

### **3.3: Solve Multi-Step Equations**

**Goals:** \*Solve multi-step equations by combining like terms

\*Solve multi-step equations using the distributive property

\*Solve multi-step equations by multiplying by reciprocals

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#### **Steps to Solving Multi-Step Equations**

**S –**

**D –**

**C –**

**B –**

**A –**

**Combine Like Terms:**

**Ex:**  $8x - 3x - 10 = 20$

**Ex:**  $9x + x - 7 = 13$

**Use the distributive property:**

**Ex:**  $7x + 2(x + 6) = 39$

**Ex:**  $4x + 3(x - 5) = 6$

**Ex:**  $4x - 7(x - 2) = 26$

**Ex:**  $5x - 4(x - 3) = 17$

**Using Reciprocals:**

**Ex:**  $\frac{3}{4}(z - 6) = 12$

**Ex:**  $\frac{3}{2}(3x + 5) = -24$

**Ex:**  $\frac{2}{5}(r + 4) = 10$

**Ex:**  $-\frac{4}{5}(4a - 1) = 28$

**Ex:** A flock of cranes migrate from Canada to Texas. The cranes take 14 days (336 hours) and fly at an average speed of 25 miles per hour. They travel a total of 2500 miles. How many hours of migration are the cranes **not** flying?

