

# Mathematical requirements

You will be required to demonstrate the following mathematics skills in GCSE Chemistry assessments. Questions will target maths skills at a level of demand appropriate to each subject.

**In Foundation Tier papers** questions assessing maths requirements will not be lower than that expected at **Key Stage 3**

**In Higher Tier papers** questions assessing maths requirements will not be lower than that of questions and tasks in assessments for the **Foundation Tier in a GCSE** Qualification in Mathematics.

## **1 Arithmetic and numerical computation**

- A Recognise and use expressions in decimal form
- B Recognise and use expressions in standard form
- C Use ratios, fractions and percentages
- D Make estimates of the results of simple calculations

## **2 Handling data**

- A Use an appropriate number of significant figures
- B Find arithmetic means
- C Construct and interpret frequency tables and diagrams, bar charts and histograms
- D Make order of magnitude calculations

## **3 Algebra**

- A Understand and use the symbols: =, <, <<, >>, >,  $\alpha$ , ~
- B Change the subject of an equation
- C Substitute numerical values into algebraic equations using appropriate units for physical quantities

## **4 Graphs**

- A Translate information between graphical and numeric form
- B Understand that  $y = mx + c$  represents a linear relationship
- C Plot two variables from experimental or other data
- D Determine the slope and intercept of a linear graph
- E Draw and use the slope of a tangent to a curve as a measure of rate of change

## **5 Geometry and trigonometry**

- A Visualise and represent 2D and 3D forms including two dimensional representations of 3D objects
- B Calculate areas of triangles and rectangles, surface areas and volumes of cubes

# Mathematical requirements

You will be required to demonstrate the following mathematics skills in GCSE Chemistry assessments. Questions will target maths skills at a level of demand appropriate to each subject.

**In Foundation Tier papers** questions assessing maths requirements will not be lower than that expected at **Key Stage 3**

**In Higher Tier papers** questions assessing maths requirements will not be lower than that of questions and tasks in assessments for the **Foundation Tier in a GCSE** Qualification in Mathematics.

## **1 Arithmetic and numerical computation**

- A Recognise and use expressions in decimal form
- B Recognise and use expressions in standard form
- C Use ratios, fractions and percentages
- D Make estimates of the results of simple calculations

## **2 Handling data**

- A Use an appropriate number of significant figures
- B Find arithmetic means
- C Construct and interpret frequency tables and diagrams, bar charts and histograms
- D Make order of magnitude calculations

## **3 Algebra**

- A Understand and use the symbols: =, <, <<, >>, >,  $\alpha$ , ~
- B Change the subject of an equation
- C Substitute numerical values into algebraic equations using appropriate units for physical quantities

## **4 Graphs**

- A Translate information between graphical and numeric form
- B Understand that  $y = mx + c$  represents a linear relationship
- C Plot two variables from experimental or other data
- D Determine the slope and intercept of a linear graph
- E Draw and use the slope of a tangent to a curve as a measure of rate of change

## **5 Geometry and trigonometry**

- A Visualise and represent 2D and 3D forms including two dimensional representations of 3D objects
- B Calculate areas of triangles and rectangles, surface areas and volumes of cubes