

MTS Year 8 Maths Learning Journey



Y9

Measures of Location

- Mean
- Median
- Mode/Modal value
- **Mean from a frequency table**
- Outliers
- Compare distributions

Data Handling

- Data collection
- Sampling
- Bar charts
- Pictograms
- Pie charts
- Line graphs
- Grouped frequency diagrams
- Range
- Misleading graphs

Line Symmetry

- Line symmetry
- Reflection

Area

- Area of 2D shapes
- Area of a circle
- Perimeter
- Circumference
- Arc length
- Sector area
- Compound shapes

Angles in Parallel Lines

- Label lines, angles and shapes
- Angles on a line and round a point and in a triangle
- Angles in Parallel lines
- Names and properties of shapes
- Construct shapes
- Interior and exterior angles
- **Line and angle bisectors**

Ratio

- Represent ratio
- Share in a ratio
- Simplify ratio
- Compare ratio

Sequences

- Generate sequences
- Find the nth term

Indices

- Add and subtract with indices
- Multiply with indices
- Divide with indices
- **Powers of powers**

Fractions and Percentages

- Fractions, decimals and percentages
- Fractions of amounts
- Percentages of amounts
- Percentage increase and decrease
- Percentage change
- **Reverse percentage**

Standard Form

- Read and write SF
- Convert from SF
- Add/subtract SF
- Multiply/divide SF
- Use a calculator
- **Negative indices**
- **Fractional indices**

Number Sense

- Rounding
- Estimating
- **Error intervals**
- Order of operations
- Metric measure
- Time

Brackets and Equations

- Form expressions
- Expand a bracket
- Factorise
- **Expand two brackets**
- Solve equations with brackets
- Form and solve
- Solve inequalities

Tables and Probability

- Samples spaces
- Probability from sample spaces
- Probability from two-way tables
- Probability from Venn diagrams
- **Product rule for total outcomes**

Representing Data

- Scatter graphs
- Correlation
- Frequency tables
- Discrete and continuous data
- Two-way tables

Cartesian Plane

- Co-ordinates
- Graphs parallel to axes
- Straight line graphs
- Gradients of lines
- **Nonlinear graphs**
- **Midpoint of a line segment**

× and ÷ Fractions

- Multiply fraction by a whole
- Multiply fractions
- Divide integer by a whole
- Divide fractions
- Reciprocals
- **Mixed numbers and improper fractions**
- **Algebraic fractions**

Proportion and Scale

- Direct proportion
- Conversion graphs
- Currency
- **Direct proportion graphs**
- Similar shape
- Scale factors
- Scale diagrams
- Map scale and ratio

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