



# 中学2年生の数学(1)

【1】 次の計算をなさい。

【1】の復習「多項式の計算」▶



$$\begin{aligned} (1) \quad (2a-b)-(6a-5b) &= 2a-b-6a+5b \\ &= 2a-6a-b+5b \\ &= -4a+4b \end{aligned}$$

$$\begin{aligned} (2) \quad -5(x-4y) &= (-5) \times x + (-5) \times (-4y) \\ &= -5x+20y \end{aligned}$$

$$\begin{aligned} (3) \quad 4(3x-2y)-7(2x-y) &= 12x-8y-14x+7y \\ &= 12x-14x-8y+7y \\ &= -2x-y \end{aligned}$$

$$\begin{aligned} (4) \quad (14x-21y) \div (-7) &= \frac{14x}{-7} - \frac{21y}{-7} \\ &= -2x+3y \end{aligned}$$

$$\begin{aligned} (5) \quad 3x-y+\frac{x+4y}{3} &= \frac{3(3x-y)+x+4y}{3} \\ &= \frac{9x-3y+x+4y}{3} \\ &= \frac{9x+x-3y+4y}{3} \\ &= \frac{10x+y}{3} \end{aligned}$$

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

【2】 次の計算をなさい。

【2】【3】の復習「単項式の計算」▶



$$(1) \quad 6a \times (-3bc) = 6 \times (-3) \times a \times b \times c = -18abc$$

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

$$(3) \quad 8xy \div 2x = 8xy \times \frac{1}{2x} = 4y$$

$$(4) \quad 24x^2y \div (-9xy) = 24x^2y \times \left(-\frac{1}{9xy}\right) = -\frac{8}{3}x$$

$$(5) \quad 14x^3 \div \left(-\frac{2}{3}x\right) = 14x^3 \times \left(-\frac{3}{2x}\right) = -21x^2$$

$$(6) \quad \left(-\frac{2}{3}bc^2\right) \div \left(-\frac{5}{3}c\right) = \left(-\frac{2}{3}bc^2\right) \times \left(-\frac{3}{5c}\right) = \frac{2}{5}bc$$

$$(7) \quad 9y^3 \div 3y \times 4x = \frac{9y^3 \times 4x}{3y} = 12xy^2$$

$$\begin{aligned} (8) \quad 8ab^2 \times \left(-\frac{1}{4}a\right) \div 2ab &= 8ab^2 \times \left(-\frac{1}{4}a\right) \times \frac{1}{2ab} \\ &= -ab \end{aligned}$$

【3】  $x = -2, y = 4$  のとき、次の式の値を求めなさい。

$$\begin{aligned} (1) \quad 2(3x+y)-3(2x+4y) &= 6x-6x+2y-12y \\ &= -10y \end{aligned}$$

$$\begin{aligned} (2) \quad 28x^2y^2 \div (-2y) \div 7x &= \frac{28x^2y^2}{(-2y) \times 7x} \\ &= -2xy \end{aligned}$$

$-10y$  に値を代入して、  
 $(-10) \times 4 = -40$

$-2xy$  に値を代入して、  
 $(-2) \times (-2) \times 4 = 16$

答え           -40          

答え           16