

WARMUP:

$$1. \begin{array}{r|l} 3x - 7 & = 5 \\ +7 & +7 \\ \hline 3x & = 12 \\ \frac{3x}{3} & \frac{12}{3} \\ \hline x & = 4 \end{array}$$

♥
LEAN $x = 4$

$$2. \begin{array}{r|l} x - 20 & = -15 \\ +20 & +20 \\ \hline x & = 5 \cdot 12 \\ \hline x & = 60 \end{array}$$

$$3) \begin{array}{r|l} -40 + 11x & = 15 \\ +40 & +40 \\ \hline 11x & = 55 \\ \frac{11x}{11} & \frac{55}{11} \\ \hline x & = 5 \end{array}$$

$$\begin{array}{c} 4 \\ - \\ \hline 11 \\ - \\ \hline 1 \end{array} \cdot -\frac{1}{11} x = 6 \cdot \begin{array}{c} - \\ \hline 11 \\ - \\ \hline 1 \end{array}$$

$$= \boxed{-66 \text{ !!}}$$

$$5) \begin{array}{r|l} 2 + 7x & = -26 \\ -2 & -2 \\ \hline 7x & = -28 \\ \frac{7x}{7} & \frac{-28}{7} \\ \hline x & = -4 \end{array}$$

$$\begin{array}{r|l}
 -2n + 3 = 9 & \\
 -3 & -3 \\
 \hline
 -2n = 6 & \\
 \frac{-2n}{-2} = \frac{6}{-2} & \\
 \hline
 n = -3 &
 \end{array}$$

$$\begin{array}{r|l}
 -21 = \frac{1}{2}c - 11 & \\
 +11 & +11 \\
 \hline
 -10 = \frac{1}{2}c & \\
 \frac{(-10)(2)}{1} = \frac{1}{2}c(2) & \\
 \hline
 -20 = c & \\
 \hline
 c = -20 &
 \end{array}$$

$$\begin{array}{r|l}
 -2x - 10x + 12 = 18 & \\
 -12x + 12 = 18 & \\
 -12 & -12 \\
 \hline
 -12x = 6 & \\
 \frac{-12x}{-12} = \frac{6}{-12} & \\
 \hline
 -\frac{1}{2} & \\
 \hline
 x = -0.5 &
 \end{array}$$

$$\begin{array}{r|l}
 2(1-x) + 3 = -8 & \\
 2(1) - 2(x) + 3 = -8 & \\
 2 - 2x + 3 = -8 & \\
 +5 - 2x = -8 & \\
 -5 & -5 \\
 \hline
 -2x = -13 & \\
 \frac{-2x}{-2} = \frac{-13}{-2} & \\
 \hline
 x = 6.5 &
 \end{array}$$

$$\begin{array}{l}
 3x = 18 \\
 \frac{3x}{3} = \frac{18}{3} \\
 x = 6 \\
 \\
 5x = 10 \\
 \frac{5x}{5} = \frac{10}{5} \\
 x = 2
 \end{array}$$

$$\begin{array}{r|l}
 -2x = -13 & \\
 \frac{-2x}{-2} = \frac{-13}{-2} & \\
 \hline
 x = 6.5 &
 \end{array}$$

More Examples

$$3(x+1) + 6 = -9$$

$3(x) + 3(1)$

$$3x + 3 + 6 = -9$$

$$3x + 9 = -9$$

$$-9 \quad -9$$

$$3x = -18$$

$$x = -6$$

$$15 = 5 + 4(2d - 3)$$

$4(2d) - 4(3)$

$$15 = 5 + 8d - 12$$

$$15 = 8d - 7$$

+7 +7

$$\frac{22}{8} = \frac{8d}{8}$$

$$2.75 = d$$

$$d = 2.75$$

$$\begin{aligned} 13 &= -2(y-4) + 3y \\ 13 &= -2y + 8 + 3y \\ 13 &= 1y + \cancel{8} \\ 13 &= y + \cancel{-8} \\ \hline 5 &= \frac{1x}{1} = 5 \Downarrow \end{aligned}$$