

# 等式の変形 1

年 組 番・氏名

◆次の等式を、[ ]の中の文字について解け。

$$\textcircled{1} \quad x + 2y = 5 \quad [x]$$

$$x = 5 - 2y$$

$$\textcircled{2} \quad 3x + y = 9 \quad [y]$$

$$y = 9 - 3x$$

$$\textcircled{3} \quad 2x - 4y = 6 \quad [x]$$

$$\begin{aligned} 2x &= 6 + 4y \\ x &= 3 + 2y \end{aligned}$$

$$\textcircled{4} \quad 6x = 9 - 3y \quad [y]$$

$$\begin{aligned} 3y &= 9 - 6x \\ y &= 3 - 2x \end{aligned}$$

$$\textcircled{5} \quad 5x - y = 10 \quad [x]$$

$$\begin{aligned} 5x &= 10 + y \\ x &= \frac{10 + y}{5} \quad (x = 2 + \frac{y}{5}) \end{aligned}$$

$$\textcircled{6} \quad 2x + 3y = 7 \quad [y]$$

$$\begin{aligned} 3y &= 7 - 2x \\ y &= \frac{7 - 2x}{3} \end{aligned}$$

$$\textcircled{7} \quad V = abc \quad [a]$$

$$\begin{aligned} abc &= V \\ a &= \frac{V}{bc} \end{aligned}$$

$$\textcircled{8} \quad \ell = 2\pi r \quad [r]$$

$$\begin{aligned} 2\pi r &= \ell \\ r &= \frac{\ell}{2\pi} \end{aligned}$$

$$\textcircled{9} \quad S = \frac{1}{2}ah \quad [h]$$

$$\begin{aligned} 2S &= ah \\ ah &= 2S \\ h &= \frac{2S}{a} \end{aligned}$$

$$\textcircled{10} \quad m = \frac{a+b}{2} \quad [a]$$

$$\begin{aligned} 2m &= a + b \\ a + b &= 2m \\ a &= 2m - b \end{aligned}$$

# 等式の変形 2

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◆次の等式を、[ ]の中の文字について解け。

$$\textcircled{1} \quad x - y = 7 \quad [x]$$

$$x = 7 + y$$

$$\textcircled{2} \quad 5x + y = 3 \quad [y]$$

$$y = 3 - 5x$$

$$\textcircled{3} \quad 5x - 10y = 15 \quad [x]$$

$$\begin{aligned} 5x &= 15 + 10y \\ x &= 3 + 2y \end{aligned}$$

$$\textcircled{4} \quad 6x = 8 + 2y \quad [y]$$

$$\begin{aligned} -2y &= 8 - 6x \\ y &= -4 + 3x \end{aligned}$$

$$\textcircled{5} \quad 4x - 5y = 3 \quad [x]$$

$$\begin{aligned} 4x &= 3 + 5y \\ x &= \frac{3 + 5y}{4} \end{aligned}$$

$$\textcircled{6} \quad x + 3y = 5 \quad [y]$$

$$\begin{aligned} 3y &= 5 - x \\ y &= \frac{5 - x}{3} \end{aligned}$$

$$\textcircled{7} \quad S = ab \quad [a]$$

$$\begin{aligned} ab &= S \\ a &= \frac{S}{b} \end{aligned}$$

$$\textcircled{8} \quad S = \pi r^2 h \quad [h]$$

$$\begin{aligned} \pi r^2 h &= S \\ h &= \frac{S}{\pi r^2} \end{aligned}$$

$$\textcircled{9} \quad V = \frac{1}{3}Sh \quad [h]$$

$$\begin{aligned} 3V &= Sh \\ Sh &= 3V \\ h &= \frac{3V}{S} \end{aligned}$$

$$\textcircled{10} \quad m = \frac{x+y+z}{3} \quad [x]$$

$$\begin{aligned} 3m &= x + y + z \\ x + y + z &= 3m \\ x &= 3m - y - z \end{aligned}$$

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