

Angles and Bearings

- Use cardinal directions and related angles R
- Draw and interpret scale diagrams R
- Understand and represent bearings
- Measure and read bearings
- Make scale drawings using bearings
- Calculate bearings using angles rules
- Solve bearings problems using Pythagoras and trigonometry
- Solve bearings problems using the sine and cosine rules H

H denotes Higher Tier GCSE content

R denotes Review step

Working with Circles

- Recognise and label parts of a circle R
- Calculate fractional parts of a circle
- Calculate the length of an arc
- Calculate the area of a sector
- Circle theorem H
- Understand and use the volume of a cylinder and cone
- Understand and use the volume of a sphere
- Understand and use the surface area of a cylinder and cone
- Understand and use the surface area of a sphere
- Solve area and volume problems involving similar shapes R H

Vectors

- Understand and represent vectors
- Use and read vector notation
- Draw and understand vectors multiplied by a scalar
- Draw and understand addition of vectors



Vectors

- Draw and understand addition and subtraction of vectors
- Explore vector journeys in shapes H
- Explore quadrilaterals using vectors H
- Understand parallel vectors H
- Explore col-linear points using vectors H
- Use vectors to construct geometric arguments and proofs H

H denotes Higher Tier GCSE content

R denotes Review step

Ratios and Fractions

- Compare quantities using a ratio R
- Link ratios and fractions R
- Share in a ratio (given total or one part) R
- Use ratios and fractions to make comparisons
- Link ratios and graphs R
- Solve problems with currency conversion
- Link ratios and scales R
- Use and interpret ratios of the form 1: n and n : 1
- Solve 'best buy' problems
- Combine a set of ratios
- Link ratio and algebra
- Ratio in area problems H
- Ratio in volume problems H
- Mixed ratio problems

Percentages & Interest

- Convert and compare fractions, decimals and percentages R
- Work out percentages of amounts (with/without a calculator) R



Percentages & Interest

- Increase and decrease by a given percentage R
- Express one number as a percentage of another R
- Calculate simple and compound interest
- Repeated percentage change
- Find the original value after a percentage R
- Solve problems involving growth and decay
- Understand iterative processes H
- Solve problems involving percentages, ratios and fractions

H denotes Higher Tier GCSE content

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Probability

- Know how to add, subtract and multiply fractions R
- Find probabilities using equally likely outcomes R
- Use the property that probabilities sum to 1 R
- Using experimental data to estimate probabilities
- Find probabilities from tables, Venn diagrams and frequency trees
- Construct and interpret sample spaces for more than one event R
- Calculate probability with independent events
- Use tree diagrams for independent events
- Use tree diagrams for dependent events
- Construct and interpret conditional probabilities H
 Tree diagrams
 Venn diagrams and Two-way tables