

Examples:
Solve for x

$$1) 7 - 6x = 85$$

Fraction multiply by the
common denominator

$$2) \frac{-6x + 7}{4} = \frac{4}{5}$$

"x" on opposite sides

$$3) 10x + 4 = -2x - 32$$

Brackets

$$4) 6(x-3) = 30$$

5) Bracket and Fractions

$$\frac{2(x+3)}{3} = 5(x-1)$$

6) Negative inequalities

$$-3x < 12$$

Examples:

Solve for x

$$1) 7 - 6x = 85$$

$$-6x = 78$$

$$\frac{-6x}{-6} = \frac{78}{-6}$$

$$x = -13$$

Fraction multiply by the common denominator

$$2) \frac{-6x}{4} + 7 = \frac{4}{5}$$

$$\frac{-120x + 140}{4} = \frac{80}{5}$$

$$-30x + 140 = 16$$

$$-30x + 140 = 16 - 140$$

$$-30x = -124$$

$$\frac{-30x}{-30} = \frac{-124}{-30}$$

$$x = \frac{62}{15}$$

"x" on opposite sides

$$3) 10x + 4 = -2x - 32$$

$$10x + 4 = -2x - 32$$

$$12x + 4 = -32$$

$$12x = -36$$

$$\frac{12x}{12} = \frac{-36}{12}$$

$$x = -3$$

Brackets

$$4) 6(x-3) = 30$$

$$6x - 18 = 30$$

$$6x - 18 = 30 + 18$$

$$6x = 48$$

$$\frac{6x}{6} = \frac{48}{6}$$

$$x = 8$$

5) Bracket and Fractions

$$\frac{2(x+3)}{3} = 5(x-1)$$

$$\frac{2x}{3} + \frac{6}{3} = 5x - 5$$

$$\frac{2x}{3} + \frac{6}{3} = 5x - 5$$

$$\frac{6x}{3} + \frac{18}{3} = 15x - 15$$

$$2x + 6 = 15x - 15$$

$$2x + 6 = 15x - 15$$

$$-13x + 6 = -15$$

$$-13x = -21$$

$$\frac{-13x}{-13} = \frac{-21}{-13}$$

$$x = \frac{21}{13}$$

6) Negative inequalities

NOTICE
INEQUALITY
CHANGED

$$-3x < 12$$

$$\frac{-3x}{-3} \frac{12}{-3}$$

$$x > -4$$