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<th>Term 1</th>
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<td><strong>Week 10</strong></td>
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<tr>
<td>1 Basic Number Review</td>
<td>2 Integers</td>
<td>3 Angles and Two-Dimensional Shapes</td>
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<tr>
<td>4 Fractions, Decimals and Percentages (conversions and calculations)</td>
<td>5 Applications of Percentages</td>
<td>6 Indices with Numerical Bases</td>
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<tr>
<td>7 Simple Probability</td>
<td>8 Time</td>
<td>9 Introductory Algebra</td>
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<td>MA4-1WM, MA4-2WM, MA4-15MG</td>
<td>MA4-1WM, MA4-2WM, MA4-3WM, MA4-8NA</td>
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<tr>
<td>10 Simple Equations</td>
<td>11 Pythagoras’ Theorem</td>
<td>12 Length, Perimeter and Circumference</td>
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<td>13 Transformations on the Number Plane</td>
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- Review of Stage 3 Whole Number, Addition and Subtraction, Multiplication and Division
- Apply the four operations with integers
- Apply the order of operations
- Use the language, notation and conventions of geometry
- Apply the geometric properties of angles at a point to find unknown angles with appropriate reasoning
- Review of Stage 3 Whole Number, Addition and Subtraction, Multiplication and Division
- Solve simple quadratic equations of the form \( ax^2 + bx + c = 0 \)
- Solve simple linear equations using algebraic techniques
- Solve simple quadratic equations of the form \( x^2 = c \)
- Find perimeter of two-dimensional shapes
- Establish and use formulas to find circumferences of circles
- Find the perimeters of quadrants, semi-circles and sectors
- Solve problems involving perimeter and circumference
- Locate and describe points on the Cartesian plane using coordinates
- Describe translations and reflections in an axis on the Cartesian plane
- Describe rotations of multiples of 90° on the Cartesian plane

For each week, the focus is on specific mathematical concepts and skills that are taught. The table provides a structured overview of the curriculum for Term 1, Term 2, Term 3, Term 4, and Term 5, with each term covering different aspects of mathematics, including number review, algebra, geometry, number operations, and probability.
# Mathematics Sample Stage 4 Scope and Sequence – Year 8 (illustrating the completion of Stage 4 by the end of Year 8 referencing key ideas)

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<tr>
<td><strong>1 Area of Plane Shapes</strong>&lt;br&gt;MA4-1WM, MA4-2WM, MA4-10MG, MA4-13MG</td>
<td><strong>2 Data Collection, Representation and Simple Analysis</strong>&lt;br&gt;MA4-1WM, MA4-2WM, MA4-3WM, MA3-18SP, MA4-19SP, MA4-20SP</td>
<td><strong>3 Financial Mathematics</strong>&lt;br&gt;MA4-1WM, MA4-2WM, MA4-3WM, MA4-5NA, MA4-6NA</td>
<td><strong>4 Volume and Capacity of Prisms and Cylinders</strong>&lt;br&gt;(including area review)&lt;br&gt;MA4-1WM, MA4-2WM, MA3-11MG, MA4-14MG</td>
<td><strong>5 Further Probability</strong>&lt;br&gt;(including Venn diagrams)&lt;br&gt;MA4-1WM, MA4-2WM, MA4-3WM, MA4-21SP</td>
<td><strong>6 Further Algebra</strong>&lt;br&gt;MA4-1WM, MA4-2WM, MA4-3WM, MA4-8NA</td>
<td><strong>7 Further Linear Equations</strong>&lt;br&gt;MA4-1WM, MA4-2WM, MA4-3WM, MA4-10NA</td>
<td><strong>8 Patterns and Linear Relationships</strong>&lt;br&gt;MA4-1WM, MA4-3WM, MA4-11NA</td>
<td><strong>9 Geometry and Congruence</strong>&lt;br&gt;MA4-1WM, MA4-2WM, MA4-3WM, MA4-17MG</td>
<td><strong>10 Ratios, Rates and Distance/Time Graphs</strong>&lt;br&gt;MA4-1WM, MA4-2WM, MA4-3WM, MA4-7NA</td>
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### Term 1
- Convert between metric units of area
- Establish and use formulas to find the areas of special quadrilaterals and circles
- Solve problems involving area

### Term 2
- Review calculations with percentages
- Solve problems involving percentages
- Perform calculations involving GST
- Calculate discounts and ‘best buys’
- Solve problems involving profit and loss

### Term 3
- Simplify algebraic expressions involving the four operations
- Substitute into algebraic expressions
- Expand and factorise simple algebraic expressions

### Term 4
- Solve simple numerical exercises based on geometrical properties
- Identify congruent figures
- Identify congruent triangles using the four tests

### Week 1
- Identify congruent figures
- Solve simple numerical exercises based on geometrical properties

### Week 2
- Solve simple linear equations using algebraic techniques, including equations involving one fraction
- Recognise, describe and record geometric and number patterns in words and algebraic symbols

### Week 3
- Collect and interpret data from primary and secondary sources
- Construct and interpret frequency tables, histograms and polygons
- Construct and interpret dot plots, stem-and-leaf plots, divided bar graphs, sector graphs and line graphs

### Week 4
- Convert between metric units of volume and capacity
- Establish and use formulas to find volumes of right prisms and cylinders
- Solve problems involving volume and capacity

### Week 5
- Visualise and draw different views of three-dimensional objects
- Convert between metric units of volume and capacity
- Establish and use formulas to find volumes of right prisms and cylinders
- Solve problems involving volume and capacity

### Week 6
- Calculate mean, median, mode and range for sets of data
- Investigate the effect of outliers on the mean and median
- Describe and interpret a variety of data displays using median, mean and range

### Week 7
- Review calculations with percentages
- Solve problems involving profit and loss
- Perform calculations involving GST
- Calculate discounts and ‘best buys’
- Solve problems involving profit and loss

### Week 8
- Investigate techniques for collecting data and consider their implications and limitations
- Collect and interpret data from primary and secondary sources
- Construct and interpret frequency tables, histograms and polygons

### Week 9
- Investigate the effect of outliers on the mean and median
- Describe and interpret a variety of data displays using median, mean and range

### Week 10
- Describe events using language of ‘at least’, exclusive ‘or’ (A or B but not both), inclusive ‘or’ (A or B or both) and ‘and’
- Represent events in two-way tables and Venn diagrams and solve related problems

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Mathematics Sample Stage 4 Scope and Sequence – Year 8 (illustrating the completion of Stage 4 by the end of Year 8 referencing key ideas)