

Year 9 Spring Term

Foundation

Higher

Statistics Continued

Charts and Graphs

- Coordinates and four quadrants
- Pictogram
- Bar-line and line graphs
- Composite and dual bar charts
- Bar charts and histogram with equal class width
- Mode and charts
- Stem and leave diagrams

Representing and Interpreting Data

- Composite and dual bar charts
- Pie charts
- Frequency polygon
- Histogram with equal class intervals
- Estimate median from histograms
- Line graphs
- Time series data
- Compare two or more distributions

Pie Chart

- Draw and measure angles correctly
- Draw Pie charts
- Interpret pie charts
- Pie charts and problem solving

Scatter Graph

- Draw and interpret scatter graphs
- Lines of best fit
- Make predictions using the line of best fit
- Correlation does not imply causality
- Explain and isolated point from scatter graph
- Know that interpolations and extrapolating cause apparent threat

Scatter Graphs

- Draw scatter graphs
- Interpreting points on a scatter graph
- Line of best fit
- Use line of best fit to make predictions
- Types of correlation
- Describing and interpreting scatter graphs

Fractions, Percentages, Ratio and Proportion

Fractions

- Equivalent fractions

Fractions

- Express a number as a fraction of another

<ul style="list-style-type: none"> - Fractions and shapes or shading - Express a given number as a fraction of another - Cancelling or simplifying fractions - Ordering fractions - Comparing fractions using inequality symbols - Add and subtract fractions - Fraction of a quantity - Multiply and divide fractions - Fractions and problem solving 	<ul style="list-style-type: none"> - Equivalent fractions - Cancelling down fractions Fraction of quantity - Fractions to decimal and vice versa - Add, subtract, multiply and divide fractions - Reciprocal - Convert fractions to recurring decimal - Convert recurring decimal to fractions
<p>Fractions, Decimals and Percentages</p> <ul style="list-style-type: none"> - Convert fractions to decimals, percentages and vice versa - Understand that percentages is a fraction in hundredths - Recognise recurring fractions - Order fractions, decimals and percentages 	<p>Percentages</p> <ul style="list-style-type: none"> - Fractions, decimals and percentages - Express a number as a percentage of another - Percentage of quantities - Percentage increase/decrease - The use of multiplier and percentage increase/decrease - Reverse percentage change - Repeated percentage change - Growth and decay
<p>Percentages</p> <ul style="list-style-type: none"> - Express a number as a percentage of another - Find percentage of a quantity: 50%, 25%, multiples of 10% and 5% - Percentage increase and decrease - Percentages and real-life problems - Percentage profit and loss - Simple interest - Multiplier and percentages - Multiplier and percentage increase and decrease 	<p>Ratio and Proportion</p> <ul style="list-style-type: none"> - Express a statement into ratio - Write ratio in the form $n:1$ or $1:n$ - Divide a quantity into given ratio - Write ratio as a fraction - Find missing part when one is known - Write ratio as a linear function - Direct proportion - Scale reading and ratio - Convert between currencies - Proportion and recipe
<p>Equations, Inequalities and Sequences</p>	<p>Polygon, Pythagoras' Theorem and Trigonometry</p>

<p>Equations</p> <ul style="list-style-type: none"> - Expression, equations, formula and identity - Set up simple equations - The function machines - Solve simple equations - Equations involving multiple steps - Rearrange simple equations - Substitute into a formula - Solving equations using graphs - Solve angles, perimeter and area problems leading to equation - Write an equation to solve worded problems 	<p>Polygons, Angles and Parallel Lines</p> <ul style="list-style-type: none"> - Properties of quadrilaterals - Triangles and problem solving - Proof angles in a triangle add to 180 - Regular and irregular polygons - Finding number of sides of a polygon - Angle properties of parallel lines
<p>Inequalities</p> <ul style="list-style-type: none"> - Inequality symbols - Whole number values satisfying an inequality - Solve inequation equations including those involving two-symbols - Solve two sets of inequalities and list values satisfying both - Construct linear inequalities, solve it and represent the solutions in a number line - Rounding answers to a given degree of accuracy 	<p>Pythagoras' Theorem</p> <ul style="list-style-type: none"> - Finding longer side using Pythagoras' theorem - Finding shorter side using Pythagoras' theorem - Pythagoras' theorem and answers in surd form - Length of a line segment - Pythagoras theorem and problem solving
<p>Sequences</p> <ul style="list-style-type: none"> - Recognise sequences of even and odd numbers - Use function machine to find terms of a sequence - Term-to-term rule - Find a specific term in a sequence 	<p>Trigonometry</p> <ul style="list-style-type: none"> - SHOCAHTOA and missing sides - SOHCAHTOA and missing angles - Angle of elevation and depression - Exact values of sin, cos and tan - Trigonometric ratios and problem solving

- Generate arithmetic sequence of numbers, triangular numbers, square and cube numbers
- Sequences from diagrams
- Find the n th term of linear sequence
- Generate terms of a sequence from its n th term
- Applying the n th term of sequences
- Generating geometric sequence and find the term-to-term rule
- Generating terms of a quadratic sequence

End-of-Term Assessment