

MATHEMATICS

Year 9, 10 and 11

Topics studied:

Year 9 (Higher)

Autumn 1

1	a	Calculations, checking and rounding
	b	Indices, roots, reciprocals and hierarchy of operations
	c	Factors, multiples and primes
	d	Standard form and surds
2	a	Algebra: the basics
	b	Setting up, rearranging and solving equations
	c	Sequences

Autumn 2

3	a	Averages and range
	b	Representing and interpreting data
	c	Scatter graphs
4	a	Fractions
	b	Percentages
	c	Ratio and proportion

Spring 1

5	a	Polygons, angles and parallel lines
	b	Pythagoras' Theorem and trigonometry
6	a	Graphs: the basics and real-life graphs
	b	Linear graphs and coordinate geometry
	c	Quadratic, cubic and other graphs

Spring 2

7	a	Perimeter, area and circles
	b	3D forms and volume, cylinders, cones and spheres
	c	Accuracy and bounds
8	a	Transformations
	b	Constructions, loci and bearings

Summer 1

9	a	Solving quadratic and simultaneous equations
	b	Inequalities
10		Probability

Summer 2

Revision and Examinations

Year 9 (Foundation)

Autumn 1

1	a	Integers and place value
	b	Decimals
	c	Indices, powers and roots
	d	Factors, multiples and primes
2	a	Algebra: the basics
	b	Expanding and factorising single brackets
	c	Expressions and substitution into formulae

Autumn 2

3	a	Tables
	b	Charts and graphs
	c	Pie charts
	d	Scatter graphs
4	a	Fractions
	b	Fractions, decimals and percentages
	c	Percentages

Spring 1

5	a	Equations
	b	Inequalities
	c	Sequences
6	a	Properties of shapes, parallel lines and angle facts
	b	Interior and exterior angles of polygons

Spring 2

7	a	Statistics and sampling
	b	The averages
8	a	Perimeter and area
	b	3D forms and volume

Summer 1

9	a	Real-life graphs
	b	Straight-line graphs
10	a	Transformations I: translations, rotations and reflections
	b	Transformations II: enlargements and combinations

Summer 2

Revision and Examinations

Year 10 (Higher)

Autumn 1

11	Multiplicative reasoning
12	Similarity and congruence in 2D and 3D

Autumn 2

13	a	Graphs of trigonometric functions
	b	Further trigonometry
14	a	Collecting data
	b	Cumulative frequency, box plots and histograms

Spring 1

15	Quadratics, expanding more than two brackets, sketching graphs, graphs of circles, cubes and quadratics	
16	a	Circle theorems
	b	Circle geometry

Spring 2

17	Changing the subject of formulae (more complex), algebraic fractions, solving equations arising from algebraic fractions, rationalising surds, proof
18	Vectors and geometric proof

Summer 1

19	a	Reciprocal and exponential graphs; Gradient and area under graphs
	b	Direct and inverse proportion

Summer 2 Revision and Examinations



Year 10 (Foundation)

Autumn 1

<u>11</u>	a	Ratio
	b	Proportion
<u>12</u>		Right-angled triangles: Pythagoras and trigonometry

Autumn 2

<u>13</u>	a	Probability I
	b	Probability II
<u>14</u>		Multiplicative reasoning

Spring 1

<u>15</u>	a	Plans and elevations
	b	Constructions, loci and bearings
<u>16</u>	a	Quadratic equations: expanding and factorising
	b	Quadratic equations: graphs

Spring 2

<u>17</u>		Circles, cylinders, cones and spheres
<u>18</u>	a	Fractions and reciprocals
	b	Indices and standard form

Summer 1

<u>19</u>	a	Similarity and congruence in 2D
	b	Vectors

<u>20</u>		Rearranging equations, graphs of cubic and reciprocal functions and simultaneous equations
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Summer 2 Revision and Examinations

Year 11 (Higher)

Autumn 1

<u>11</u>		Multiplicative reasoning
<u>12</u>		Similarity and congruence in 2D and 3D

Autumn 2

<u>13</u>	a	Graphs of trigonometric functions
	b	Further trigonometry
<u>14</u>	a	Collecting data
	b	Cumulative frequency, box plots and histograms

Spring 1

<u>15</u>		Quadratics, expanding more than two brackets, sketching graphs, graphs of circles, cubes and quadratics
<u>16</u>	a	Circle theorems
	b	Circle geometry

Spring 2

<u>17</u>		Changing the subject of formulae (more complex), algebraic fractions, solving equations arising from algebraic fractions, rationalising surds, proof
<u>18</u>		Vectors and geometric proof

Summer 1

<u>19</u>	a	Reciprocal and exponential graphs; Gradient and area under graphs
	b	Direct and inverse proportion

Summer 2 Revision and Examinations



Year 11 (Foundation)

Autumn 1

11	a	Ratio
	b	Proportion
12		Right-angled triangles: Pythagoras and trigonometry

Autumn 2

13	a	Probability I
	b	Probability II
14		Multiplicative reasoning

Spring 1

15	a	Plans and elevations
	b	Constructions, loci and bearings
16	a	Quadratic equations: expanding and factorising
	b	Quadratic equations: graphs

Spring 2

17		Circles, cylinders, cones and spheres
18	a	Fractions and reciprocals
	b	Indices and standard form

Summer 1

19	a	Similarity and congruence in 2D
	b	Vectors

20		Rearranging equations, graphs of cubic and reciprocal functions and simultaneous equations
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Summer 2 Revision and Examinations

Assessment Structure:

Three examinations to take place at the end of the year 11

Foundation Tier – grades 1-5

Higher Tier grades 4-9

At both tiers there will be three papers each 1hr 30 mins in duration (Only one paper is non calculator)

Subject specific websites to support revision and independent learning:

MyMaths

Mathswatch

Edexcel Website (past papers and mark schemes)

YouTube (tutorials, video solutions to past exam questions)

Additional Information:

We have a chess club on Thursday lunchtimes

There are revision resources on the school website

