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Module 3 Solving Linear Equations of One Variable
Lesson 4 Solving Two-Step Linear Equations

Set 1

1. Is $k = 0$ a solution to the equation: $\frac{k}{12} - 3 = -3$?

$$\begin{aligned} \frac{k}{12} - 3 &= -3 \\ \frac{0}{12} - 3 &= -3 \\ 0 - 3 &= -3 \\ -3 &= -3 \end{aligned}$$

Yes, 0 is a solution.

2. Explain the steps you would use to solve the equation $5p - 9 = 13$.

Add nine to both sides of the equation. Then divide both sides of the equation by five.

3. Solve: $4d - 10 = 70$

$$\begin{aligned} 4d - 10 &= 70 \\ 4d - 10 + 10 &= 70 + 10 \\ 4d &= 80 \\ \frac{4d}{4} &= \frac{80}{4} \\ d &= 20 \end{aligned}$$

4. Solve: $\frac{y}{15} + 4 = 5$

$$\begin{aligned} \frac{y}{15} + 4 &= 5 \\ \frac{y}{15} + 4 - 4 &= 5 - 4 \\ \frac{y}{15} &= 1 \\ (15)\left(\frac{y}{15}\right) &= (15)(1) \\ y &= 15 \end{aligned}$$

5. Solve: $3x + 2 = 17$

$$\begin{aligned} 3x + 2 - 2 &= 17 - 2 \\ 3x &= 15 \\ \frac{3x}{3} &= \frac{15}{3} \\ x &= 5 \end{aligned}$$

6. Solve: $\frac{r}{7} - 2 = 12$

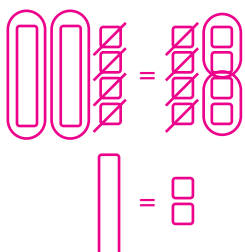
$$\begin{aligned} \frac{r}{7} - 2 &= 12 \\ \frac{r}{7} - 2 + 2 &= 12 + 2 \\ \frac{r}{7} &= 14 \\ (7)\left(\frac{r}{7}\right) &= (7)(14) \\ r &= 98 \end{aligned}$$

Manipulative Set

Use algebra tiles to model and solve each equation.

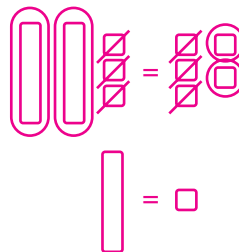
1. $2x + 4 = 8$

$x = 2$



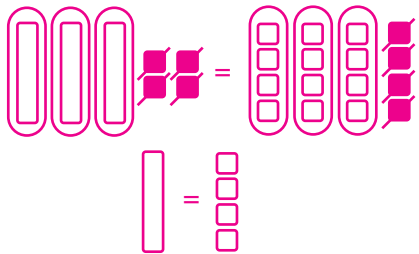
2. $2x + 3 = 5$

$x = 1$



3. $3x - 4 = 8$

$x = 4$



4. $4x + 3 = 15$

$x = 3$

