Higher Attainer students need to be able to show learning identified for Middle Attainer students and the areas identified here.

Mid-Year Expectations		End of Year Expectations
Higher Prior Attainer	**Proportional Reasoning** • Express ratios in the form 1 : n. • Use the gradient of a line as a ratio. • Explore direct proportion graphs. • Multiply and divide improper and mixed numbers. • Multiply and divide algebraic fraction. **Representations** • Explore the gradient of the line y = kx. • Explore non-linear graphs. • Find the midpoint of a segment. • Use the product rule for finding the total of possible outcomes. **Algebraic Techniques** • Expand a pair of binomials. • Find the nth term of a sequence. • Calculate powers raised to powers. Throughout the year, students are expected to use prior learning with new. Students use reasoning and develop problem solving skills, using learning from more than one area.	**Developing Number** • Find original amounts when the percentage is more than or less than 100%. • Use negative and fractional indices. • Understand and use error intervals. • Convert metric units of area and volume. **Developing Geometry** • Use the diagonals in quadrilaterals. • Prove simple geometric facts. • Construct an angle bisector and a bisector of an angle line segment. **Reasoning with Data** • Calculate the mean from ungrouped and grouped frequency tables.

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Mid-Year Expectations	End of Year Expectations
Middle Prior Attainer **Proportional Reasoning** • Simplify, write equivalent, and share in ratios. • Use ratios for comparisons and give related fractions. • Convert currencies. • Use scale factors and conversion graphs. • Multiply and divide integers and fractions and use the reciprocal. **Representations** • Draw graphs parallel to axes and graphs of the form $y = mx + c$. • Understand correlation. • Work with discrete and continuous data • Draw and use two-way, ungrouped, and grouped frequency tables and sample space and Venn diagrams. • Use data in tables to find probabilities. **Algebraic Techniques** • Expand a single bracket and factorise by with common factors. • Form and solve equations that include brackets. • Solve inequalities and understand solution sets. • Generate sequences with rules in words and algebra. • Add and subtract expressions with indices. • Simplify algebraic expressions using multiplication and division rules of indices. Throughout the year, students are expected to use prior learning with new. Students use reasoning and develop problem solving skills,	**Developing Number** • Use fraction, decimal and percentage equivalents. • Recognise numbers as fractions or percentages of another. • Increase and decrease an amount by a percentage. • Calculate profit and loss. • Use standard index form with all four operations. • Estimate answers by rounding to decimal places and to one significant figure. • Show good understanding of the use of BIDMAS. **Developing Geometry** • Calculate missing angles in parallel lines. • Calculate interior and exterior angles of polygons. • Construct bisectors. • Calculate the area and perimeter of triangles, rectangles, parallelograms, trapezia, circles, and compound shapes. • Reflect shapes horizontally, vertically, and diagonally. **Reasoning with Data** • Draw and use appropriate charts to compare distributions and identify outliers. • Identify misleading graphs. • Design and criticise methods of collecting data. • Calculate the different averages and the range and use to compare distributions. • Choose the appropriate average. Students continue to embed prior learning into new, apply reasoning and problem solve.

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Mid-Year Expectations	End of Year Expectations
Lower Prior Attainer	

Mid-Year Expectations

Proportional Reasoning
- Simplify, write equivalent, and share in ratios.
- Use ratios for comparisons and give related fractions.
- Convert currencies.
- Use scale factors and conversion graphs.
- Multiply and divide integers and fractions.

Representations
- Draw horizontal, vertical, and diagonal graphs.
- Understand correlation.
- Work with discrete and continuous data
- Draw and use two-way and frequency tables and sample space and Venn diagrams.
- Use data in tables to find probabilities.

Algebraic Techniques
- Expand a single bracket.
- Form and solve equations that include brackets.
- Solve inequalities and understand solution sets.
- Generate sequences with rules in words and algebra.
- Add and subtract expressions with indices.
- Simplify algebraic expressions using multiplication and division rules of indices.

Throughout the year, students are expected to use prior learning with new.

End of Year Expectations

Developing Number
- Use fraction, decimal and percentage equivalents.
- Increase and decrease an amount by a percentage.
- Calculate profit and loss.
- Estimate answers by rounding to decimal places and to one significant figure.
- Show good understanding of the use of BIDMAS.

Developing Geometry
- Calculate missing angles in parallel lines.
- Calculate interior and exterior angles of polygons.
- Construct bisectors.
- Calculate the area and perimeter of triangles, rectangles, parallelograms, trapezia, circles, and compound shapes.
- Reflect shapes horizontally, vertically, and diagonally.

Reasoning with Data
- Draw and use appropriate charts to compare distributions and identify outliers.
- Identify misleading graphs.
- Calculate the mode, median and mean and the range.

Students continue to embed prior learning into new.

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