



Maths KS4 – Years 9-11

Year 9 Topics covered

- Autumn 1**
- Autumn 1: PARTS AND PROPORTION
 - Fractions and % as operators
 - % increase decrease
 - % change
 - % change
 - Reverse percentages
 - Applications of prop reasoning
 - Pie charts
 - Stratified sampling
 - Expected frequency
 - Compound interest, growth and decay
- Autumn 2**
- Autumn 2: GEOMETRY & MEASURE
 - Similar shapes
 - Enlargement, inc with centre
 - Linear units of metric measurement
 - Pythagoras
 - Arcs lengths and sector areas
- Spring 1**
- Spring 1: OPERATIONS
 - Calculator methods
 - Error intervals, writing inequalities
 - Multi-step problems
 - Negative powers
 - Standard form

Year 9 Topics covered

- Spring 2**
- Spring 2: ANGLES
 - Angles recap inc polygons
 - Loci
 - Bearings & scale drawings
 - More advanced constructions
 - Tangent ratio
- Summer 1**
- Summer 1: VARIABLES & UNKNOWNNS
 - Fibonacci sequences
 - Geometric sequences
 - Quadratic sequences
 - Recursive notation
 - Factorising using single brackets
 - Expanding double brackets
 - Factorising quadratics
 - Solving linear equations with fractions
- Summer 2**
- Summer 2: STATISTICS & PROBABILITY
 - Theoretical probability including conditional probability
 - Two-way tables
 - Venn diagrams and set theory
 - Sample spaces
 - Tree diagrams
 - Systematic listing
 - Numerical probability
 - Experimental probability





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Year 10 Topics covered

Year 10 will be studying Edexcel Maths GCSE

Specification: <http://qualifications.pearson.com/en/qualifications/edexcel-gcses/mathematics-2015.html>

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|----------|---|
| Autumn 1 | Autumn 1: PARTS AND PROPORTION
Plotting linear graphs
$y = mx + c$
Parallel and perpendicular line
Gradient as a rate of change
Real life graphs
SDT graphs
Compound measure |
| Autumn 2 | Autumn 2: GEOMETRY & MEASURE
Spheres and cones
Surface area & nets
Faces, edges and vertices
Similar areas and volumes
Congruent triangles
Units of measure (area and volume) |
| Spring 1 | Spring 1: VARIABLES & UNKNOWNNS
Recurring decimals to fractions
Using formulae
Rearranging formulae
Solving linear inequalities
Simultaneous linear equations |

Year 10 Topics covered

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|----------|--|
| Spring 2 | Spring 2: STATISTICS & PROBABILITY
Sampling
Scatter graphs and correlations
Box plots
Cumulative frequency, inc quartiles and IQR
Histograms
Averages, inc grouped data
Stem and leaf
Bar charts
Time series graphs & frequency polygon
Averages and range, raw data |
| Summer 1 | Summer 1: VARIABLES & UNKNOWNNS
Plotting quadratic and cubic
Graphical solutions to equations
Complete the square
Solving quadratics by factorising
Quadratic inequalities
Simultaneous linear equations
Graphical inequalities
Iteration
Functions |
| Summer 2 | Summer 2: ANGLES & TRANSFORMATIONS
Sine and cosine ratio
Reflection and rotational symmetry
Reflecting and rotating shapes
Translations
Combinations of transformations
Simple circle theorems |





Maths KS4 Years 9-11

Year 11 Topics covered

Name of Exam Board	Edexcel
Link to specification	Year 11 will be studying Edexcel Maths GCSE Specification: http://qualifications.pearson.com/en/qualifications/edexcel-gcse/mathematics-2015.html
Breakdown of units/topics covered	<p>Autumn 1: OPERATIONS Surds and exact calculations Rationalising Fractional indices Direct and inverse proportion Reciprocal graphs</p> <p>Autumn 2: VARIABLES & UNKNOWNNS Algebraic proof Equation of a circle Quadratic formula Quadratic simultaneous equations Iteration Vectors</p> <p>Spring 1: ANGLES Area of a triangle using absinC Sine rule Cosine rule Circle theorems II Exact values of sine, cosine, tangent</p>

Year 11

Topics covered

Spring 2: VARIABLES & UNKNOWNNS
Interpreting quadratic and cubic graphs
Exponential graphs
Trig graphs
Transformations of functions
Geometric problems on coordinate axes

Summer 1: PREPARATION FOR GCSE EXAMS
Review and revision
Past exam paper practice
Study leave
Exams





Leventhorpe

a business and enterprise academy

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Year 11 Topics covered

How is the course assessed?
%Coursework / Examination
etc

In GCSE Mathematics, 100% of the course is assessed through examination at the end of Year 11.

Students will sit three papers, one non-calculator and two calculator papers. A larger proportion of students will sit the foundation tier than the higher tier. All papers are 1 hour 30 minutes long.

Links to helpful web – based resources

<http://moodle2.leventhorpe.herts.sch.uk>

www.mymaths.co.uk

www.bbc.co.uk/bitesize/gcse/maths

www.s-cool.co.uk

www.mathsrevision.net

www.mathswatch.co.uk

Suggested reading or revision guides for GCSE

CGP Edexcel Complete revision and practice (ISBN 1782944052)

CGP Higher tier revision guide

(ISBN 1782944044)

CGP Foundation tier revision guide

(ISBN 1782944001)

CGP GCSE Maths Edexcel Workbook (Higher tier)

(ISBN 1782944079)

CGP GCSE Maths Edexcel Workbook

(Foundation tier)

(ISBN 178294401X)

