

Curriculum plan: Maths

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INTENT:



“God used beautiful mathematics in creating the world”

Paul Dirac

Maths is a universal language that explains the world around us. The study of mathematics in The King's enables students to make sense of everyday situations, forge links between topics and establish connections to real life context.

As a fundamental discipline in our lives, maths fosters curiosity, equipping students with various strategies to tackle problems; it empowers students with resilience to take risks, get it wrong, form a new strategy and start again, with determination and drive to reach the final answer.

Maths is logical thinking, reasoning, intuition, analysis, construction, generalization and beauty.





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Key found at the bottom of this document

Half term points

AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
<p>Key learning to include: A3.1 Real-life graphs 🕒 SP1.3 Using frequency tables 🕒 GM3.2 Finding area and perimeter N2.5 Using the number system effectively</p> <p>Key learning to include: 🕒 A3.2 Plotting graphs of linear functions SP3.2 Designing a questionnaire 🕒 SP2.6 Scatter diagrams 🕒 GM3.3 Circumference 🕒 N1.8 Multiplying decimals 🕒 N1.9 Dividing decimals</p> <p>Key learning to include: 🕒 A3.3 The equation of a straight line 🕒 SP1.4 Using grouped frequency tables SP2.5 Displaying grouped data GM3.4 Area of circles 🕒 N2.6 Writing numbers in standard form</p>	<p>Key learning to include: A1.5 Setting up, solving simple equations 🕒 A1.6 Using brackets 🕒 N1.7 BIDMAS GM3.3 Circumference 🕒 N4.3 Multiplying fraction's 🕒 N5.3 Converting between fractions, decimals and percentages</p> <p>Key learning to include: A1.7 Working with more complex equations 🕒 A1.8 Solving equations with brackets 🕒 GM3.4 Area of circles 🕒 N5.4 Applying percentage increases and decreases to amounts</p> <p>Key learning to include: 🕒 A1.9 Simplifying harder expressions 🕒 GM3.5 Pythagoras' theorem 🕒 N5.5 Finding the percentage change from one amount to another 🕒 N5.6 Reverse percentages</p>	<p>Key learning to include: A1.7 Working with more complex equations 🕒 GM 2.5 Angles in triangles and quadrilaterals 🕒 GM 2.6 Types of quadrilateral SP1.3 Using frequency tables 🕒 SP2.2 Stem and leaf diagrams</p> <p>Key learning to include: A4.1 Trial and improvement 🕒 GM 2.7 Angles and parallel lines 🕒 GM1.8 Bearings SP1.4 Using grouped frequency tables</p> <p>Key learning to include: 🕒 A4.2 Linear inequalities 🕒 GM2.8 Angles in a polygon 🕒 N7.5 Prime factorisation SP1.5 Interquartile range SP2.5 Displaying grouped data</p> <p>Key learning to include: 🕒 N7.4 Index notation</p>	<p>Key learning to include: 🕒 N1.6 Multiplying and dividing negative numbers 🕒 A2.3 Linear sequences 🕒 A3.2 Plotting graphs of linear functions 🕒 GM6.3 Volume and surface area of cuboids 🕒 N6.1 Understanding ratio notation</p> <p>Key learning to include: 🕒 A2.4 Special sequences 🕒 A3.3 The equation of a straight line 🕒 GM6.4 2-D representations of 3-D shapes N4.5 Working with mixed numbers GM1.7 Metric-imperial conversions 🕒 N6.3 Working with proportional quantities</p> <p>Key learning to include: 🕒 A2.5 Quadratic sequences 🕒 A3.4 Plotting quadratic and cubic graphs 🕒 GM6.5 Prisms 🕒 GM1.10 Compound units 🕒 N6.4 The constant of proportionality</p>	<p>Key learning to include: A3.2 Plotting graphs of linear functions 🕒 N3.4 Rounding decimals GM1.7 Metric-imperial conversions 🕒 GM1.8 Bearings 🕒 GM4.2 Constructions with a ruler and protractor</p> <p>Key learning to include: 🕒 A4.2 Linear inequalities 🕒 N3.5 Significance 🕒 GM1.9 Scale drawing 🕒 GM4.3 Constructions with a pair of compasses</p> <p>Key learning to include: 🕒 A4.3 Solve pairs of equations by substitution A4.4 Solve simultaneous equations using elimination A4.5 Using graphs to solve simultaneous equations 🕒 N3.6 Approximating 🕒 N3.7 Limits of accuracy 🕒 GM4.4 Loci</p>	<p>Key learning to include: N6.3 Working with proportional quantities A1.4 Working with formulae 🕒 A1.5 Setting up and solving simple equations 🕒 A1.6 Using brackets A1.7 Working with more complex equations A1.8 Solving equations with brackets 🕒 GM5.4 Reflection GM5.5 Rotation 🕒 SP4.1 probability SP4.2 Single event probability</p> <p>Key learning to include: 🕒 N6.2 Sharing in a given ratio A1.9 Simplifying harder expressions 🕒 GM5.6 Enlargement SP4.3 Combined events 🕒 N4.4 Add, sub fractions 🕒 N4.6 Dividing fractions</p> <p>Key learning to include: N6.5 Inversely proportional quantities A1.10 Using complex formulae 🕒 GM5.7 Similarity 🕒 GM5.8 Trigonometry 🕒 SP4.4 Estimating probability</p>



