<table>
<tr><th>Timing</th><th>Unit Title</th><th>Key Question</th><th>Knowledge</th><th>Assessing understanding</th></tr>
<tr><td rowspan="2">Autumn</td><td>Number</td><td>Can you use number properties and indices to simplify and evaluate expressions?</td><td>● Number problems and reasoning
● Place value and estimating
● HCF and LCM
● Calculating with powers (indices)
● Zero, negative and fractional indices
● Algebraic indices
● Powers of 10 and standard form
● Surds</td><td rowspan="3">How understanding is assessed:

● Applying concepts to increasingly complex and unfamiliar problems
● Explaining and justifying methods through class discussion and questioning
● Independent practice through classwork and homework
● Retrieval practice to secure key knowledge and methods
● Topic tests

Skills developed:
● Conceptual understanding
● Numerical skills
● Algebraic skills
● Problem solving skills

Assessment points:
● Topic tests
● End of term summative tests</td></tr>
<tr><td>Algebra</td><td>Can you manipulate algebraic expressions and represent sequences?</td><td>● Expanding and factorising
● Equations
● Formulae
● Linear sequences
● Non-linear sequences
● More expanding and factorising</td></tr>
<tr><td rowspan="2">Spring</td><td>Interpreting and representing data</td><td>Can you represent and interpret data using a range of statistical methods?</td><td>● Statistical diagrams
● Time series
● Scatter graphs
● Line of best fit
● Averages and range</td></tr>
<tr><td>Fractions, ratio and percentages</td><td>Can you apply proportional reasoning using fractions, ratio and percentages?</td><td>● Fractions
● Ratios
● Ratio and proportion
● Percentages</td></tr>
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<tr><td>Spring</td><td>Angles and trigonometry</td><td>Can you apply geometric reasoning and trigonometry to solve problems?</td><td>● Angles in parallel lines
● Interior and exterior angles of a polygon
● Pythagoras’ theorem
● Trigonometry
● Bearings and scale drawings</td><td rowspan="4">How understanding is assessed:
● Applying concepts to increasingly complex and unfamiliar problems
● Explaining and justifying methods through class discussion and questioning
● Independent practice through classwork and homework
● Retrieval practice to secure key knowledge and methods
● Topic tests

Skills developed:
● Conceptual understanding
● Numerical skills
● Algebraic skills
● Problem solving skills

Assessment points:
● Topic tests
● End of term summative tests
● End of year summative test</td></tr>
<tr><td rowspan="3">Summer</td><td>Graphs</td><td>Can you represent and interpret relationships using linear and non-linear graphs?</td><td>● Linear graphs
● More linear graphs
● Graphing rates of change
● Quadratic graphs
● Other non-linear graphs</td></tr>
<tr><td>Area and volume</td><td>Can you apply measures and accuracy to solve problems involving area and volume?</td><td>● Bounds
● Units and accuracy
● Sectors of circles
● 3D solids
● Volume and surface area</td></tr>
<tr><td>Transformations and constructions</td><td>Can you apply transformations and constructions accurately?</td><td>● Transformations
● Constructions
● Loci</td></tr>
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