

Get this alone
draw a wall

$$3x + 5 = 20$$

opposite →

do stuff to both sides

$$3x = 15$$

$$\div 3$$

$$x = 5$$

by →
of x's

$$7 + 3x = 5x + 13$$

Take away the smallest # of x's

$$7 - 3x = 2x + 13$$

$$-13$$

$$-6 = 5x$$

$$\div 5$$

$$-3/5 = x$$

$$3(x + 2) = 12$$

Multiply by 1/3
get inside

$$3x + 6 = 12$$

$$-6$$

$$3x = 6$$

$$\div 3$$

$$x = 2$$

Solving for x

Get the x alone by "Undoing" it's side

$$3x - 5 = 20$$

$$+5$$

$$3x = 25$$

$$\div 3$$

$$x = 8\frac{1}{3}$$

$$-3x - 5 = -20$$

$$+5$$

$$-3x = -15$$

$$\div -3$$

$$x = 5$$

by →
need

$$7 - 3x = 5x + 13$$

-3x is smaller take it away by +3x

$$7 + 3x = 8x + 13$$

$$-13$$

$$-6 = 5x$$

$$\div 5$$

$$-3/5 = x$$

$$3(x + 2) = x - 18$$

$$3x + 6 = x - 18$$

$$-x$$

$$2x + 6 = -18$$

$$-6$$

$$2x = -24$$

$$\div 2$$

$$x = -12$$

$$3(x + 2) = -15$$

$$3x + 6 = -15$$

$$-6$$

$$3x = -21$$

$$\div 3$$

$$x = -7$$

Steps to Solving

1) Distribute
multiply # (x + #) # rewrite

2) Get x's to one side
find the least x's #
take it away

3) Isolate the variable
feel the onion for

4) Divide by the number of x's

5) Check it

$$4(\overset{3}{x} - 12) = -2\overset{3}{x} - 30$$
$$-30 \quad -30$$

Solve it!

$$4(x - 12) = -2x - 30$$

$$4x - 48 = -2x - 30$$

$$\begin{array}{r} +2x \\ \hline 6x - 48 = -30 \end{array}$$

$$\begin{array}{r} +48 \\ \hline 6x = 18 \end{array}$$

$$\begin{array}{r} :6 \\ \hline x = 3 \end{array}$$

$$\boxed{x = 3}$$