

Graph of a Linear Equation

Chapter 4: Linear Equations in Two Variables · Topic 2

Key Concept

Although only two points are mathematically required to determine a unique line, plotting a third point as a check helps verify no calculation errors were made, since all three points should lie exactly on the same straight line if correctly calculated. The x-intercept (where the line crosses the x-axis, at $y=0$) and y-intercept (where it crosses the y-axis, at $x=0$) are often the easiest and most convenient points to calculate and plot first when graphing a linear equation.

Quick Revision Notes

- The graph of any linear equation in two variables is always a straight line.
- Plot at least two solution points, then draw a straight line through them.
- A third point can be plotted as a check to verify no calculation errors.
- The x-intercept ($y=0$) and y-intercept ($x=0$) are convenient points to calculate first.

Practice Questions

- 1 Draw the graph of the equation $x+y=4$.
- 2 Find the x-intercept and y-intercept of the equation $2x+y=6$.
- 3 Explain why plotting a third point helps verify the accuracy of a graphed line.