



Solving equations

Worksheet 2

Objectives: to practice how to solve equations that include fractions.

Solve the equations below:

$\frac{x}{2} + 1 = 4$ $\begin{array}{r} \cancel{-1} \quad \cancel{-1} \\ \hline \end{array}$ $2 \times \frac{x}{2} = 3 \times 2 \Rightarrow \boxed{x = 6}$	$\frac{x}{5} - 6 = 1$ $\begin{array}{r} \cancel{+6} \quad \cancel{+6} \\ \hline \end{array}$ $5 \times \frac{x}{5} = 7 \times 5$ $\boxed{x = 35}$
$\frac{x}{4} + 3 = -5$ $\begin{array}{r} \cancel{+3} \quad \cancel{-3} \\ \hline \end{array}$ $4 \times \frac{x}{4} = -8 \times 4$ $\boxed{x = -32}$	$\frac{x}{3} - 2 = -1$ $\begin{array}{r} \cancel{+2} \quad \cancel{+2} \\ \hline \end{array}$ $3 \times \frac{x}{3} = 1 \times 3$ $\boxed{x = 3}$
$2 \times \frac{(x+1)}{2} = 5 \times 2$ $\begin{array}{r} \cancel{x+1} \\ \hline \end{array}$ $x + 1 = 10$ $\begin{array}{r} \cancel{-1} \quad \cancel{-1} \\ \hline \end{array}$ $\boxed{x = 9}$	$3 \times \frac{(x-2)}{3} = 4 \times 3$ $\begin{array}{r} \cancel{x-2} \\ \hline \end{array}$ $x - 2 = 12$ $\begin{array}{r} \cancel{+2} \quad \cancel{+2} \\ \hline \end{array}$ $\boxed{x = 14}$
$2 \times \frac{(x+3)}{2} = -1 \times 2$ $\begin{array}{r} \cancel{x+3} \\ \hline \end{array}$ $x + 3 = -2$ $\begin{array}{r} \cancel{+3} \quad \cancel{-3} \\ \hline \end{array}$ $\boxed{x = -5}$	$5 \times \frac{(x-4)}{5} = -2 \times 5$ $\begin{array}{r} \cancel{x-4} \\ \hline \end{array}$ $x - 4 = -10$ $\begin{array}{r} \cancel{+4} \quad \cancel{+4} \\ \hline \end{array}$ $\boxed{x = -6}$

$$\frac{(x+2)}{3} + \cancel{5} = 8$$

$$\frac{\cancel{3} \times (x+2)}{\cancel{3}} = 3 \times 3$$

$$x + \cancel{2} = 9$$

$$ + \cancel{2} = 9$$

$$ - 2 = 9 - 2$$

$$x = 7$$

$$\frac{(x+3)}{5} - \cancel{10} = 11$$

$$\frac{\cancel{5} \times (x+3)}{\cancel{5}} = 21 \times 5$$

$$x + \cancel{3} = 105$$

$$ - \cancel{3} = 105 - 3$$

$$x = 102$$

$$\frac{(x-6)}{5} + \cancel{7} = 9$$

$$\cancel{5} \times \frac{(x-6)}{\cancel{5}} = 2 \times 5$$

$$x - \cancel{6} = 10$$

$$ + \cancel{6} = 10 + 6$$

$$x = 16$$

$$\frac{(x-5)}{5} - \cancel{2} = 3$$

$$\cancel{5} \times \frac{(x-5)}{\cancel{5}} = 5 \times 5$$

$$x - 5 = 25$$

$$ + 5 = 25 + 5$$

$$x = 30$$

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

$$\cancel{4} \times \frac{(x+1)}{\cancel{4}} = -1 \times 4$$

$$x + \cancel{1} = -4$$

$$ - \cancel{1} = -4 - 1$$

$$x = -5$$

$$\frac{(x-6)}{7} - \cancel{5} = 15$$

$$\cancel{7} \times \frac{(x-6)}{\cancel{7}} = 20 \times 7$$

$$x - \cancel{6} = 140$$

$$ + \cancel{6} = 140 + 6$$

$$x = 146$$