a)^2 \times (-4b)^2 \\ = 4a^2 \times 16b^2 \\ = 64a^2b^2 \end{aligned}$$

$$\begin{aligned} \textcircled{12} \quad (2a)^3 \\ = 8a^3 \end{aligned}$$

# 『数が苦』を『数楽』に その10

2年 組 番 氏名

---

単項式の除法1 [(単項式)  $\div$  (単項式)]

◎ 次の計算をなさい。

$$\begin{aligned} \textcircled{1} \quad 6ab \div 3b \\ = 2a \end{aligned}$$

$$\begin{aligned} \textcircled{2} \quad 12xy \div 4y \\ = 3x \end{aligned}$$

$$\begin{aligned} \textcircled{3} \quad 20x \div (-5x) \\ = -4 \end{aligned}$$

$$\begin{aligned} \textcircled{4} \quad 15x^2 \div 5x \\ = 3x \end{aligned}$$

$$\begin{aligned} \textcircled{5} \quad (-8x^3) \div (-2x) \\ = 4x^2 \end{aligned}$$

$$\begin{aligned} \textcircled{6} \quad 9x^2 \div (-6x) \\ = -\frac{3}{2}x \end{aligned}$$

$$\begin{aligned} \textcircled{7} \quad -10xy^2 \div 5xy \\ = -2y \end{aligned}$$

$$\begin{aligned} \textcircled{8} \quad -8a^2b \div 2ab \\ = -4a \end{aligned}$$

$$\begin{aligned} \textcircled{9} \quad (-3x)^2 \div 12x \\ = 9x^2 \div 12x \\ = \frac{3}{4}x \end{aligned}$$

$$\begin{aligned} \textcircled{10} \quad (-6a^2b^3) \div (2ab)^2 \\ = (-6a^2b^3) \div 4a^2b^2 \\ = -\frac{3}{2}b \end{aligned}$$

$$\begin{aligned} \textcircled{11} \quad 27ab^2 \div (-9ab) \\ = -3b \end{aligned}$$

$$\begin{aligned} \textcircled{12} \quad 12a^3 \div 3a \\ = 4a^2 \end{aligned}$$

# 『数が苦』を『数楽』に その 11

2年 組 番 氏名

---

単項式の除法 2 [ 分数をふくむ単項式の除法 ]

◎ 次の計算をなさい。

$$\begin{aligned} \textcircled{1} \quad 6ab \div \frac{3}{2}b \\ = 6ab \times \frac{2}{3b} = 4a \end{aligned}$$

$$\begin{aligned} \textcircled{2} \quad 3x^2 \div \frac{x}{3} \\ = 3x^2 \times \frac{3}{x} = 9x \end{aligned}$$

$$\begin{aligned} \textcircled{3} \quad 2xy \div \frac{x}{4} \\ = 2xy \times \frac{4}{x} = 8y \end{aligned}$$

$$\begin{aligned} \textcircled{4} \quad 4ab \div \frac{8}{7}b \\ = 4ab \times \frac{7}{8b} = \frac{7}{2}a \end{aligned}$$

$$\begin{aligned} \textcircled{5} \quad 5x^2y \div \left(-\frac{5}{2}y\right) \\ = 5x^2y \times \left(-\frac{2}{5y}\right) \\ = -2x^2 \end{aligned}$$

$$\begin{aligned} \textcircled{6} \quad \frac{5}{9}ab^2 \div \left(-\frac{5}{3}b\right) \\ = \frac{5}{9}ab^2 \times \left(-\frac{3}{5b}\right) \\ = -\frac{1}{3}ab \end{aligned}$$

$$\begin{aligned} \textcircled{7} \quad \left(-\frac{a^2}{2}\right) \div \frac{a}{4} \\ = \left(-\frac{a^2}{2}\right) \times \frac{4}{a} = -2a \end{aligned}$$

$$\begin{aligned} \textcircled{8} \quad \frac{xy^2}{3} \div \frac{xy}{6} \\ = \frac{xy^2}{3} \times \frac{6}{xy} = 2y \end{aligned}$$

$$\begin{aligned} \textcircled{9} \quad \frac{2}{3}a^2b \div \frac{5}{6}ab \\ = \frac{2}{3}a^2b \times \frac{6}{5ab} \\ = \frac{4}{5}a \end{aligned}$$

$$\begin{aligned} \textcircled{10} \quad \frac{8}{7}x^2y \div \left(-\frac{2}{7}xy\right) \\ = \frac{8}{7}x^2y \times \left(-\frac{7}{2xy}\right) \\ = -4x \end{aligned}$$

