



Topic	Learning Objectives	Key Vocabulary	Learning Sequence	Linked Learning	Home Learning
Circle Theorems	<p>Recognise and use the equation of a circle with centre at the origin</p> <p>Find the equation of a tangent to a circle at a given point</p> <p>Identify and apply circle definitions and properties, including: centre, radius, chord, diameter, circumference, tangent, arc, sector and segment</p> <p>Apply and prove the standard circle theorems concerning angles, radii, tangents and chords and use them to prove related results</p>	<p>Reciprocal</p> <p>Perpendicular</p> <p>Chord</p> <p>Tangent</p> <p>Alternate</p> <p>Theorem</p> <p>Cyclic quadrilateral</p>	<p>Recognise and use the equation of a circle with centre at the origin</p> <p>Find the equation of a tangent to a circle at a given point</p> <p>Identify and apply circle definitions and properties, including: centre, radius, chord, diameter, circumference, tangent, arc, sector and segment</p> <p>Apply and prove the standard circle theorems concerning angles, radii, tangents and chords and use them to prove related results</p>	<p>Practical experience of drawing circles with compasses</p> <p>Recall the words, centre, radius, diameter and circumference</p> <p>Recall the relationship of the gradient between two perpendicular lines</p> <p>Find the equation of a straight line, given a gradient and a coordinate</p>	<p>There will be a written piece of homework each week to assess learning.</p> <p>Videos and additional work can be accessed via www.corbettmaths.com</p> <p>www.keshmaths.org.uk</p>
More Algebra	<p>Rationalise denominators</p> <p>Simplify and manipulate algebraic expressions</p> <p>Rearrange formulae to change the subject</p> <p>Argue mathematically to show algebraic expressions are equivalent and use algebra to support and construct arguments and proofs</p> <p>Interpret simple expressions as functions with input and outputs</p> <p>Interpret inverse functions</p> <p>Interpret composite functions</p>	<p>Rationalise</p> <p>Denominator</p> <p>Surd</p> <p>Rational</p> <p>Irrational</p> <p>Proof</p> <p>Function notation</p> <p>Inverse</p> <p>evaluate</p>	<p>Rationalise denominators</p> <p>Simplify and manipulate algebraic expressions</p> <p>Rearrange formulae to change the subject</p> <p>Argue mathematically to show algebraic expressions are equivalent and use algebra to support and construct arguments and proofs</p> <p>Interpret simple expressions as functions with input and outputs</p> <p>Interpret inverse functions</p> <p>Interpret composite functions</p>	<p>Simplify surds</p> <p>Use negative numbers with all four operations</p> <p>Recall and use the hierarchy of operations</p>	<p>There will be a written piece of homework each week to assess learning.</p> <p>Videos and additional work can be accessed via www.corbettmaths.com</p> <p>www.keshmaths.org.uk</p>



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Vectors and geometric proof	<p>To be able to Apply addition and subtraction of vectors, multiplication of vectors by a scalar and diagrammatic and column representations of vectors</p> <p>Use vectors to construct geometric arguments and proof</p>	<p>Vector</p> <p>Direction</p> <p>Magnitude</p> <p>Scalar</p> <p>Multiple</p> <p>Parallel</p> <p>Collinear</p> <p>Proof</p> <p>Ratio</p> <p>Column vector</p>	<p>To be able to Apply addition and subtraction of vectors, multiplication of vectors by a scalar and diagrammatic and column representations of vectors</p> <p>Use vectors to construct geometric arguments and proof</p>	<p>Use vectors to describe translations</p> <p>Pythagoras' theorem</p> <p>Properties of triangles and quadrilaterals</p>	<p>There will be a written piece of homework each week to asses learning.</p> <p>Videos and additional work can be accessed via www.corbettmaths.com</p> <p>www.keshmaths.org.uk</p>
Proportion and graphs	<p>Interpret simple expressions as functions with inputs and outputs</p> <p>Recognise, plot, sketch and interpret graphs of reciprocal and exponential functions</p> <p>Calculate or estimate gradients of graphs and areas under graphs</p> <p>Work fluently with real life graphs involving speed, distance, time and velocity</p> <p>Solve problems involving direct and inverse proportion including graphical and algebraic representations</p> <p>Calculate and Interpret the gradient at a point on a curve</p>	<p>Reciprocal</p> <p>Linear</p> <p>Gradient</p> <p>Exponential</p> <p>Functions</p> <p>Direct</p> <p>Indirect</p> <p>Proportion</p> <p>Velocity</p>	<p>Interpret simple expressions as functions with inputs and outputs</p> <p>Recognise, plot, sketch and interpret graphs of reciprocal and exponential functions</p> <p>Calculate or estimate gradients of graphs and areas under graphs</p> <p>Work fluently with real life graphs involving speed, distance, time and velocity</p> <p>Solve problems involving direct and inverse proportion including graphical and algebraic representations</p> <p>Calculate and Interpret the gradient at a point on a curve</p>	<p>Draw linear and quadratic graphs</p> <p>Calculate the gradient of a linear function between two points</p> <p>Recall transformations of trigonometric functions</p> <p>Knowledge of writing statements of direct proportion and forming an equation to find values</p>	<p>There will be a written piece of homework each week to asses learning.</p> <p>Videos and additional work can be accessed via www.corbettmaths.com</p> <p>www.keshmaths.org.uk</p>



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