

# 10

・たすきかけによる因数分解

(例) 次の式を因数分解せよ。

(1)  $2x^2 + 7x + 3 = (x+3)(2x+1)$ 、

$$\begin{array}{r} 1 \quad 1 \\ 2 \quad 3 \end{array} \quad \begin{array}{r} 2 \\ 3 \\ \hline 5 \\ \text{一致せず} \end{array} \quad \begin{array}{r} 1 \quad 3 \\ 2 \quad 1 \end{array} \quad \begin{array}{r} 6 \\ 1 \\ \hline 7 \\ \text{一致} \end{array}$$

(2)  $3x^2 - 10x + 8 = (x-2)(3x-4)$ 、

$$\begin{array}{r} 1 \quad -1 \\ 3 \quad -8 \end{array} \quad \begin{array}{r} -3 \\ -8 \\ \hline -11 \\ \text{一致せず} \end{array} \quad \begin{array}{r} 1 \quad -2 \\ 3 \quad -4 \end{array} \quad \begin{array}{r} -6 \\ -4 \\ \hline -10 \\ \text{一致} \end{array}$$

(3)  $5x^2 - 7x - 6 = (x-2)(5x+3)$ 、

$$\begin{array}{r} 1 \quad 2 \\ 5 \quad -3 \end{array} \quad \begin{array}{r} 10 \\ -3 \\ \hline 7 \\ \text{一致せず} \end{array} \quad \begin{array}{r} 1 \quad -2 \\ 5 \quad 3 \end{array} \quad \begin{array}{r} -10 \\ 3 \\ \hline -7 \\ \text{一致} \end{array}$$

(4)  $6x^2 - 5xy - 6y^2 = (2x-3y)(3x+2y)$ 、

$$\begin{array}{r} 2 \quad -3y \\ 3 \quad 2y \end{array} \quad \begin{array}{r} -9y \\ 4y \\ \hline -5y \\ \text{一致} \end{array}$$

(5)  $abx^2 - (a^2 + b^2)x + ab = (ax-b)(bx-a)$ 、

$$\begin{array}{r} a \quad -b \\ b \quad -a \end{array} \quad \begin{array}{r} -b^2 \\ -a^2 \\ \hline -(a^2 + b^2) \\ \text{一致} \end{array}$$

(参考) なぜ、この方法(たすきかけ)で上手くいくのか？

$$4 \quad \underline{ac}x^2 + (\underline{ad+bc})x + \underline{bd} = (ax+b)(cx+d)$$

$$\begin{array}{r} a \quad b \\ c \quad d \end{array} \quad \begin{array}{r} bc \\ ad \\ \hline ad+bc \end{array}$$

一致するような a, b, c, d  
の組を見つける