

Meridian Maths Curriculum

Year 8

Autumn Term

[Solving Equations](#)

[Coordinates](#)

[Probability](#)

[Forward percentages](#)

Spring Term

[Perimeter & Area](#)

[Ratio](#)

[3D Shapes](#)

Summer Term

[Linear Graphs 1](#)

[Angles](#)

[Constructions and Loci](#)

Topic 1: Solving Equations

Key Idea 1.1: Introduction to Linear Equations

- 1.1a: What is an equation?
- 1.1b: Manipulating equations

Key Idea 1.2: Solving Linear Equations

- 1.2a: Solving using Algebra Tiles
- 1.2b: Solving abstractly
- 1.2c: Solving equations with brackets, fractions and non-integer solutions

Key Idea 1.3: Applications and Problem Solving

- 1.3a: Forming and solving 1: Number problems
- 1.3b: Forming and solving 2: Determining whether a number is in a sequence

Sparx Maths

Independent Learning Codes

Skill	Code
Solving equations with one step	M707
Solving equations with two steps	M634
Solving equations of the form $\frac{a}{x} + b = c$	M647
Mixed problems	M855
Solving linear equations involving brackets	M902

Topic 2: Coordinates

Key Idea 2.1: Introduction and Plotting Coordinates

- 2.1a: Reading and plotting coordinates.
- 2.1b: Plotting shapes.
- 2.1c: Plotting on unusual axes.

Key Idea 2.2: Links to Graphs

- 2.2a: Horizontal and vertical graphs.
- 2.2b: Tilted graphs.

Key Idea 2.3: Applications and Problem Solving

- 2.3a: Review and problem-solving questions.

Sparx Maths

Independent Learning Codes

Skill	Code
Reading and plotting coordinates	M618
Solving shape problems involving coordinates	M230
Plotting horizontal, vertical and diagonal lines	M797

Topic 3: Probability

Key Idea 3.1: Single Event Probability.

- 3.1a:** The probability scale.
- 3.1b:** Key probability notation.
- 3.1c:** Mutually exclusive and exhaustive events.

Key Idea 3.2: Probability with Two or More Events.

- 3.2a:** Systematic listing.
- 3.2b:** Sample space diagrams.
- 3.2c:** Frequency trees and two-way tables.

Key Idea 3.3: Applications of Probability.

- 3.3a:** Experimental probability and expected outcomes.
- 3.3b:** Reasoning and Problem Solving.

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Independent Learning Codes

Skill	Code
Using probability phrases	M655
Writing probabilities as fractions	M941
Writing probabilities as fractions, decimals and percentages	M938
Probabilities of mutually exclusive events	M755
Tree diagrams for independent events	M299
Sample space diagrams	M718
Interpreting frequency tables and two-way tables	M899
Calculating experimental probabilities	M332

Topic 4: Forward Percentages

Key Idea 4.1: Expressing amounts as percentages

Key Idea 4.2: Percentages of amounts

4.2a: Percentage of an amount (non calculator)

4.2b: Percentage of an amount (calculator)

Key Idea 4.3: Simple interest and basic finance

Key Idea 4.4 Percentage change

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Independent Learning Codes

Skill	Code
Writing numbers as percentages of other numbers	M235
Finding percentages of amounts without a calculator	M437
Finding percentages of amounts with a calculator	M905
Percentage change without a calculator	M476
Percentage change with a calculator	M533

Topic 5: Perimeter and Area

Key Idea 5.1: Perimeter

- 5.1a: Perimeter of rectilinear shapes
- 5.1b: Perimeter with algebraic expressions
- 5.1c Solving equations with perimeter

Key Idea 5.2: Area

- 5.2a: Area of rectangles and parallelograms
- 5.2b: Area of triangles
- 5.2c: Area of trapezia
- 5.2d: Area of composite shapes

Key Idea 5.3: Applying and problem solving

Sparx Maths

Independent Learning Codes

Skill	Code
Finding areas using grids	M900
Finding perimeters using grids	M920
Finding the area of rectangles	M390
Finding the perimeter of rectangles and simple shapes	M635
Finding the area of compound shapes	M269
Finding the perimeter of compound shapes	M690
Finding the area of triangles	M610
Finding the area of compound shapes containing triangles	M996
Finding the area of parallelograms	M291
Finding the area of trapeziums	M705
Mixed problems: Finding the area of rectangles, triangles, parallelograms and trapeziums	M303

Key Idea 6.1: Introduction, Simplifying and Scaling

- 6.1a: Introduction to ratio.
- 6.1b: Equivalent and simplifying ratio.
- 6.1c: Unitary ratio and scaling.
- 6.1d: Writing ratio as fractions.