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10	<p>Key learning to include: N1.8 Multiplying decimals 🌀 N2.3 Multiplying and dividing by powers of 10 N2.5 Using the number system effectively 🌀 A3.2 Plotting graphs of linear functions A3.3 The equation of a straight line A1.6 Using brackets GM6.3 Volume and surface area of cuboids</p> <p>Key learning to include: 🌀 N2.6 Writing numbers in standard form</p> <p>Key learning to include: 🌀 N3.6 Approximating 🌀 A3.4 Plotting quadratic and cubic graphs GM1.10 Compound units GM6.6 Enlargement in 2d and 3d dimensions</p> <p>Key learning to include: N2.7 Calculating with standard form 🌀 N7.6 Rules of indices A3.6 Quadratic equations A5.1 Factorising quadratics 🌀 A5.2 Solve equations by factorising GM5.10 Finding centres of rotation</p>	<p>Key learning to include: 🌀 N5.3 Converting between fractions, decimals and percentages N5.4 Applying percentage increases and decrease GM2.5 Angles in triangles and quadrilaterals 🌀 GM 2.7 Angles and parallel line SP2.3 Vertical line charts 🌀 SP2.4 Pie charts GM6.2 Understanding nets GM6.4 2-D representations of 3-D shapes</p> <p>Key learning to include: 🌀 N5.5 Finding the percentage change GM2.8 Angles in a polygon GM6.5 Prisms 🌀 SP2.6 Scatter diagrams</p> <p>Key learning to include: SP2.7 Using lines of best fit GM6.7 Constructing plans and elevations</p> <p>Key learning to include: N5.7 Repeated percentage increase/decrease A2.6 Geometric progressions 🌀 GM2.9 Congruent triangles and proof GM2.10 Proof using similar and congruent triangles</p>	<p>Key learning to include: 🌀 A1.5 Setting up and solving simple equations A1.7 Working with more complex equations N1.9 Dividing decimals 🌀 N4.4 Adding and subtracting fractions N4.5 Working with mixed numbers GM3.2 Finding area and perimeter GM6.3 Volume and surface area of cuboids 🌀 GM6.5 Prisms</p> <p>Key learning to include: 🌀 A3.6 Quadratic equations A1.9 Simplifying harder expressions</p> <p>Key learning to include: 🌀 A3.5 Finding equations of straight lines GM1.11 Working with compound units GM6.8 Surface area and volume of 3-D shapes</p> <p>Key learning to include: A3.7 Polynomial and reciprocal functions A1.11 Identities 🌀 GM3.6 Arcs and sectors</p>	<p>Key learning to include: N4.3 Multiplying fractions SP4.2 Single event probability 🌀 SP4.3 Combined events GM5.5 Rotation 🌀 N1.7 BIDMAS 🌀 N2.6 Writing numbers in standard form A3.4 Plotting quadratic and cubic graphs</p> <p>Key learning to include: SP4.4 Estimating probability 🌀 GM5.10 Finding centres of rotation N2.7 Calculating with standard form A1.10 Using complex formulae 🌀 A3.7 Polynomial and reciprocal functions</p> <p>Key learning to include: SP4.5 The multiplication rule</p> <p>Key learning to include: SP4.6 The addition rule 🌀 GM7.1 Vectors 🌀 N7.7 Fractional indices A1.12 Using indices in Algebra N5.8 Growth and decay 🌀 A3.10 Exponential functions</p>	<p>Key learning to include: 🌀 GM3.3 Circumference 🌀 GM3.4 Area of circles GM5.6 Enlargement 🌀 A2.3 Linear sequences A2.4 Special sequences</p> <p>Key learning to include: 🌀 N7.5 Prime Factorisation GM5.7 Similarity A2.5 Quadratic sequences A2.6 Geometric progressions</p> <p>Key learning to include: 🌀 N7.8 Surds GM5.12 Enlargement with negative scale factors A2.7 Other sequences 🌀 A2.8 Nth term of quadratic sequences</p>	<p>Key learning to include: N3.4 Rounding decimals 🌀 N3.5 Significance 🌀 GM2.6 Types of quadrilaterals G2M2.8 Angles in a polygon A3.3 The equation of a straight line A3.4 Plotting quadratic and cubic graphs</p> <p>Key learning to include: 🌀 N7.6 Rules of indices GM2.9 Congruent triangles and proof A4.3 Solve pairs of equations by substitution 🌀 A4.4 Solve simultaneous equations by elimination</p> <p>Key learning to include: N2.8 Recurring decimals 🌀 N3.8 Upper and lower bounds 🌀 GM2.11 Circle theorems A3.8 Perpendicular lines A4.6 Solving linear inequalities in two variables</p>



