

第8回

文字式の乗除の計算は
どうやるのだろうか

例1



交換法則

(1) $2x \times 5$

$$\begin{aligned} & 2 \times x \times 5 \\ &= 2 \times 5 \times x \\ &= 10 \times x \\ &= 10x \end{aligned}$$

$10x$

(2) $6x \times (-3)$

$$\begin{aligned} & 6 \times x \times (-3) \\ &= 6 \times (-3) \times x \\ &= -18 \times x \\ &= -18x \end{aligned}$$

$-18x$

問1

$$(1) 3x \times 2$$

$$\underline{6x}$$

$$(2) -x \times 9$$

$$\underline{-9x}$$

$$(3) -5x \times (-6x)$$

$$\underline{30x^2}$$

$$(4) 14x \times \frac{6}{7}$$

$$\underline{12x}$$

例2

$$(1) 12x \div 3$$


$$a \div b = \frac{a}{b}$$

$$= \frac{12x}{3}$$

$$= \underline{4x}$$

$$(2) 4x \div \left(-\frac{2}{5}\right)$$

$$= 4x \times \left(-\frac{5}{2}\right)$$

$$= \underline{-10x}$$

問2

$$(1) 18x \div 6$$

$$\underline{3x}$$

$$(3) 6x \div \left(-\frac{3}{2}\right)$$

$$\underline{-4x}$$

$$(2) 9x \div \frac{3}{4}$$

$$\underline{12x}$$

$$(4) -3x \div 3$$

$$\underline{-x}$$

例3

$$(1) \ 3(4x + 5)$$

$$\begin{aligned} &= 3 \times 4x + 3 \times 5 \\ &= 12x + 15 \end{aligned}$$

$$= \underline{12x + 15}$$

$$(2) \ \frac{2}{3}(9x - 6)$$

$$\begin{aligned} &= \frac{2}{3} \times 9x - \frac{2}{3} \times 6 \\ &= 6x - 4 \end{aligned}$$

$$= \underline{6x - 4}$$

問3

$$(1) \ 7(5x + 3)$$

$$\underline{35x + 21}$$

$$(2) \ (2x - 9) \times (-10)$$

$$\underline{-20x + 90}$$

$$(3) \ 15\left(\frac{2}{5}x - 10\right)$$

$$\underline{6x - 150}$$

$$(4) \ \left(-x + \frac{2}{3}\right) \times \frac{1}{2}$$

$$-\frac{1}{2}x + \frac{1}{3}$$

例4

$$(1) (15x + 30) \div 5$$

$$\underline{3x + 6}$$

$$(2) (18x - 21) \div \left(-\frac{3}{2}\right)$$

$$\underline{-12x + 14}$$

問4

$$(1) (6x - 15) \div (-3)$$

$$\underline{-2x + 5}$$

$$(2) (8x + 16) \div \frac{8}{3}$$

$$\underline{3x + 6}$$

例5

$$(1) \quad \frac{5x+3}{2} \times 6$$

$$\underline{15x + 18}$$

$$(2) \quad \frac{6x+7}{8} \times 4$$

$$\frac{6x + 7}{2}$$

問5

$$(1) \quad \frac{2x+3}{4} \times 8$$

$$\underline{4x + 6}$$

$$(2) \quad \frac{-3x-5}{8} \times (-6)$$

$$\frac{9x + 15}{4}$$

例6

$$(1) \quad 3(2x - 1) + 4(x - 7)$$

$$\underline{10x - 31}$$

$$(2) \quad 5(x - 3) - (x + 1)$$

$$\underline{4x - 16}$$

問6

$$(1) \ 8(x - 2) + 4(2x + 3)$$

$$\underline{16x - 4}$$

$$(2) \ 7(x - 1) - 9(x - 2)$$

$$\underline{-2x - 11}$$

$$(3) \ 3(-4a - 1) - 2(3 - 6a)$$

$$\underline{-9}$$

$$(4) \ \frac{1}{2}(2x - 4) - 3(x + 1)$$

$$\underline{-2x - 5}$$

例7

$$(1) \frac{3x+1}{2} + \frac{x-2}{3}$$

$$\frac{11x-1}{6}$$

$$(3) \frac{2x-3}{2} - \frac{3-2x}{4}$$

$$\frac{6x-9}{4}$$

$$(2) \frac{2x+1}{3} - \frac{x-3}{2}$$

$$\frac{x+11}{6}$$

$$(4) \frac{3x-1}{6} - \frac{2x-1}{4}$$

$$-\frac{1}{12}$$