

1.1 Linear Equations

Day 1 ^①

Ex 1 Solving

Solve $3(2x-4) = 7 - (x+5)$

$$6x - 12 = 7 - x - 5$$

$$6x - 12 = 2 - x$$

$$+x \qquad \qquad \qquad +x$$

$$\begin{array}{r} 6x - 12 = 2 - x \\ +x \qquad \qquad \qquad +x \\ \hline 7x - 12 = 2 \\ +12 \qquad \qquad +12 \\ \hline \end{array}$$

$$\frac{7x}{7} = \frac{14}{7}$$

$x = 2$

Distribute
Combine Like
Terms

→ x's on
Same side

→ #'s Same side

isolate the
variable

1.1

Day 1 (2)

Ex 2 Solve

$$\left(\frac{4}{4}\right) \frac{2x+4}{3} + \left(\frac{6}{6}\right) \frac{1}{2} x = \left(\frac{3}{3}\right) \frac{1}{4} x - \frac{7}{3} \left(\frac{4}{4}\right) \quad \text{LCD} = 12$$

$$12 \left(\frac{8x+16}{12} + \frac{6x}{12} \right) = \left(\frac{3x}{12} - \frac{28}{12} \right) 12$$

$$8x + 16 + 6x = 3x - 28$$

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

$$\frac{12}{3} (2x+4) + \frac{12}{2} (x) = \frac{12}{4} (x) - \frac{12}{3} (7)$$

$$4 (2x+4) + 6x = 3x - 4 (7)$$

$$8x + 16 + 6x = 3x - 28$$

$$\begin{array}{rcl} 14x + 16 & = & 3x - 28 \\ -3x & & -3x \end{array}$$

$$\begin{array}{rcl} 11x + 16 & = & -28 \\ -16 & & -16 \end{array}$$

$$\begin{array}{rcl} 11x & = & -44 \\ 11 & & 11 \end{array}$$

$$x = -4$$

CLT

X's same side

#'s same side

isolate variable