

Linear Equations in Two Variables

Chapter 5: Linear Equations in Two Variables · Topic 1

Key Concept

A linear equation in two variables, like $2x+3y=12$, has infinitely many solutions, each represented as a point on a line when graphed.

A system of two linear equations can be solved using substitution (solving one variable, substituting into the other equation).

Elimination method solves systems by adding or subtracting equations to eliminate one variable, finding the value of the other.

Graphically, the solution to a system of two linear equations is the point where their two lines intersect on a graph.

Quick Revision Notes

- Linear equation: $ax+by=c$ form.
- Example: $2x+3y=12$, infinite solutions.
- Each solution is a point on a line.
- Substitution method: solve, substitute.
- Elimination method: add/subtract to eliminate.
- This finds the other variable's value.
- Graphical solution: intersection point of lines.
- Practice builds equation-solving skills.

Practice Questions

- 1 Solve $x+y=10$ and $x-y=2$ using substitution.
- 2 Solve $2x+y=8$ and $x-y=1$ using elimination.
- 3 Graph the equation $x+y=5$.
- 4 Discuss what a system's graphical solution represents.
- 5 Solve a word problem using two linear equations.
- 6 Explain the substitution method in your own words.