Key Idea 6.2: Sharing in a Ratio

- 6.2a: Sharing in a ratio using the whole.
- 6.2b: Sharing in a ratio using parts and differences.
- 6.2c: Sharing a ratio using all types.

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Independent Learning Codes

Skill	Code
Writing and simplifying ratios	M885
Using equivalent ratios to find unknown amounts	M801
Converting between ratios, fractions and percentages	M267
Sharing amounts in a given ratio	M525
Writing ratios in the form 1:n	M543

Topic 7: Linear Graphs 1

Key Idea 7.1: Recap and Gradient

7.1a: Gradient as slope.

7.1b: Interpreting gradient.

7.1c: Drawing lines with a given gradient.

Key Idea 7.2: The General form of a Linear Graph

7.2a: Exploring intercept.

7.2b: Introducing $y = mx + c$.

7.2c: Exploring gradient and intercept.

Key Idea 7.3: Plotting Linear Graphs

7.3a: Exploring tables of values.

7.3b: Drawing linear graphs from a table of values.

7.1c: Plotting sequences.

Sparx Maths

There are no appropriate Sparx Independent Learning codes for the content we cover within this topic at this stage in the curriculum.

Key Idea 8.1: Types of Angles

- 8.1a:** Types of angles
- 8.1b:** Measuring and drawing angles

Key Idea 8.2: Angle Calculations

- 8.2a:** Adjacent angles on a straight line
- 8.2b:** Angles at a point
- 8.2c:** Vertically opposite angles

Key Idea 8.3: Angles in Triangles and Quadrilaterals

- 8.3a:** Angles in triangles
- 8.3b:** Angles in quadrilaterals.

Key Idea 8.3: Bearings

- 8.3a:** Drawing and measuring bearings
- 8.3b:** Bearings and scale drawings

Sparx Maths	
Independent Learning Codes	
Skill	Code
Types of angles	M502
Estimating angles	M541
Measuring angles	M780
Drawing angles	M331
Angles on a line and about a point	M818
Vertically opposite angles	M163
Angles in triangles	M351
Angles in quadrilaterals	M679
Combining angle facts	M319
Measuring and drawing bearings	M260
Drawing and interpreting scale diagrams	M112

Topic 9: 3D Shapes

Key Idea 9.1: Properties of 3D shapes

- 9.1a: Key terminology
- 9.1b: Nets of prisms
- 9.1c Drawing 3D shapes on isometric paper

Key Idea 9.2: Plans and elevations

- 9.2a: Identifying plans and elevations from 3D shapes
- 9.2b: Drawing plans and elevations from 3D shapes
- 9.2c: Identifying the 3D shape from the plans and elevations

Key Idea 9.3: Surface area

- 9.3a: Surface area of prisms
- 9.3b: Calculating a missing side length when given the surface area
- 9.3c: Applications of surface area

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Independent Learning Codes

Skill	Code
Nets of 3D shapes	M518
Plans and elevations	M229
Finding the surface area from a net	M884
Finding the surface area of cubes and cuboids	M534
Finding the surface area of prisms	M661

Topic 10: Constructions and Loci

Key Idea 10.1: Constructions

10.1a: Basic constructions including bisectors.

10.1b: Constructing shapes.

10.1c: Constructing angles.

Key Idea 10.2: Loci

10.2a: Simple loci.

10.2b: Loci using constructions.

10.2c: Regions.

Sparx Maths

Independent Learning Codes

Skill	Code
Using a pair of compasses	U678
Constructing triangles	U187
Constructing bisectors of angles	U787
Constructing perpendicular bisectors and lines	U245
Mixed problems: Constructing bisectors and perpendicular lines	U979
Constructing loci	U820