

7.5 (Page 267)

Solving Multi-Step Equations

Example: Solve each equation.

$$2(s + 3) = 4s - 2$$

$$2s + 6 = 4s - 2$$

$$\begin{array}{r} -2s \\ -2s \end{array}$$

$$6 = 2s - 2$$

$$\begin{array}{r} +2 \\ +2 \end{array}$$

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

$$s = 4$$

7.5 (Page 267)

Solving Multi-Step Equations

Example: Solve each equation.

$$12m - 5 = 3(2m - 1)$$

$$12m - 5 = 6m - 3$$

$$\begin{array}{r} -6m \\ -6m \end{array}$$

$$6m - 5 = -3$$

$$\begin{array}{r} +5 \\ +5 \end{array}$$

$$\frac{6m}{6} = \frac{2}{6}$$

$$\frac{2 \div 2}{6 \div 2} = \frac{1}{3}$$

$$m = \frac{1}{3}$$

## 7.5 (Page 267)

## Solving Multi-Step Equations

Example: Solve each equation.

$$4(x + 5) = 2x + 12$$

$$4x + 20 = 2x + 12$$

$-2x \quad -2x$

$$2x + 20 = 12$$

$-20 \quad -20$

$$12 - 20$$

$$12 + -20$$

$$2x = -8$$

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

$$x = -4$$

## 7.5 (Page 267)

## Solving Multi-Step Equations

Example: Solve each equation.

$$a + 3 = 5(2a - 3)$$

$$1a + 3 = 10a - 15$$

$-1a \quad -1a$

$$3 = 9a - 15$$

$+15 \quad +15$

$$18 = 9a$$

$\frac{\quad}{9} \quad \frac{\quad}{9}$

$$a = 2$$

7.5 (Page 267)

Solving Multi-Step Equations

Example: Solve each equation.

$$\boxed{7} + 3x + \boxed{3} = 2x + 9$$

$$10 + 3x = 2x + 9$$

$$\quad \quad \quad -2x \quad -2x$$

$$10 + x = 9$$

$$-10 \quad \quad -10$$

$$\boxed{x = -1}$$

7.5 (Page 267)

Solving Multi-Step Equations

Example: Solve each equation.

$$2x - \boxed{6} + \boxed{5} = 3x - 3$$

$$2x - 1 = 3x - 3$$

$$-2x \quad \quad -2x$$

$$-1 = x - 3$$

$$+3 \quad \quad +3$$

$$\boxed{2 = x}$$

7.5 (Page 267)

Solving Multi-Step Equations

Example: Solve each equation.

$$\frac{4}{7}y - 8 = \frac{2}{7}y + 10$$

$$-\frac{2}{7}y \quad -\frac{2}{7}y$$

$$\frac{2}{7}y - 8 = 10$$

$$\frac{2}{7}y = 18$$

$$y = 18 \div \frac{2}{7}$$

$$y = \frac{18 \cdot 7}{2} = \frac{63}{1}$$

$$y = 63$$

$$\frac{2}{7}y = 18 \cdot 7$$

$$\frac{2y}{2} = \frac{126}{2}$$

$$y = 63$$

7.5 (Page 267)

Solving Multi-Step Equations

Example: Solve each equation.

$$-12 + 7(x + 3) = 4(2x - 1) + 3$$

$$\boxed{-12} + 7x + \boxed{21} = 8x \boxed{-4} + \boxed{3}$$

$$9 + 7x = 8x - 1$$

$$-7x \quad -7x$$

$$9 = x - 1$$

$$+1 \quad +1$$

$$10 = x$$

7.5 (Page 267)

Solving Multi-Step Equations

Example: Solve each equation.

$$4(2x - 1) - 3 = 5(x - 5)$$

$$8x - 4 - 3 = 5x - 25$$

$$8x - 7 = 5x - 25$$

$$3x - 7 = -25$$

$$\frac{3x}{3} = \frac{-18}{3}$$

$$x = -6$$

7.5 (Page 267)

Solving Multi-Step Equations

Example: Solve each equation.

$$7(y - 3) - 2 = 3(2y - 5) + 4$$

$$7y - 21 - 2 = 6y - 15 + 4$$

$$7y - 23 = 6y - 11$$

$$y - 23 = -11$$

$$y = 12$$