

Year 8 Mathematics
Curriculum



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Introduction

This document outlines what students will learn in Mathematics in Year 8.

Learning Objectives:

1. Number

Integers:

- Adding, subtracting, multiplying, and dividing integers.
- Ordering integers.
- Primes, factors and multiples.
- Square and cube numbers.

Negative numbers:

- Adding, subtracting, multiplying and dividing negative numbers.

Indices:

- Laws of indices (multiplying and dividing powers).

Highest Common Factor (HCF):

- Finding the HCF of two or more numbers.

Lowest Common Multiple (LCM):

- Finding the LCM of two or more numbers.

Fractions:

- Adding, subtracting, multiplying, and dividing fractions with different denominators.
- Converting between fractions, decimals, and percentages.



2. Algebra

Equations:

- Solving linear equations with one unknown.
- Solving linear equations with brackets.
- Solving linear simultaneous equations.

Formulae:

- Substituting values into formulae.
- Rearranging formulae.

Sequences:

- Arithmetic and geometric sequences.
- Finding the n th term of a sequence.

Graphs:

- Plotting straight line graph
- Calculating gradient of a line
- Finding equation of a line

3. Geometry

Angles:

- Angles in polygons.
- Angles in triangles.
- Angles in circles.

Area and Volume:

- Calculating the area and perimeter of 2D shapes (trapezium, rhombus, kite).
- Calculating the volume of 3D shapes (prisms, cylinders).

Transformations:

- Enlargements.
- Reflections.
- Rotations.
- Translations.



4. Statistics and Probability

Statistics:

- Grouped frequency tables.
- Histograms.
- Averages (mean, median, mode, range).
- Interquartile range.

Probability:

- Probability of compound events.
- Tree diagrams.
- Conditional probability.

Evaluation and Review

The curriculum will be reviewed annually to ensure its effectiveness. Feedback from students, teachers, and parents will be considered in the review process.

Updated August 2024

Next review: August 2025