# 『数が苦』を『数楽』に その12

2年 組 番 氏名

---

単項式の乗法・除法 [ 乗法と除法が混じった単項式の計算 ]

◎ 次の計算をなさい。

$$\begin{aligned} \textcircled{1} \quad & 6a^2 \times b \div 3a \\ & = \frac{6a^2 \times b}{3a} = 2ab \end{aligned}$$

$$\begin{aligned} \textcircled{2} \quad & x^3 \times x \div x^2 \\ & = \frac{x^3 \times x}{x^2} = x^2 \end{aligned}$$

$$\begin{aligned} \textcircled{3} \quad & (-12xy) \times 2y \div 6y^2 \\ & = -\frac{12xy \times 2y}{6y^2} = -4x \end{aligned}$$

$$\begin{aligned} \textcircled{4} \quad & 12a^2 \div 4a \times (-3a) \\ & = -\frac{12a^2 \times 3a}{4a} = -9a^2 \end{aligned}$$

$$\begin{aligned} \textcircled{4} \quad & 7x \times (-6y^2) \div (-3xy) \\ & = \frac{7x \times 6y^2}{3xy} = 14y \end{aligned}$$

$$\begin{aligned} \textcircled{6} \quad & 28xy \div (-7y) \div 4x \\ & = -\frac{28xy}{7y \times 4x} = -1 \end{aligned}$$

$$\begin{aligned} \textcircled{7} \quad & 16a^2 \times (-2ab^2) \div 4ab \\ & = -\frac{16a^2 \times 2ab^2}{4ab} = -8a^2b \end{aligned}$$

$$\begin{aligned} \textcircled{8} \quad & 6a^2b \div (-3ab) \times 2ab \\ & = -\frac{6a^2b \times 2ab}{3ab} = -4a^2b \end{aligned}$$

$$\begin{aligned} \textcircled{9} \quad & 4x^3 \div (-2x) \times (3x)^2 \\ & = -\frac{4x^3 \times 9x^2}{2x} = -18x^4 \end{aligned}$$

$$\begin{aligned} \textcircled{10} \quad & 18xy \times x^2y \div (-3x)^2 \\ & = \frac{18xy \times x^2y}{9x^2} = 2xy^2 \end{aligned}$$

# 『数が苦』を『数楽』に その13

2年 組 番 氏名

---

等式の変形 [ 等式の変形をする ]

◎ 次の式を[ ]の中の文字について解きなさい。

①  $y = 12 - 4x$  [  $x$  ]

$$4x = -y + 12$$

$$x = -\frac{1}{4}y + 3$$

②  $6x + 4y = 10$  [  $y$  ]

$$4y = -6x + 10$$

$$y = -\frac{3}{2}x + \frac{5}{2}$$

③  $3x + 2y = 12$  [  $x$  ]

$$3x = -2y + 12$$

$$x = -\frac{2}{3}y + 4$$

④  $-3x + 5y + 10 = 0$  [  $y$  ]

$$5y = 3x - 10$$

$$y = \frac{3}{5}x - 2$$

⑤  $m = \frac{a+b}{3}$  [  $b$  ]

$$\frac{a+b}{3} = m$$

$$a + b = 3m \quad \boxed{b = 3m - a}$$

⑥  $c = ab$  [  $a$  ]

$$ab = c$$

$$\boxed{a = \frac{c}{b}}$$

⑦  $2(x+y) = 30$  [  $y$  ]

$$x + y = 15$$

$$\boxed{y = -x + 15}$$

⑧  $V = \frac{1}{3}\pi r^2 h$  [  $h$  ]

$$\frac{1}{3}\pi r^2 h = V$$

$$\pi r^2 h = 3V$$

$$\boxed{h = \frac{3V}{\pi r^2}}$$

⑨  $S = \frac{1}{2}h(a+b)$  [  $a$  ]

$$\frac{1}{2}h(a+b) = S \quad h(a+b) = 2S$$

$$a + b = \frac{2S}{h} \quad \boxed{a = \frac{2S}{h} - b}$$

⑩  $a = \frac{3b+5c}{4}$  [  $c$  ]

$$\frac{3b+5c}{4} = a \quad 3b+5c = 4a$$

$$5c = 4a - 3b \quad \boxed{c = \frac{4}{5}a - \frac{3}{5}b}$$