

Year 7

Students will follow one of three pathways for year seven mathematics. Ipswich Academy follows the Mathematics Mastery programme of study, which encourages a deeper understanding through the use of concrete, pictorial and abstract representations.

Fluency	Essentials	Depth
<ul style="list-style-type: none"> • Place value • Addition and subtraction • Addition and subtraction of decimals • Multiplication and division • Working with units • Angles • Triangles and quadrilaterals • Symmetry and tessellation • Understand and use fractions • Fractions of amounts • Multiplying and dividing decimals • Order of operations • Introduction to algebra • Percentages • Handling data 	<ul style="list-style-type: none"> • Round and estimate • Decimals • Multiplication and division • Area and perimeter • Prime factorisation • Fractions and equivalents fraction • Fractions of amounts • Multiplying and dividing • Addition and subtraction • Order of operations • Sequences and expressions • Substitute and simplify, expand, factorise and solve equations • Estimate measures • Angles • Triangles • Angles in parallel lines • Quadrilaterals and symmetry • Rounding • Handling data • Averages 	<ul style="list-style-type: none"> • Round and estimate • Decimals • Multiplication and division • Area and perimeter • Prime factorisation • Fractions and equivalents fraction • Fractions of amounts • Multiplying and dividing • Addition and subtraction • Order of operations • Sequences and expressions • Substitute and simplify, expand, factorise and solve equations • Unit of measures • Area unit conversions • Angles • Triangles • Angles in parallel lines • Quadrilaterals and symmetry and tessellation • Rounding • Fractions, decimals and percentages • Pie charts • Circumference and area of circle • Handling data • Averages • Investigation

Year 8

Students will follow one of three pathways for year eight mathematics. Each will follow on from the year seven programme to ensure a strong foundation for their GCSE course in year nine.

Fluency	Essentials	Depth
<ul style="list-style-type: none"> • Primes and factorising • Add and subtract fractions • Positive and negative numbers • Sequences, expressions and equations • Triangles, quadrilaterals and angles in parallel lines • Length and area: parallelograms and trapezia • Percentage change • Ratio and rate • Rounding • Circumference and area of a circle • 3D shapes and nets • Surface area and volume • Statistics 	<ul style="list-style-type: none"> • Primes and factorising • Add and subtract fractions • Positive and negative numbers • Sequences(linear and non- linear), expressions and equations • Constructions, congruence, Pythagoras theorem & Polygons • Length and area: parallelograms and trapezia • Percentage change & Ratio • Probability • Rounding • Circumference and area of a circle • 3D shapes and nets • Surface area and volume • Statistics & correlation 	<ul style="list-style-type: none"> • Primes and factorising • Add and subtract fraction, standard form • Positive and negative numbers • Sequences(linear and non- linear), expressions and equations • Constructions, congruence, Pythagoras theorem & polygons • Length and area: parallelograms and trapezia • Percentage change • Ratio • Probability • Rounding • Circumference and area of a circle • 3D shapes and nets • Surface area and volume • Statistics & correlation

Year 9 – 11

Students will follow the Edexcel GCSE mathematics programme of study, and complete either the foundation or higher scheme of work through years 9-11.

Foundation (grades 1-5)

1. Number
2. Algebra
3. Graphs, tables and charts
4. Fractions and percentages
5. Equations, Inequalities and sequences
6. Angles
7. Averages and range
8. Perimeter, area and volume 1
9. Graphs
10. Transformations
11. Ration and proportion
12. Right-angled triangles
13. Probability
14. Multiplicative reasoning
15. Constructions, loci and bearings
16. Quadratic equations and graphs
17. Perimeter, area and volume 2
18. Fractions, indices and standard form
19. Congruence, similarity and vectors
20. More algebra

Higher (grades 4-9)

1. Number
2. Algebra
3. Interpreting and representing data
4. Fractions, ratio and percentages
5. Angles and trigonometry
6. Graphs
7. Area and volume
8. Transformations and constructions
9. Equations and inequalities
10. Probability
11. Multiplicative reasoning
12. Similarity and congruence
13. More trigonometry
14. Further statistics
15. Equations and graphs
16. Circle theorems
17. More algebra
18. Vectors and geometric proof
19. Proportion and graphs