

■ LINEAR EQUATIONS IN ONE UNKNOWN ■

Form 1 Regular Course
Vol 2

Part 1 – Simple Type

1. $x - 1 = 5$

$$x = 6$$

2. $1 - x = 5$

$$x = -4$$

3. $-(x - 3) = -5$

$$x = 8$$

4. $-\frac{3}{5}x = 9$

$$x = 9 \times -\frac{5}{3}$$

$$x = -15$$

5. $\frac{3}{2x} = 18$

$$\frac{2x}{3} = \frac{1}{18}$$

$$x = \frac{1}{18} \times \frac{3}{2}$$

$$x = \frac{1}{12}$$

6. $\frac{5}{2x} = \frac{2}{5}$

$$25 = 4x$$

$$x = \frac{25}{4}$$

Part 2 – Mixed Type

1. $6x - 4 = 50$

$$6x = 54$$

$$x = 9$$

2. $2 - 2x = -1$

$$-2x = -3$$

$$x = \frac{3}{2}$$

3. $\frac{x}{3} + 1 = 5$

$$\frac{x}{3} = 4$$

$$x = 12$$

4. $\frac{5x}{3} + 1 = -4$

$$\frac{5x}{3} = -5$$

$$x = -5 \times \frac{3}{5}$$

$$x = -3$$

5. $2 - \frac{3}{4}x = -1$

$$-\frac{3}{4}x = -3$$

$$x = -3 \times -\frac{4}{3}$$

$$x = 4$$

6. $\frac{x+9}{7} = 13$

$$x+9 = 91$$

$$x = 82$$

7. $\frac{x-1}{3} = 8$

$$x-1 = 24$$

$$x = 25$$

8. $7(x+2) = 28$

$$x+2 = 4$$

$$x = 2$$

$$9. \quad 4(x-9) = -24$$

$$x-9 = -6$$

$$x = 3$$

$$10. \quad -2(2x+3) = 10$$

$$2x+3 = -5$$

$$2x = -8$$

$$x = -4$$

$$11. \quad 3(x+9) = 28$$

$$3x+27 = 28$$

$$3x = 1$$

$$x = \frac{1}{3}$$

$$12. \quad 9(x-2) = -16$$

$$9x-18 = -16$$

$$9x = 2$$

$$x = \frac{2}{9}$$

$$13. \quad -3(x-1) - 2 = 5$$

$$-3x+3 = 7$$

$$-3x = 4$$

$$x = -\frac{4}{3}$$

$$14. \quad \frac{2x-1}{3} + 1 = 28$$

$$\frac{2x-1}{3} = 27$$

$$2x-1 = 81$$

$$2x = 82$$

$$x = 41$$

$$15. \quad \frac{3(x-1)}{2} + 1 = 7$$

$$\frac{3(x-1)}{2} = 6$$

$$x-1 = 6 \times \frac{2}{3}$$

$$x-1 = 4$$

$$x = 5$$

$$16. \frac{2(5x-3)}{3} + 5 = 7$$

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

$$5x-3 = 2 \times \frac{3}{2}$$

$$5x-3 = 3$$

$$5x = 6$$

$$x = \frac{6}{5}$$

Part 3A – Complicated Equations (A)

$$1. \quad 2x+1=3x-4$$

$$x = 5$$

$$2. \quad 7-3x=4x+21$$

$$7x = -14$$

$$x = -2$$

$$3. \quad 3x+2=-2x-18$$

$$5x = -20$$

$$x = -4$$

$$4. \quad 11x-5=3x-69$$

$$8x = -64$$

$$x = -8$$

$$5. \quad 3(2x+1)-2(2x-2)=-3x-3$$

$$6x+3-4x+4=-3x-3$$

$$5x = -10$$

$$x = -2$$

$$6. \quad 5(4-x)-5(x+2)+12=0$$

$$20-5x-5x-10+12=0$$

$$10x = 22$$

$$x = \frac{11}{5}$$

$$7. \quad 4(6x+1)=5(x+1)-77$$

$$24x+4=5x+5-77$$

$$19x = -76$$

$$x = -4$$

$$8. \quad 3(1-x) - 4(2-x) = -x$$

$$3 - 3x - 8 + 4x = -x$$

$$2x = 5$$

$$x = \frac{5}{2}$$

$$9. \quad -11(x-1) = -46 - 4(3x-10)$$

$$-11x + 11 = -46 - 12x + 40$$

$$x = -17$$

$$10. \quad 3(11x+2) - 10 = 5x - 144$$

$$33x + 6 - 10 = 5x - 144$$

$$28x = -140$$

$$x = -5$$

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