

A.EF14 Solving Equations

If $3x = 12$ then $x = 4$ This is **solving** an **equation**

equation solution

Exercise 1 Complete

$x + 4 = 20$ <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;">-4</div> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;">-4</div> </div> $x = \underline{\hspace{2cm}}$	$x - 6 = 13$ <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;">+6</div> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;">+6</div> </div> $x = \underline{\hspace{2cm}}$	$5x = 35$ <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;">÷5</div> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;">÷5</div> </div> $x = \underline{\hspace{2cm}}$	$\frac{x}{3} = 4$ <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;">x 3</div> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;">x 3</div> </div> $x = \underline{\hspace{2cm}}$
$x + 17 = 20$ <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;"> </div> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;"> </div> </div> $x = \underline{\hspace{2cm}}$	$x - 6.5 = 13$ <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;"> </div> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;"> </div> </div> $x = \underline{\hspace{2cm}}$	$8x = 56$ <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;"> </div> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;"> </div> </div> $x = \underline{\hspace{2cm}}$	$\frac{x}{4} = 21$ <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;"> </div> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;"> </div> </div> $x = \underline{\hspace{2cm}}$

$3x + 5 = 26$ <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;">-5</div> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;">-5</div> </div> $3x = 21$ <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;">÷3</div> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;">÷3</div> </div> $x = 7$	<div style="border: 1px solid red; padding: 5px; margin-bottom: 10px;"> <p>(x multiplied by three then add five equals twenty six)</p> </div> $\frac{x}{4} + 7 = 17$ <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;">-7</div> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;">-7</div> </div> <div style="border: 1px solid red; padding: 5px;"> <p>(x divided by four then add 7 equals seventeen)</p> </div>
$3x = 21$ <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;">÷3</div> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;">÷3</div> </div> $x = 7$	$\frac{x}{4} = 10$ <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;">x4</div> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;">x4</div> </div> $x = 40$

Exercise 2 Complete

$5x + 8 = 48$ <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;">-8</div> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;">-8</div> </div> $\underline{\hspace{2cm}} x = \underline{\hspace{2cm}}$ <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;"> </div> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;"> </div> </div> $x = \underline{\hspace{2cm}}$	$4x - 5 = 79$ <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;">+5</div> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;">+5</div> </div> $\underline{\hspace{2cm}} x = \underline{\hspace{2cm}}$ <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;"> </div> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;"> </div> </div> $x = \underline{\hspace{2cm}}$	$\frac{x}{3} + 14 = 30$ <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;"> </div> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;"> </div> </div> $\frac{x}{3} = \underline{\hspace{2cm}}$ <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;"> </div> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;"> </div> </div> $x = \underline{\hspace{2cm}}$	$\frac{x}{4} - 27 = 67$ <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;"> </div> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;"> </div> </div> $\frac{x}{4} = \underline{\hspace{2cm}}$ <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;"> </div> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;"> </div> </div> $x = \underline{\hspace{2cm}}$
$6x - 8 = 40$ <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;"> </div> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;"> </div> </div> $\underline{\hspace{2cm}} x = \underline{\hspace{2cm}}$ <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;"> </div> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;"> </div> </div> $x = \underline{\hspace{2cm}}$	$5x + 2 = 68$ <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;"> </div> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;"> </div> </div> $\underline{\hspace{2cm}} x = \underline{\hspace{2cm}}$ <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;"> </div> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;"> </div> </div> $x = \underline{\hspace{2cm}}$	$\frac{x}{10} - 20 = 10$ <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;"> </div> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;"> </div> </div> $\frac{x}{10} = \underline{\hspace{2cm}}$ <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;"> </div> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;"> </div> </div> $x = \underline{\hspace{2cm}}$	$\frac{x}{5} + 27 = 47$ <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;"> </div> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;"> </div> </div> $\frac{x}{5} = \underline{\hspace{2cm}}$ <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;"> </div> <div style="border: 1px solid red; padding: 2px; width: 30px; text-align: center;"> </div> </div> $x = \underline{\hspace{2cm}}$

