

$$34. \quad \overset{+7p}{p} + 3 = 35 - \overset{+7p}{7p}$$

$$8p + 3 = 35$$

$$\frac{8p}{8} = \frac{32}{8}$$

$$p = 4$$

$$\frac{9}{0} \text{ undefined}$$

$$\frac{0}{8} = 0$$

$$3 + 8 = 8 + 3$$

Commutative
Property of
Addition

3.5 Distributive Property

$$3(x-4) = 48$$

$$3x - 12^{+12} = 48^{+12}$$

$$\frac{16}{3} = \frac{48}{48}$$

$$\begin{array}{l} 3x = 60 \\ \frac{1}{3} \quad \frac{1}{3} \\ x = 20 \end{array}$$

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

$$2x + 8 - 5 = 2x + 3$$

$$\rightarrow 2x + 3 = 2x + 3$$

$$\rightarrow 3 = 3$$

$$\rightarrow 0 = 0$$

True

All Real Numbers

$$4x + 9 = 4(x + 3)$$

$$\rightarrow 4x + 9 = 4x + 12$$

$$\rightarrow 4x - 4x = 4x - 4x + 3$$

$$\rightarrow 0 \neq 3$$

$$4x + 9 = 4x + 12$$

$$\rightarrow 9 = 12$$

$$0 = 3 \quad \text{False}$$

$$4(2) + 9 \neq 4(2) + 12$$

$$8 + 9 \neq 8 + 12$$

$$17 \neq 20$$

No Solution

$$4m + 1 - m = 2m + m + 9$$

Combine
Like
Terms

$$\overset{-3m}{3m} + 1 \neq \overset{-3m}{3m} + 9$$

$$1^{-1} \neq 9^{-1}$$

$$0 \neq 8$$

No Solution

$$4(\widehat{x-2}) = 2(\widehat{x+3}) + 2x$$

$$4x - 8 = 2x + 6 + 2x$$

$$4x - 8 = 4x + 6$$

No Solution

$$5(x-1)+2 = 8x-3x-3$$

$$5x - 5 + 2 = 5x - 3$$

$$\rightarrow 5x - 3 = 5x - 3$$

All Real Numbers

$$-3 = -3$$

$$0 = 0$$

$$4z - (z + 6) = 3z - 4$$

$$3z - 6 = 3z - 4$$

$$4z - z + -6 = 3z - 4$$

$$3z - 6 = 3z - 4$$

No Solution

$$4z - 1(z + 6) = 3z - 4$$

$$4z - z - 6 = 3z - 4$$

$$52 \quad 80 \quad -28 \quad \quad \quad 40 \quad +12 \quad 52$$

$$8x - 2(x+4) = 4x + 12$$

$$8x - 2x - 8 = 4x + 12$$

$$6x - 8 = 4x + 12$$

$$2x - 8 = 12$$

$$\frac{2x}{2} = \frac{20}{2}$$

$$x = 10$$

p 145

12-46 E

$$12. \quad 4n - 2 + 7n = 20$$

$$11n - 2 = 20 + 2$$

$$\frac{11n}{11} = \frac{22}{11}$$

$$n = 2$$

Simplify
left① Simplify
Right

(Combine Like terms or Distribute)

② Opposite Operations