

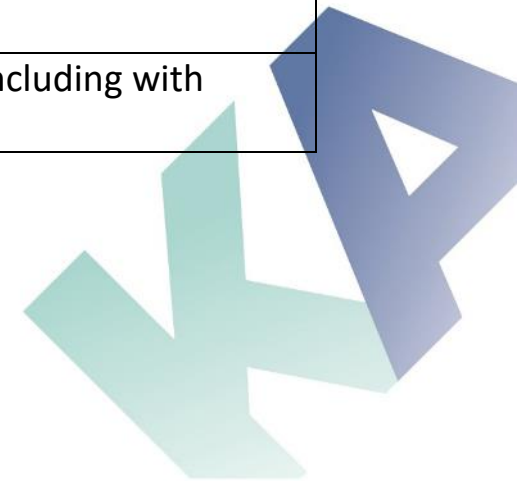
MATHS LEARNING PATH STATEMENTS YEAR 9

Students on Learning Paths 3 and 4 will study different topics than students on Paths 1 and 2, and therefore have different targets in their assessment reports.

YEAR 9	MATHS LEARNING PATH 1 LP1	MATHS LEARNING PATH 2 LP2
St 1	Convert recurring decimals to fractions	Apply all four operations to mixed numbers
St 2	Calculate with fractional and negative indices	Calculate with negative indices
St 3	Rationalise the denominator	Multiply, divide and simplify surd expressions
St 4	Solve a range of problems related to compound growth and decay	Identify and solve reverse percentage problems
St 5	Change the subject of formulae (where the subject appears once)	Solve linear inequalities and represent their solutions on a number line
St 6	Find the surface area of prisms and cylinders	Find the perimeter and area of sectors
St 7	Find the nth term of non-monic quadratic sequences	Find the nth term of monic quadratic sequences
St 8	Solve Pythagoras problems in 3D	Find missing sides of right-angled triangles using Pythagoras' Theorem
St 9	Find the equations of perpendicular lines through a given point	Identify the gradient and y-intercept of linear graphs and plot linear graphs using this information
St 10	Solve problems involving density, mass and volume.	Find the volume of prisms and cylinders

MATHS LEARNING PATH STATEMENTS YEAR 9

YEAR 9	MATHS LEARNING PATH 3 LP3	MATHS LEARNING PATH 4 LP4
St 1	Find the HCF and LCM of two numbers	Express the prime factor decomposition of a number
St 2	Expand and simplify expressions involving single and double brackets	Simplify algebraic expressions using power laws
St 3	Factorise linear expressions with algebraic factors	Substitute positive integers into expressions and formulae
St 4	Apply all four operations to fractions and mixed numbers	Find fractions of amounts (including larger than 1)
St 5	Solve problems involving fractions and percentages of amounts	Find multiples of 5% of a number
St 6	Solve problems involving bearings	Find missing angles between parallel lines
St 7	Find missing angles in regular and irregular polygons	Find missing angles inside triangles and quadrilaterals
St 8	Calculate the nth term of a linear sequence	Find the next three terms in linear, geometric and Fibonacci sequences
St 9	Find the area of trapezia	Find the area of triangles
St 10	Solve multi-step linear equations	Solve two-step linear equations (including with division)



Year 9 LP1: Terms 1-6 Topics

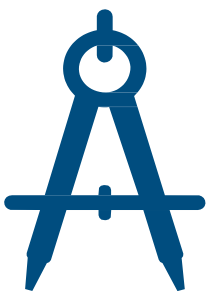
The table below summarises the key learning path topics covered so far this year. You can use the information to review which topics you may need more work on.

Learning Path Skill	Maths Topic	Sparx Maths Clip Numbers for Revision
1	Fractions	LP1 – Recurring Decimals to Fractions – U689
2	Indices	LP1 – Negative and Fractional Indices – U985/772
3	Surds	LP1 – Rationalising the Denominator – U707/281
4	Percentages	LP1 – Compound Growth and Decay – U332/988
5	Algebra	LP1 – Rearrange Formulae – U556
6	Area	LP1 – Surface Area of Prisms – U259/464
7	Sequences	LP1 – Quadratic Sequences – U206
8	Pythagoras	LP1 – 3D Pythagoras – U541
9	Linear Graphs	LP1 – Perpendicular Lines – U898
10	Volume	LP1 – Density/Mass/Volume – U910/842

Sparx Maths Clip numbers have been included to allow you to target revision of these topics. To see video explanations of these topics and to access more practice questions:

- Go to the Sparx Maths website (www.sparxmaths.co.uk/student).
- Select King Alfred's Academy from the list of schools
- Click on "Log in to Sparx using Microsoft"
- Enter your school email and password
- Click on "Independent Learning"
- Select "GCSE" as your curriculum
- Search for the clip number of the skill you want to practice.

