

① x is the #  $11x + 1 = 67$

② x is the #  $\frac{x}{2} + 4 = 12$

③ x is the #  $\frac{x+2}{3} = 8$

④ x is the #  $jx + 7 = y$

⑤  $x - 5 = -12$   
 $\begin{array}{r} x - 5 = -12 \\ +5 \quad +5 \\ \hline x = -7 \end{array}$

⑥  $\frac{x}{4} = -5 \cdot 4$   
 $\begin{array}{r} \frac{x}{4} = -5 \cdot 4 \\ \hline x = -20 \end{array}$

⑦  $7 + x = 5$   
 $\begin{array}{r} 7 + x = 5 \\ -7 \quad -7 \\ \hline x = -2 \end{array}$

⑧  $\frac{4}{x} = \frac{5}{12}$  cross multiply b/c the fractions are set equal

$12 \cdot 4 = x \cdot 5$

$\frac{48}{5} = \frac{5x}{5}$

$\boxed{\frac{48}{5} = x}$

⑨  $-40 = 12x + 8$   
 $\begin{array}{r} -40 = 12x + 8 \\ -8 \quad -8 \\ \hline -48 = 12x \end{array}$

$\frac{-48}{12} = \frac{12x}{12}$

$\boxed{-4 = x}$

⑩  $-2p - 3 = -19$   
 $\begin{array}{r} -2p - 3 = -19 \\ +3 \quad +3 \\ \hline -2p = -16 \end{array}$

$\frac{-2p}{-2} = \frac{-16}{-2}$

$\boxed{p = 8}$

11

$$4x + \frac{2}{3} = \frac{5}{6}$$

$$\frac{-2/3}{-2/3} \quad \frac{-2/3}{-2/3}$$

$$\frac{4x}{4} = \frac{1}{6} \div 4$$

$$x = \frac{1}{24}$$

?

$$\frac{5}{6} - \frac{2}{3} \Rightarrow \frac{5}{6} - \frac{4}{6} \Rightarrow \frac{1}{6}$$

$$\frac{1}{6} \div 4 \Rightarrow \frac{1}{6} \cdot \frac{1}{4} \Rightarrow \frac{1}{24}$$

12

$$\frac{7}{4}x + 2 = \frac{11}{6}$$

$$\frac{-2}{-2} \quad \frac{-2}{-2}$$

$$\frac{4}{7} \cdot \frac{7}{4}x = \frac{-1}{6} \cdot \frac{4}{7}$$

$$x = \frac{-4}{42} \text{ which reduces to } x = \frac{-2}{21}$$

?

$$\frac{11}{6} - 2 \Rightarrow \frac{11}{6} - \frac{12}{6} \Rightarrow \frac{-1}{6}$$

13

$$-9 = -11 + \frac{b}{8}$$

$$\frac{+11}{+11}$$

$$8 \cdot 2 = \frac{b}{8} \cdot 8$$

$$16 = b$$

14

$$\frac{2x}{5} + 4 = -10$$

$$\frac{-4}{-4} \quad \frac{-4}{-4}$$

$$\frac{5}{2} \cdot \frac{2x}{5} = \frac{-14}{2} \cdot \frac{5}{2}$$

$$x = \frac{-70}{2} \text{ or } x = -35$$

15

$$3x + 5 = m$$

$$\frac{-5}{-5} \quad \frac{-5}{-5}$$

$$\frac{3x}{3} = \frac{m-5}{3}$$

$$x = \frac{m-5}{3} \text{ or } x = \frac{m-5}{3}$$

16

$$4x - 2y = 20$$

$$\frac{-4x}{-4x}$$

$$\frac{-2y}{-2} = \frac{-4x+20}{-2}$$

$$y = \frac{-4x+20}{2}$$

$$y = \frac{-4}{2}x + \frac{20}{2}$$

$$y = -2x + 10$$