

# JOURNEY DIAGRAM - MATHS - KS3

Year 7

Autumn 1

Autumn 2

Spring 1

Spring 2

Summer 1

Summer 2

**Graphs and sequences**

- Identify and plot coordinates
- Midpoints
- Plotting linear graphs

**Measurements and shape geometry**

- Nets of 3D shapes
- Measure and draw lines accurately
- Area and perimeter

**Ratios and percentages**

- Ratio
- Percentages without a calculator

**Equations and Formula**

- Simplifying algebraic terms
- Form and solve equations

**Number**

- Square, cube and prime numbers
- Prime decomposition (HCF and LCM)
- Improper and mixed fractions
- Percentages, decimals and fractions

**Angles**

- Angle properties

**Calculations**

- Written methods of multiplication, division, addition and subtraction
- Negative numbers
- Operations with fractions

**Equations and Formula**

- Simplifying expressions
- Substitution
- Inequalities
- Solving equations

**Transformations**

- Enlargements
- Translations
- Rotations
- Reflections

**Data analysis**

- Different types of data
- Venn diagrams
- Stem and Leaf diagrams
- Scatter Graphs
- Pie Charts

**Proportion and Percentages**

- Using a calculator to find a percentage of amount
- Solve ratio problems
- Use scale drawings
- Best buy

**Graphs and Sequences**

- Types of sequences including Fibonacci
- Arithmetic sequences
- Plotting linear graphs
- The equation of straight-line graphs
- Angles
- Interior and exterior angles of polygons
- Bearings
- Exact trigonometric values

**Probability**

- Two-way tables
- Venn diagrams
- Frequency trees
- Tree diagrams

**Equations and Formula**

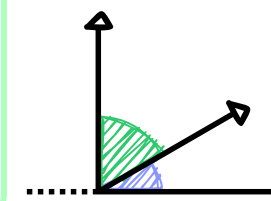
- Form and solving linear equations
- Expanding single and double brackets

**Number**

- Standard form
- Error intervals

**Constructions**

- Correct notations for angles and lengths
- Construct angle bisectors, different types of triangles



Year 8

Summer 2

Summer 1

Spring 2

Spring 1

Autumn 2

Autumn 1

**Number**

- Standard form
- Error intervals

**Constructions**

- Correct notations for angles and lengths
- Construct angle bisectors, different types of triangles
- Loci

**Graphs and Sequences**

- Types of sequences including Fibonacci
- Arithmetic sequences
- Plotting linear graphs
- The equation of straight-line graphs

**Angles**

- Interior and exterior angles of polygons
- Bearings
- Exact trigonometric values

**Probability**

- Two-way tables
- Venn diagrams
- Frequency trees
- Tree diagrams

**Equations and Formula**

- Form and solving linear equations
- Expanding single and double brackets
- Quadratic equations: factorise

**Data analysis**

- Different types of data
- Venn diagrams
- Stem and Leaf diagrams
- Scatter Graphs
- Pie Charts
- Compare data using statistical measurements
- Frequency Polygons

**Proportion and Percentages**

- Using a calculator to find a percentage of amount
- Compound interest and depreciations
- Solve ratio problems
- Use scale drawings
- Best buy

**Number**

- Square, cube and prime numbers
- Prime decomposition (HCF and LCM)
- Improper and mixed fractions
- Percentages, decimals and fractions
- Error intervals
- Standard form

**Angles**

- Angle properties
- Bearings
- Pythagoras' Theorem

**Calculations**

- Written methods of multiplication, division, addition and subtraction
- Negative numbers
- Operations with fractions
- Laws of indices

**Number**

- Square, cube and prime numbers
- Prime decomposition (HCF and LCM)
- Improper and mixed fractions
- Percentages, decimals and fractions
- Error intervals
- Standard form

**Angles**

- Angle properties
- Bearings
- Pythagoras' Theorem

**Calculations**

- Written methods of multiplication, division, addition and subtraction
- Negative numbers
- Operations with fractions
- Laws of indices

**Graphs and sequences**

- Identify and plot coordinates
- Midpoints
- Plotting linear graphs
- Distance speed graphs and conversion graphs
- Measurements and shape geometry**
- Nets of 3D shapes
- Measure and draw lines accurately
- Area and perimeter
- Circles

**Ratios and percentages**

- Ratio
- Percentages without a calculator

**Equations and Formula**

- Simplifying algebraic terms
- Form and solve equations
- Expanding / factorising

Year 9

Autumn 1

Autumn 2

Spring 1

Spring 2

Summer 1

Summer 2

**Graphs and sequences**

- Identify and plot coordinates
- Plotting linear graphs
- Distance speed graphs and conversion graphs
- The equation of a straight line

**Measurements and shape geometry**

- Nets of 3D shapes
- Measure and draw lines accurately
- Area and perimeter
- Circles
- Volume

**Ratios and percentages**

- Ratio
- Percentages without a calculator

**Equations and Formula**

- Simplifying algebraic terms
- Form and solve equations
- Expanding / factorising
- Rearrange formulas

**Number**

- Square, cube and prime numbers
- Prime decomposition (HCF and LCM)
- Improper and mixed fractions
- Percentages, decimals and fractions
- Error intervals
- Standard form
- Recurring decimals

**Angles**

- Angle properties
- Bearings
- Pythagoras' Theorem
- Trigonometry of right-angled triangles

**Calculations**

- Written methods of multiplication, division, addition and subtraction
- Negative numbers
- Operations with fractions
- Laws of indices
- Standard form calculations

**Equations and Formula**

- Simplifying expressions
- Substitution
- Inequalities
- Solving equations
- Expanding double brackets
- Quadratics

**Transformations**

- Enlargements
- Translations
- Rotations
- Reflections
- Combination of transformations

$$m = \frac{f(x_2) - f(x_1)}{x_2 - x_1}$$

**Data analysis**

- Different types of data
- Venn diagrams
- Stem and Leaf diagrams
- Scatter Graphs
- Pie Charts
- Compare data using statistical measurements
- Frequency Polygons
- Capture-Recapture Method

**Proportion and Percentages**

- Using a calculator to find a percentage of amount
- Compound interest and depreciations
- Solve ratio problems
- Use scale drawings
- Best buy
- Direct and inverse proportion equations

**Graphs and Sequences**

- Types of sequences including Fibonacci
- Arithmetic sequences
- Quadratic sequences
- Plotting linear graphs
- The equation of straight-line graphs

**Angles**

- Interior and exterior angles of polygons
- Bearings
- Exact trigonometric values
- Pythagoras' Theorem

**Probability**

- Two-way tables
- Venn diagrams
- Frequency trees
- Tree diagrams
- The product rule for counting

**Equations and Formula**

- Form and solving linear equations
- Expanding single and double brackets
- Quadratic equations: factorise to solve, complete the square, the quadratic formula
- Quadratic inequalities

