

WS 5-3 (Last Page)

#7

$$6y = 4(y+8)$$

$$6y = (4y) + 32$$

$$\begin{array}{r} 6y \\ -4y \\ \hline 2y \end{array} = \begin{array}{r} (4y) + 32 \\ -4y \\ \hline 32 \end{array}$$

$$\frac{2y}{2} = \frac{32}{2}$$

$$y = -$$

$$y = 16$$

#8

$$2(m+3)+9=-11$$

$$2m+6+9=-11$$

$$2m+15=-11$$

$$\begin{array}{r} -15 \\ -15 \end{array}$$

$$2m = -26$$

$$\frac{2m}{2} = \frac{-26}{2}$$

$$m = -13$$

#7 (Wording)

$$\textcircled{-2}(n+9)=10$$

$$-2n \textcircled{-18} = 10$$

$$\begin{array}{r} +18 \quad +18 \\ \hline \end{array}$$

$$-2n = 28$$

$$\begin{array}{r} \hline -2 \quad -2 \end{array}$$

$$\boxed{n = -14}$$

① Expand the brackets by multiplying -2 into the brackets.

② Isolate $-2n$ by adding 18 to both sides.

③ Isolate n by dividing both sides with -2 .

WS 5-4

$$\#8 \quad \textcircled{v} \quad x - 3 = 5 - x \quad \textcircled{N}$$

$$\begin{array}{r} +3 \quad +3 \\ \hline x = 8 - x \end{array}$$

$$\begin{array}{r} +x \quad +x \\ \hline 2x = 8 \end{array}$$

$$\underline{2x = 8}$$

$$\begin{array}{r} 2 \\ \hline x = 4 \end{array}$$

#11

$$\textcircled{1} 4(3g-5) = -2(46+3g) \textcircled{2}$$
$$12g - 20 = -92 - 6g$$

$$\begin{array}{r} +20 \quad +20 \\ \hline 12g = -72 - 6g \\ +6g \quad +6g \\ \hline 18g = -72 \end{array}$$

$$\frac{18g}{18} = \frac{-72}{18}$$
$$g = -4$$

$$\#1 \quad \frac{a}{5} - \frac{a}{6} = 1 \quad CD = 5 \times 6 = 30$$
$$30 \left(\frac{a}{5} - \frac{a}{6} \right) = 30(1)$$
$$\frac{\cancel{30}^6}{\cancel{1}} \left(\frac{a}{\cancel{5}} \right) - \frac{\cancel{30}_5}{\cancel{1}} \left(\frac{a}{\cancel{6}} \right) = 30(1)$$
$$\underbrace{6a - 5a}_{} = 30$$

a = 30

#4 $\frac{x}{2} + 1 = \frac{2x}{3} - 3$ $CD = 2 \times 3 = 6$

$6\left(\frac{x}{2} + 1\right) = 6\left(\frac{2x}{3} - 3\right)$

$6\left(\frac{x}{2}\right) + 6(1) = 6\left(\frac{2x}{3}\right) - 6(3)$

$3x + 6 = 4x - 18$ (N)

$3x = 4x - 24$

$-4x \quad -4x$

$-x = -24$

$\frac{-x}{-1} = \frac{-24}{-1}$

$x = 24$

$$\#5 \quad \frac{x-2}{4} - \frac{x-7}{3} = 1 \quad (D = 4 \times 3 = 12)$$

$$12 \left(\frac{x-2}{4} - \frac{x-7}{3} \right) = 12(1)$$

$$\frac{3}{1} \left(\frac{x-2}{4} \right) - \frac{4}{1} \left(\frac{x-7}{3} \right) = 12(1)$$

$$3(x-2) - 4(x-7) = 12$$

$$3x - 6 - 4x + 28 = 12$$

$$3x - 4x - 6 + 28 = 12$$

$$-x + 22 = 12$$

$$\frac{-x}{-1} = \frac{-10}{-1}$$

$$x = -10$$

$$\#5(c) \quad \frac{3y-1}{5} - 1 = \frac{2y-4}{3} \quad \begin{array}{l} \text{CD} \\ \downarrow \\ 5 \times 3 \\ = 15 \end{array}$$

$$15 \left(\frac{3y-1}{5} - 1 \right) = 15 \left(\frac{2y-4}{3} \right)$$

$$\cancel{15}^3 \left(\frac{3y-1}{\cancel{5}} - 1 \right) - 15(1) = \cancel{15}^5 \left(\frac{2y-4}{\cancel{3}} \right)$$

$$3(3y-1) - 15(1) = 5(2y-4)$$

$$9y - 3 - 15 = 10y - 20$$

$$\textcircled{V} \quad 9y \quad \textcircled{-18} = 10y - 20 \quad \textcircled{N}$$

$$\quad \quad \quad +18 = \quad \quad \quad +18$$

$$\begin{array}{r} 9y = 10y - 2 \\ -10y \quad -10y \\ \hline \end{array}$$

$$\begin{array}{r} -y = -2 \\ \hline \end{array}$$

$$\begin{array}{r} -y = -2 \\ \hline \quad \quad \quad -1 \\ \hline \end{array}$$

$$\boxed{y=2}$$