

# Practice and Revision - Linear Inequations

Chapter 15: Linear Inequations · Topic 2

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## 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.