Subject: Maths

Year 9

OVERVIEW

The Maths department at the Lowry Academy aims to provide students with a secure understanding of mathematical knowledge, categorised according to the following areas: number, algebra, geometry, ratio and proportion, probability, and statistics, meeting the needs of the National Curriculum at KS3 and KS4. The focus of the curriculum is to develop procedural knowledge of the fundamental elements of mathematics in order for students to access further problem solving elements and reason mathematically, whilst fostering a love of maths. By the end of Year 9, students will have developed their mathematical skills within the different areas of Maths (number, algebra, ratio and proportion, geometry, probability and statistics)

AUTUMN

Decimal manipulation (4 operations with integers and decimals)
Calculations involving money and units. BIDMAS.
Estimation and limits of accuracy (rounding to 10,100,1000 and a given number of decimal places)
Rounding to 1 significant figure. Estimate answers to 1 or 2 step calculations.
Related calculations (recognise and use relationships between operations) HCF and LCM (including prime factors)
Fractions of an amount. Fractions and ratio problems.
Algebraic manipulation and index laws (collecting like terms and simplifying) Expand and factorise (single brackets) Substitution.

Assessment

Within the autumn term, year 9 students will be assessed through:

KPI tests (after each topic), feedback sheets (twice per half term) and fluency Friday (fortnightly)

Personal Development

The Maths Department look for opportunities throughout the year to enrich the curriculum through trips and guest speakers.

During each half term there is a Reading to Learn Opportunity, in which we look at the life and work of influential mathematicians and political and equality battled they faced.

SPRING

Percentages with a calculator (percentages of an amount, percentage increase and decrease and finding the original amount)
Comparing 2 quantities using percentages, expressing one quantity as a percentage of another and using multipliers.
Proportion (best buys, recipes, currency and unitary methods)
Probability (systematic listing strategies, describing probability using scales, tables and frequency trees)
The use of VENN diagrams and sample space diagrams.
Linear equations and linear inequalities (solving and forming)
Sequences (nth term and identifying triangular, square and cube numbers)

Assessment

Year 9 students will be given a mid-year assessment within Maths. In addition they will also complete the following:

KPI tests (after each topic), feedback sheets (twice per half term) and fluency Friday (fortnightly)

Personal Development

The Maths Department look for opportunities throughout the year to enrich the curriculum through trips and guest speakers.

During each half term there is a Reading to Learn Opportunity, in which we look at the life and work of influential mathematicians and political and equality battled they faced.

SUMMER

- Interior and exterior angles
- Alternate and corresponding angles on parallel lines
- Translation as 2D vectors
- Translation, reflection and rotation
- Enlargement
- Identify the equation of a line of symmetry
- Draw sketches of 3D solids
- Interpret plans and elevations of 3D shapes
- Circle definitions
- Circumference of a circle
- Estimation of surface areas
- Sketch nets of cuboids and prisms

Assessment

Year 9 students will be given an end of year assessment within Maths. In addition they will also complete the following:

KPI tests (after each topic), feedback sheets (twice per half term) and fluency Friday (fortnightly)

Personal Development

The Maths Department look for opportunities throughout the year to enrich the curriculum through trips and guest speakers.

During each half term there is a Reading to Learn Opportunity, in which we look at the life and work of influential mathematicians and political and equality battled they faced.

Useful resources for supporting your child at home

- Corbett Maths
- BBC bitesize
- Maths Genie
- SPARX

Homework

Students will complete weekly homework on SPARX (online platform) Homework is set every Monday and is due in every Monday. SPARX club is available on the Maths corridor during every lunch time and also after school on a Tuesday (L6)