

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

Steps to Solving Multi-Step Equations

1.

2.

3.

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?

