

Linear Inequations

Chapter 15: Linear Inequations · Topic 1

Key Concept

Solving inequations follows similar rules to equations, except when multiplying or dividing both sides by a negative number, we flip the inequality sign.

For example, solving $2x+3 < 11$ gives $2x < 8$, so $x < 4$, meaning any value less than 4 satisfies the inequation.

Solutions to inequations can be represented on a number line, showing the range of values that satisfy the condition.

Understanding inequations helps solve real-life problems involving limits, like budget constraints or minimum requirements.

Quick Revision Notes

- Inequations use signs like $<$, $>$, $\leq$, $\geq$.
- Rules are similar to equations, except when multiplying/dividing by negatives.
- Flip the inequality sign for negative multiplication/division.
- $2x+3<11$ gives $x<4$.
- Solutions are a range, not one value.
- Number lines show inequation solutions.
- Inequations help with budget constraints.
- They help with minimum requirement problems.

Practice Questions

- 1 Solve $3x-2>10$.
- 2 Solve $-2x<8$ (remember to flip the sign).
- 3 Represent $x>3$ on a number line.
- 4 Discuss a real-life example using an inequation.
- 5 Solve $x/3+1\leq 5$.
- 6 Explain why we flip the sign for negative multiplication.