

授業(4)

< やってみよう > 解説

① $5(x+3y)$

$$\begin{aligned}
 &= 5 \times (x+3y) \\
 &= \underline{5 \times x + 5 \times 3y} \\
 &= 5x + 15y
 \end{aligned}$$

$\left\{ \begin{array}{l} \times \text{が省略} \\ \text{されている。} \\ 5 \text{を} x \text{と} 3y \text{に} \\ \text{分配する} \\ \leftarrow \text{それぞれ} \text{かけ算} \end{array} \right.$

② $-7(-2x+3y)$

$$\begin{aligned}
 &= -7 \times (-2x+3y) \\
 &= \underline{-7 \times (-2x) - 7 \times 3y} \\
 &= 14x - 21y
 \end{aligned}$$

③ $6\left(\frac{a}{3} - \frac{b}{2}\right)$

$$\begin{aligned}
 &= 6 \times \left(\frac{a}{3} - \frac{b}{2}\right) \\
 &= \underline{\cancel{6}^2 \times \frac{a}{\cancel{3}_1}} + \underline{\cancel{6}^3 \times \left(-\frac{b}{\cancel{2}_1}\right)} \\
 &= 2a - 3b
 \end{aligned}$$

④ $(-4x-6y+10) \times \left(-\frac{1}{2}\right)$

$$\begin{aligned}
 &= \underline{-\cancel{4}^2 x \times \left(-\frac{1}{\cancel{2}_1}\right)} - \underline{\cancel{6}^3 y \times \left(-\frac{1}{\cancel{2}_1}\right)} + \underline{10 \times \left(-\frac{1}{\cancel{2}_1}\right)} \\
 &= 2x + 3y - 5
 \end{aligned}$$

< やってみよう > 解説

① $(12x-20y) \div 4$

$$\begin{aligned}
 &= (12x-20y) \times \frac{1}{4} \\
 &= \underline{12x \times \frac{1}{\cancel{4}_1}} - \underline{20y \times \frac{1}{\cancel{4}_1}} \\
 &= 3x - 5y
 \end{aligned}$$

$\left\{ \begin{array}{l} \div \rightarrow \times \text{に} \text{変} \text{換} \\ \text{逆数} \text{に} \text{変} \text{換} \\ \frac{1}{4} \text{を} \\ 12x \text{と} -20y \text{に} \\ \text{分配} \text{する} \\ \leftarrow \text{約分} \text{する} \end{array} \right.$

② $(15x^2-5x+30) \div (-5)$

$$\begin{aligned}
 &= (15x^2-5x+30) \times \left(-\frac{1}{5}\right) \\
 &= \underline{\cancel{15}^3 x^2 \times \left(-\frac{1}{\cancel{5}_1}\right)} - \underline{\cancel{5}^1 x \times \left(-\frac{1}{\cancel{5}_1}\right)} + \underline{\cancel{30}^6 \times \left(-\frac{1}{\cancel{5}_1}\right)} \\
 &= -3x^2 + x - 6
 \end{aligned}$$

③ $(4x+2y) \div \frac{1}{3}$

$$\begin{aligned}
 &= (4x+2y) \times \underline{3} \\
 &= 4x \times 3 + 2y \times 3 \\
 &= 12x + 6y
 \end{aligned}$$

$\left\{ \begin{array}{l} \frac{1}{3} \text{の逆数は} \\ \frac{3}{1} = 3 \end{array} \right.$

④ $\left(\frac{7}{2}x - \frac{7}{4}y\right) \div \frac{7}{4}$

$$\begin{aligned}
 &= \left(\frac{7x}{2} - \frac{7y}{4}\right) \times \frac{4}{7} \\
 &= \underline{\cancel{7}^1 x \times \frac{\cancel{4}^2}{\cancel{2}_1}} - \underline{\cancel{7}^1 y \times \frac{\cancel{4}^1}{\cancel{4}_1}} \\
 &= 2x - y
 \end{aligned}$$