

## Year 7 Mathematics

In Year 7 Mathematics, students build upon their prior knowledge from KS2. Students follow 13 topic strands taught in Blocks throughout Year 7 with support and challenge in place for every learner. All work in each Block is fully differentiated into Bronze, Silver, Gold and Platinum levels in line with student pathways. The mathematical skills acquired in Years 7, 8 and 9 are taught to fully prepare each student for the GCSE course and beyond. Retrieval practice is embedded into lessons. This is usually seen in Brain in Gears at the start of all lessons and may include recall questions from previous lessons or a recap of prior learning. Retrieval practice includes interleaved questions from previous topics, making connections between topics where possible.

Year 7 Curriculum	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
Topic(s)	<p><b>Block 1: Calculations and Accuracy</b></p> <ul style="list-style-type: none"> <li>- Four operations with numbers</li> <li>- Four operations with negative numbers</li> <li>- Order of Operations</li> <li>- Money Problems</li> <li>- Rounding</li> <li>- Calculator Skills</li> </ul> <p><b>Block 2: Simplifying and Substituting</b></p> <ul style="list-style-type: none"> <li>- What is "x"?</li> <li>- Collecting 'like' terms</li> <li>- Substitution</li> <li>- Expand single brackets</li> </ul> <p><b>Block 3: Ratio and Proportion</b></p> <ul style="list-style-type: none"> <li>- Simplify ratios</li> </ul>	<p><b>Block 4: Integers, Powers and Roots</b></p> <ul style="list-style-type: none"> <li>- Factors, multiples and primes</li> <li>- Squares, cubes and roots</li> <li>- HCF and LCM</li> <li>- Prime factor decomposition</li> <li>- Index notation</li> <li>- Reciprocals</li> </ul> <p><b>Block 5: Sequences, Functions and Graphs</b></p> <ul style="list-style-type: none"> <li>- Generate next terms</li> <li>- Plot coordinates</li> <li>- Draw and recognise horizontal and vertical lines</li> <li>- Find and use the nth term</li> </ul>	<p><b>Block 6: Area and Perimeter</b></p> <ul style="list-style-type: none"> <li>- Find area and perimeter of squares, rectangles and parallelograms</li> <li>- Find area and perimeter of triangles and trapeziums</li> <li>- Find the area and perimeter of compound shapes</li> </ul> <p><b>Block 7: Transformations</b></p> <ul style="list-style-type: none"> <li>- Lines of symmetry</li> <li>- Rotational symmetry</li> <li>- Scale factors of enlargement</li> <li>- Reflect shapes</li> <li>- Perform an enlargement on a grid</li> </ul>	<p><b>Block 9: Fractions, Decimals and Percentages</b></p> <ul style="list-style-type: none"> <li>- Equivalent fractions</li> <li>- Four operations with decimals</li> <li>- Four operations with fractions</li> <li>- Order fractions</li> <li>- Fractions of amounts</li> <li>- Percentage of quantities</li> <li>- Percentage multipliers</li> <li>- Percentage increase and decrease</li> </ul> <p><b>Block 10: Lines, Angles and Shapes</b></p> <ul style="list-style-type: none"> <li>- Angle facts</li> <li>- Drawing nets of 3D shapes</li> </ul>	<p><b>Block 11: Forming and Solving Equations</b></p> <ul style="list-style-type: none"> <li>- Function machines</li> <li>- Solve simple linear equations</li> <li>- Words to formula</li> <li>- Solve linear equations with unknowns on both sides</li> <li>- Draw simple linear inequalities on a number line</li> </ul> <p><b>Block 12: Data and Interpreting Results</b></p> <ul style="list-style-type: none"> <li>- Tally charts and pictograms</li> <li>- Venn diagrams</li> <li>- Draw stem and leaf diagrams</li> <li>- Mode, median, mean and range</li> </ul>	<p><b>Block 13: Measures, Volume and Surface Area</b></p> <ul style="list-style-type: none"> <li>- Read scales and tables</li> <li>- Convert metric units</li> <li>- Volume of cubes and cuboids by counting</li> <li>- Volume of cubes and cuboids</li> </ul> <p><b>Maths Engagement Week</b></p>

	<ul style="list-style-type: none"> <li>- Unitary method</li> <li>- Sharing in ratio</li> <li>- Currency conversions</li> </ul>	<ul style="list-style-type: none"> <li>- Plot a linear graph from table of values</li> <li>- Find gradient of a line</li> </ul> <p><b>Maths Engagement Week</b></p>	<p><b>Block 8: Probability</b></p> <ul style="list-style-type: none"> <li>- Probability scale and language</li> <li>- Know and use that probabilities add to 1</li> <li>- Frequency trees</li> <li>- Two-way tables</li> <li>- Relative frequency</li> <li>- Sample space diagrams</li> </ul>	<ul style="list-style-type: none"> <li>- Angles in parallel lines</li> <li>- Simple bearings</li> </ul>	<ul style="list-style-type: none"> <li>- Pie charts</li> <li>- Scatter graphs</li> <li>- Compare data sets</li> </ul>	
<p><b>Assessment</b></p>	<p><b>Assessment 1</b> covers all the content listed above.</p> <p>The assessment will be completed in the lesson and lasts 1 hour. Students and parents will receive information from the class teacher to confirm the exact date of the assessment.</p> <p>Students are expected to revise for the assessment to showcase their abilities such that intervention or challenge work can take place afterwards.</p>	<p><b>Assessment 2</b> covers all the content listed above.</p> <p>The assessment now contains a “Review and Recall” section which places emphasis on retrieval practice from work covered since the beginning of the year. Questions may also link mathematical concepts that have been taught previously.</p> <p>Students are expected to revise for the assessment to showcase their abilities such that intervention or challenge work can take place afterwards.</p>	<p><b>Assessment 3</b> covers all the content listed above.</p> <p>The assessment still contains a “Review and Recall” section which places emphasis on retrieval practice from work covered since the beginning of the year. Questions may also link mathematical concepts that have been taught previously.</p> <p>Students are expected to revise for the assessment to showcase their abilities such that intervention or challenge work can take place afterwards.</p>	<p><b>Assessment 4</b> covers all the content listed above.</p> <p>The assessment still contains a “Review and Recall” section which places emphasis on retrieval practice from work covered since the beginning of the year. Questions may also link mathematical concepts that have been taught previously.</p> <p>Students are expected to revise for the assessment to showcase their abilities such that intervention or challenge work can take place afterwards.</p>	<p><b>Assessment 5</b> covers all the content listed above.</p> <p>The assessment still contains a “Review and Recall” section which places emphasis on retrieval practice from work covered since the beginning of the year. Questions may also link mathematical concepts that have been taught previously.</p> <p>Students are expected to revise for the assessment to showcase their abilities such that intervention or challenge work can take place afterwards.</p>	<p><b>End of Year Examinations</b> cover all topics across the year.</p> <p>The examinations are sat in lessons. There is a non-calculator and a calculator paper.</p> <p>Students are expected to revise thoroughly for these examinations to highlight their progress across the year. Their results also inform any set movements as we progress into the next academic year.</p>

## Independent Work

At the end of each block of work, students will receive an “Independent Block Review Sheet” which must be completed fully and handed in to the teacher. The sheet contains key questions and work from key concepts from the block of learning they have just completed. Each question has attached a HegartyMaths video clip number to support full completion of the sheet. These sheets make excellent starting points for revision when an assessment is approaching. Students will glue these into their book to aid sequential learning. Students are also encouraged to complete the HegartyMaths quizzes.