

1.

$$66 = 14 + 2 \cdot (3x - 1) - 3(x - 8)$$

$$66 = 14 + 6x - 2 - 3x + 24$$

$$66 = 36 + 3x \quad | -36$$

$$30 = 3x \quad | :3$$

$$\underline{\underline{10 = x}}$$

2.

$$14 = x + 5(x + 8) + 2x + 3(x - 12) - 6x$$

$$14 = x + 5x + 40 + 2x + 3x - 36 - 6x$$

$$14 = 5x + 4 \quad | -4$$

$$10 = 5x \quad | :5$$

$$\underline{\underline{2 = x}}$$

3.

$$3(x - 4) + 2(6x - 3) = 3x - 2 + 8$$

$$3x - 12 + 12x - 6 = 3x + 6$$

$$15x - 18 = 3x + 6 \quad | -3x$$

$$12x - 18 = 6 \quad | +18$$

$$12x = 24 \quad | :12$$

$$\underline{\underline{x = 2}}$$

4.

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

$$8x - 2 = 4x + 2 \quad | -4x$$

$$4x - 2 = 2 \quad | +2$$

$$4x = 4 \quad | :4$$

$$\underline{\underline{x = 1}}$$

5.

$$x(3-x) - 5x + x^2 = 10x + 30 + 4x + 2$$

$$3x - \cancel{x^2} - 5x + \cancel{x^2} = 14x + 32$$

$$-2x = 14x + 32 \quad | + 2x$$

$$0 = 16x + 32 \quad | - 32$$

$$-32 = 16x \quad | : 16$$

$$\underline{\underline{-2 = x}}$$

6.

$$-2(x-4) + 5(x+7) = -5(x+3) - 6$$

$$-2x + 8 + 5x + 35 = -5x - 15 - 6$$

$$3x + 43 = -5x - 21 \quad | + 5x$$

$$8x + 43 = -21 \quad | - 43$$

$$8x = -64 \quad | : 8$$

$$\underline{\underline{x = -8}}$$

7.

$$x(3-x) - 5x + 2x^2 = 10x + 30 + x^2 + 2$$

$$3x - x^2 - 5x + 2x^2 = 10x + 32 + x^2$$

$$-2x + \cancel{x^2} = 10x + 32 + \cancel{x^2} \quad | + 2x$$

$$0 = 12x + 32 \quad | - 32$$

$$-32 = 12x \quad | : 12$$

$$\frac{-32}{12} = x$$

$$\underline{\underline{x = -\frac{8}{3}}}$$

$$\underline{8.} \quad 7(x+3) + 5x + 3 = 5 + 3(x+1) + 3(x+3) + 5(x+3)$$

$$7x + 21 + 5x + 3 = 5 + 3x + 3 + 3x + 9 + 5x + 15$$

$$12x + 24 = 32 + 11x$$

$$| -11x$$

$$x + 24 = 32$$

$$| -24$$

$$\underline{\underline{x = 8}}$$