All of these topics will continue to be reviewed regularly in lessons and independent study over the rest of the year, so there are plenty of opportunities to make progress.



"THE ONLY WAY TO LEARN MATHEMATICS IS TO DO MATHEMATICS!"

Year 9 LP2: Terms 1-6 Topics

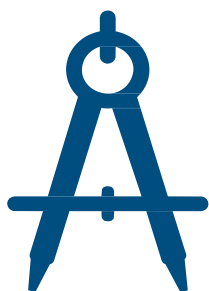
The table below summarises the key learning path topics covered so far this year. You can use the information to review which topics you may need more work on.

Learning Path Skill	Maths Topic	Sparx Maths Clip Numbers for Revision
1	Fractions	LP2 – Mixed Number Operations – U793/224/538
2	Indices	LP2 - Negative Indices – U694
3	Surds	LP2 - Surd Calculations – U633/338/872/499
4	Percentages	LP2 – Reverse Percentages – U286
5	Algebra	LP2 - Inequalities – U759/738/145
6	Area	LP2 – Perimeter/Area of Sectors – U221/373
7	Sequences	LP2 – Linear Sequences – U498
8	Pythagoras	LP2 – Missing Sides – U385
9	Linear Graphs	LP2 – Gradients and y-intercepts – U315/741
10	Volume	LP2 – Prisms & Cylinders – U174/915

Sparx Maths Clip numbers have been included to allow you to target revision of these topics. To see video explanations of these topics and to access more practice questions:

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- Select King Alfred's Academy from the list of schools
- Click on "Log in to Sparx using Microsoft"
- Enter your school email and password
- Click on "Independent Learning"
- Select "GCSE" as your curriculum
- Search for the clip number of the skill you want to practice.

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Year 9 LP3: Terms 1-6 Topics

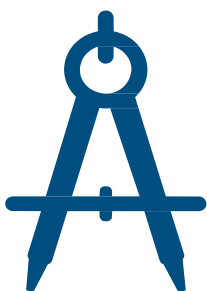
The table below summarises the key learning path topics covered so far this year. You can use the information to review which topics you may need more work on.

Learning Path Skill	Maths Topic	Sparx Maths Clip Numbers for Revision
1	HCF and LCM	LP3 – Finding HCF and LCM – 79/80
2	Expanding	LP3 – Expanding Brackets – 93/134
3	Factorising	LP3 – Factorising Expressions - 94
4	Fractions	LP3 – Fraction Operations – 71/72/73/74
5	Fractions & Percentages	LP3 – Fraction & Percentage – 72/85/108
6	Angles	LP3 – Calculate Bearings – 124
7	Angles	LP3 – Polygons - 123
8	Sequences	LP3 – Linear n^{th} Term – 103
9	Area	LP3 – Trapezia – 56
10	Equations	LP3 – Multi-Step Equations – 100/135a

Sparx Maths Clip numbers have been included to allow you to target revision of these topics. To see video explanations of these topics and to access more practice questions:

- Go to the Sparx Maths website (www.sparxmaths.co.uk/student).
- Select King Alfred's Academy from the list of schools
- Click on "Log in to Sparx using Microsoft"
- Enter your school email and password
- Click on "Independent Learning"
- Select "Key Stage 3" as your curriculum
- Search for the clip number of the skill you want to practice.

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Year 9 LP4: Terms 1-6 Topics

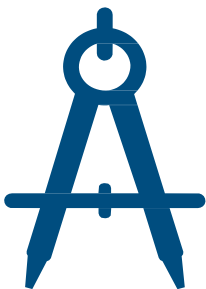
The table below summarises the key learning path topics covered so far this year. You can use the information to review which topics you may need more work on.

Learning Path Skill	Maths Topic	Sparx Maths Clip Numbers for Revision
1	Primes	LP4 – Product of Primes – 78
2	Powers	LP4 – Power Laws – 29/34/35/82
3	Formulae	LP4 – Substitution - 95
4	Fractions	LP4 – Fractions of an Amount – 72
5	Percentages	LP4 – Percentages of Amounts – 86/87
6	Angles	LP4 – Angles in Parallel Lines – 120
7	Angles	LP4 – Triangles and Quadrilaterals - 121
8	Sequences	LP4 – Next Terms – 37
9	Area	LP4 – Triangles – 54
10	Equations	LP4 – Two-Step Equations – 100

Sparx Maths Clip numbers have been included to allow you to target revision of these topics. To see video explanations of these topics and to access more practice questions:

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- Select King Alfred's Academy from the list of schools
- Click on "Log in to Sparx using Microsoft"
- Enter your school email and password
- Click on "Independent Learning"
- Select "Key Stage 3" as your curriculum
- Search for the clip number of the skill you want to practice.

All of these topics will continue to be reviewed regularly in lessons and independent study over the rest of the year, so there are plenty of opportunities to make progress.



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