

Pair of Linear Equations

Quick Study Guide

HOW TO USE THIS GUIDE

HIGHLIGHTED TEXT SHOWS IMPORTANT POINTS

- ★ MARKS HIGH-FOCUS TOPICS
- 📄 INDICATES EXAM TIPS
- ⚠️ SHOWS COMMON ERRORS
- 💡 GIVES QUICK TIPS

BASIC CONCEPT

Mnemonic: "DIVIDE KARO"

- L** - Lines ka system
I - In standard form
N - Need two equations
E - Equals to constant
A - $-ax + by + c$
R - Remember form

Remember As:

DUKAAN SYSTEM

- * Like shop calculations:
- * Pen = x rupees
- * Copy = y rupees
- * Bill = Total amount
- * Two items, two equations

Common Errors

- * Wrong standard form
- * Signs confusion
- * Terms mixing
- * Constants wrong side

- B** - Basic form check
O - Order maintain
S - Standard form
S - Solve together

SOLVING METHODS

Mnemonic: "TARIKA STAR"

- T** - Three methods
A - Apply suitable
R - Right method choose
I - Important steps
K - Keep checking
A - Answer verify
S - Substitution
T - Take elimination
A - And cross multiply
R - Right method pick

Example:

- * HCF(60,45)
- * $60 = 45 \times 1 + 15$
- * $45 = 15 \times 3 + 0$
- * HCF = 15

CHOOSE METHOD:

EASY PEASY

1. Substitution when:
 * x or y coefficient is 1
 * Simple equation
2. Elimination when:
 * Similar coefficients
 * Easy to multiply
3. Cross multiplication:
 * Complex coefficients
 * Fractions involved

SUBSTITUTION METHO

Mnemonic: "PRIME TIME"

- V** - Value express
A - Any variable
L - Like x = something
U - Use in other
E - Equation solve

- D** - Dusra equation
A - And substitute
L - solve for y
O - Original check

REMEMBER AS:

MAMA METHOD

1. Make x = expression
2. Add in second equation
3. Mazed se solve karo
4. Answer substitute

Example: 84

- * $x + y = 7$ $1.x = 7 - y$
 * $2x - y = 4$ $2. 2(7 - y) - y = 4$
 $3. \text{solve for } y$
 $4. \text{Put back for } x$

ELIMINATION METHOD

Mnemonic: "BHAGAO GAME"

- B** - Both multiply
H - Hatao one variable
A - Add/Subtract
G - Get one variable
A - Answer find
O - Other variable

- G** - Good method
A - After multiply
M - Match coefficients
E - Easily solve

Remember Points:

- SAME SAME**
1. Make coefficients same
 2. Add or subtract
 3. solve for one variable
 4. Enter back
 5. Simple answer check

EXAMPLES

- * $3x + 2y = 13$
- * $2x + 3y = 13$
- * Multiply 1st by 3, 2nd by 2
- * Subtract equations

CROSS MULTIPLICATION

Mnemonic: "CROSS KARO"

- C** - Coefficients arrange
R - Right order
O - Organize terms
S - Solve determinants
S - System follow

- K** - Keep format
A - Arrange properly
R - Remember formula
O - Order maintain

FORMULA REMINDER

DETERMINANT RAJA

- * $x = D_1/D$
- * $y = D_2/D$
- * $D = \begin{vmatrix} a_1 & b_1 \\ a_2 & b_2 \end{vmatrix}$

WORD PROBLEMS

Mnemonic: "STORY SOLVE"

- S** - See what's given
T - Take variables
O - Organize data
R - Relations make
Y - Yes check units

- S** - Set equations
O - Organize steps
L - Logical check
V - Verify answer
E - Everything match

PROBLEM STEPS:

SUNDAY PLAN:

1. Terminating:
 2. Use given conditions
 3. Note all relations
 4. Develop equations
 5. Apply best method
 6. Your answer check
- * $1/4 = 0.25$
 * $1/8 = 0.125$

GRAPHICAL SOLUTION

Mnemonic: "GRAPH HERO"

G
R
A
P
H

- Graph paper use
- Right scale pick
- Axis mark proper
- Plot points
- Help with table

H
E
R
O

- Hub points find
- Equations plot
- Right angles check
- Origin mark

SOLUTION TYPE:

LINE GAME

- | | | |
|---|---|---|
| 1. One solution:
* Lines intersect
* Unique point | 2. No solution:
* Parallel lines
* Never meet | 3. Infinite solutions:
* Same line
* All points match |
|---|---|---|

QUICK REVISION CHECKLIST

Before Exam:

- ✓ Standard form check
- ✓ Method selection
- ✓ Substitution steps
- ✓ Elimination process
- ✓ Cross multiplication
- ✓ Word problems
- ✓ Graphical solutions

Scoring Tips:

1. Show all steps
2. Keep equations aligned
3. Write proper signs
4. Check solutions
5. Verify in both equations

100%

HIGH FOCUS AREAS

1. Word Problems (5 marks)
2. Basic Concepts (5 marks)
3. Solving Methods (5 marks)
4. Graphical (4 marks)
5. Applications (4 marks)

PROBLEM SOLVING TIPS

Mnemonic: "SOLVE KARO"

S
O
L
V
E

- See problem type
- Organize data
- List variables
- Verify units
- Equations make

K
A
R
O

- Keep checking
- All conditions use
- Remember methods
- Order maintain

GOOD LUCK!

