**Multi-Step Equations**

**Solving a Two-Step Equation:**

**Solve: 1.5x + 15 = 24**

Ex (1): Solve 1.5x + 15 = 24 🡪 1.5x + 15 = 24 🡪 1.5x = 9 🡪 1.5x = 9 🡪 **x = 6**

 -15 -15 1.5 1.5

 Two Step 🡪 Subtract Constant 🡪 One Step 🡪 Isolate x 🡪 Answer

 Equation “15” on both sides Equation Divide 1.5

CFU:

1. Solve -3z + 1 = 7

**Combining Like Terms:**

**Solve: 8x – 6x – 25 = -35**

Ex (2): Solve 8x – 6x – 25 = -35 🡪 2x – 25 = -35 🡪 2x = -10 🡪 **x = -5**

 (8x – 6x = 2x) + 25 +25 2 2

 Combine like terms 🡪 Add Constant “25” 🡪 Isolate “x” 🡪 Answer

 on both sides Divide by 2

CFU:

1. Solve – 4n – 8n + 17 = 23

**Distributive Property:**

**Solve 2(1 – 5x) + 4 = -8**

2(1 – 5x) + 4 = -8 🡪 (2)(1) – (2)(5x) + 4 = -8 🡪 2 – 10x + 4 = -8 🡪 -10x + 6 = -8

 Equation 🡪 Distribute 2 into Parentheses 🡪 Combine like term 🡪 Two-Step

 (2 + 4) = 6 Equation

-10x + 6 = -8 🡪 -10x = -14 🡪 **x = 1.4**

 -6 -6 -10 -10

Subtract Constant “6” 🡪 Isolate “x” divide by -10 🡪 Answer

on both sides

CFU:

1. -3(x + 2) + 5x = -9