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11	<p>Key learning to include:</p> <ul style="list-style-type: none"> 🕒 N4.3 Multiplying fractions 🕒 N4.6 Dividing fractions 🕒 GM6.6 Enlargement in 2 and 3 dimensions 🕒 A1.8 Solving equations with brackets 🕒 GM1.8 Bearings <p>Key learning to include:</p> <ul style="list-style-type: none"> 🕒 A5.1 Factorising quadratics 🕒 A5.2 Solve equations by factorising 🕒 GM3.5 Pythagoras' theorem 🕒 GM3.6 Arcs and sectors A4.5 Using graphs to solve simultaneous equations 🕒 GM5.8 Trigonometry 🕒 GM5.9 Trig for special angles <p>Key learning to include:</p> <ul style="list-style-type: none"> 🕒 A5.3 Factorising harder quadratics 🕒 A5.4 Completing the square 	<p>Key learning to include:</p> <ul style="list-style-type: none"> 🕒 N6.2 Sharing in a given ratio 🕒 GM1.9 Scale drawing 🕒 GM4.2 Constructions with a ruler and protractor 🕒 SP1.3 Using frequency tables 🕒 SP1.4 Using grouped frequency tables <p>Key learning to include:</p> <ul style="list-style-type: none"> 🕒 N6.4 The constant of proportionality 🕒 N5.6 Reverse percentages 🕒 GM4.4 Loci 🕒 SP2.5 Displaying grouped data <p>Key learning to include:</p> <ul style="list-style-type: none"> 🕒 A1.14 Rearranging more formulae 🕒 A4.7 Solving equations numerically GM5.11 Combining transformations 🕒 A6.2 Translations and reflections of functions 🕒 SP2.8 Histograms 	<p>Key learning to include:</p> <ul style="list-style-type: none"> 🕒 N3.6 Approximating 🕒 GM1.10 Compound units 🕒 GM5.3 Translations A3.1 Real life graphs 🕒 N6.5 Working with inversely proportional quantities <p>Key learning to include:</p> <ul style="list-style-type: none"> 🕒 N3.7 Limits of accuracy GM7.1 Vectors A1.11 Identities 🕒 N6.3 Working with proportional quantities <p>Key learning to include:</p> <ul style="list-style-type: none"> 🕒 A6.1 Using chords and tangents 🕒 A6.3 Area under non-linear graphs 🕒 GM7.2 Proof with vectors 🕒 A3.9 Inverse and composite functions 🕒 A4.8 Proving general results N6.6 Formulating 	<p>Key learning to include:</p> <ul style="list-style-type: none"> 🕒 GM2.9 Congruent triangles and proof 🕒 N5.5 Finding the percentage change from one amount to another 🕒 SP 4.4 Estimating probability <p>Key learning to include:</p> <ul style="list-style-type: none"> 🕒 GM2.10 Proof using similar and congruent triangles 🕒 N5.7 Repeated percentage increase/decrease 🕒 SP4.6 The addition rule <p>Key learning to include:</p> <ul style="list-style-type: none"> 🕒 GM5.13 Trig, 2-D and 3-D GM6.9 Area and volume in similar shapes 🕒 A5.7 Solving quadratic inequalities 🕒 SP4.7 Conditional probability 		<p>Grade range end point:</p> <p style="font-size: 2em; text-align: center;">9-1</p> <p style="text-align: center; color: orange;">Higher tier grades 9 - 4</p> <p style="text-align: center; color: blue;">Foundation tier grades 5 - 1</p>

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Working towards (Key)
Higher Tier Grades 9 - 4
Both Higher Tier and Higher/Foundation Students will take either the Higher Tier Or the Foundation Tier
Higher/Foundation Tier Both Higher/Foundation and Foundation Tier Students will take the Foundation Tier or Higher Tier
Foundation Tier Grades 5 - 1