

# Probability

Chapter 23: Probability · Topic 1

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## Key Concept

Probability is calculated as  $P(\text{event}) = (\text{number of favourable outcomes}) \div (\text{total number of possible outcomes})$ .

For a fair coin toss, the probability of heads is  $1/2$ , since there's one favourable outcome (heads) out of two possible outcomes.

For rolling a die, the probability of getting an even number is  $3/6$  (or  $1/2$ ), since 2, 4, and 6 are three favourable outcomes out of six.

Understanding probability helps us make informed decisions and predictions in games, sports, weather forecasting, and everyday situations.

## Quick Revision Notes

- Probability = favourable outcomes  $\div$  total outcomes.
- Coin toss probability of heads is  $1/2$ .
- Die roll probability of even number is  $3/6$  or  $1/2$ .
- 2, 4, 6 are the even outcomes.
- Probability ranges from 0 to 1.
- It helps make informed predictions.
- It's used in games and weather forecasting.
- Practice builds probability calculation skills.

## Practice Questions

- 1 Calculate the probability of rolling an odd number on a die.
- 2 Calculate the probability of picking a blue ball from 4 blue and 6 red balls.
- 3 Discuss a real-life example of probability.
- 4 Flip a coin 20 times and record results.
- 5 Solve two probability problems.
- 6 Explain probability in your own words.