Solving Two-Step Equations

Step 1: Use addition or subtraction to move the number on the same side of the variable.
Step 2: Use multiplication or division to move the number on the same side of the variable.

Directions: Solve each equation.

1. $2x+3=11$

$-3 \quad -3$

$\frac{2x}{2} = \frac{8}{2}$

$\boxed{x=4}$

2. $-2=6y-14$

$+14 \quad +14$

$\frac{12}{6} = \frac{6y}{6}$

$\boxed{2=y \text{ OR } y=2}$

3. $13-4m=25$

$-13 \quad -13$

$\frac{-4m}{-4} = \frac{12}{-4}$

$\boxed{m=-3}$

4. $-6-x=-18$

$+6 \quad +6$

$\frac{-1x}{-1} = \frac{-12}{-1}$

$\boxed{x = 12}$

5. $\frac{x}{12} + \cancel{7} = -3$

$\cancel{+7} \quad -7$

$-3 + -7 = -10$

$(12) \cdot \frac{x}{\cancel{12}} = -10 \cdot (12)$

$\boxed{x = -120}$

6. $\cancel{6} - \frac{t}{6} = 12$

$-\cancel{6} \quad -6$

$(-6) \cdot \frac{t}{-6} = 6 \cdot (-6)$

$\boxed{t = -36}$

7. $\frac{x}{2} - 1\frac{2}{3} = 1\frac{1}{4}$

$\frac{6 \cdot x}{6 \cdot 2} - \frac{5 \cdot 4}{3 \cdot 4} = \frac{5 \cdot 3}{4 \cdot 3}$ LCD = 12

$\frac{6x}{\cancel{12}} - \frac{20}{\cancel{12}} = \frac{15}{\cancel{12}}$

$6x - 2\cancel{0} = 15$

$+\cancel{20} \quad +20$

$$\frac{\cancel{6}x}{\cancel{6}} = \frac{35}{6}$$

$$\boxed{x = 5\frac{5}{6}}$$

$$\begin{array}{r} 5\frac{5}{6} \\ 6\overline{)35} \\ -30 \\ \hline 5 \end{array}$$