Equations with brackets

$$3(x + 5) = 63$$

$$\begin{array}{cc} \boxed{\div 3} & \boxed{\div 3} \\ \hline & \end{array}$$

$$x + 5 = 21$$

$$\begin{array}{cc} \boxed{-5} & \boxed{-5} \\ \hline & \end{array}$$

$$x = 16$$

(x add five then multiplied by three equals sixty three)

$$\frac{x+7}{4} = 6$$

$$\begin{array}{cc} \boxed{\times 4} & \boxed{\times 4} \\ \hline & \end{array}$$

$$x + 7 = 24$$

$$\begin{array}{cc} \boxed{-5} & \boxed{-5} \\ \hline & \end{array}$$

$$x = 17$$

(x add 7 then divided by four equals six)

Exercise 3 Complete

$$6(x + 2) = 48$$

$$\begin{array}{cc} \boxed{} & \boxed{} \\ \hline & \end{array}$$

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

$$\begin{array}{cc} \boxed{} & \boxed{} \\ \hline & \end{array}$$

$$x = \underline{}$$

$$4(x - 10) = 84$$

$$\begin{array}{cc} \boxed{} & \boxed{} \\ \hline & \end{array}$$

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

$$\begin{array}{cc} \boxed{} & \boxed{} \\ \hline & \end{array}$$

$$x = \underline{}$$

$$\frac{x+5}{3} = 3$$

$$\begin{array}{cc} \boxed{} & \boxed{} \\ \hline & \end{array}$$

$$x + 5 = \underline{}$$

$$\begin{array}{cc} \boxed{} & \boxed{} \\ \hline & \end{array}$$

$$x = \underline{}$$

$$\frac{x-22}{4} = 9$$

$$\begin{array}{cc} \boxed{} & \boxed{} \\ \hline & \end{array}$$

$$x - 22 = \underline{}$$

$$\begin{array}{cc} \boxed{} & \boxed{} \\ \hline & \end{array}$$

$$x = \underline{}$$

$$7(x - 13) = 42$$

$$\begin{array}{cc} \boxed{} & \boxed{} \\ \hline & \end{array}$$

$$\begin{array}{cc} \boxed{} & \boxed{} \\ \hline & \end{array}$$

$$x = \underline{}$$

$$5(x + 10) = 15$$

$$\begin{array}{cc} \boxed{} & \boxed{} \\ \hline & \end{array}$$

$$\begin{array}{cc} \boxed{} & \boxed{} \\ \hline & \end{array}$$

$$x = \underline{}$$

$$\frac{x-13}{9} = 7$$

$$\begin{array}{cc} \boxed{} & \boxed{} \\ \hline & \end{array}$$

$$\begin{array}{cc} \boxed{} & \boxed{} \\ \hline & \end{array}$$

$$x = \underline{}$$

$$\frac{x-42}{7} = 9$$

$$\begin{array}{cc} \boxed{} & \boxed{} \\ \hline & \end{array}$$

$$\begin{array}{cc} \boxed{} & \boxed{} \\ \hline & \end{array}$$

$$x = \underline{}$$

$$\frac{3(x+7)}{4} = 60$$

$$\begin{array}{cc} \boxed{\times 4} & \boxed{\times 4} \\ \hline & \end{array}$$

$$3(x + 7) = 240$$

$$\begin{array}{cc} \boxed{\div 3} & \boxed{\div 3} \\ \hline & \end{array}$$

$$x + 7 = 80$$

$$\begin{array}{cc} \boxed{-7} & \boxed{-7} \\ \hline & \end{array}$$

$$x = 73$$

Exercise 4 Solve these equations

1) $11x = 134$

2) $\frac{x}{4} + 7 = 17$

3) $12x - 6 = 30$

4) $3x - 8 = 100$

5) $\frac{x}{7} - 7 = 3$

6) $2x - 6 = 7$

7) $3(x - 8) = 12$

8) $\frac{x-7}{7} = -2$

9) $2(x - 6) = 102$

Exercise 5 Solve these equations

1) $\frac{5(x-8)}{4} = 10$

2) $\frac{7(x-7)}{3} = -21$

3) $\frac{2(x-6)}{10} = 102$