

Year 10 (Extended Maths)

Term 1

Mathematics

Course Content.

The course begins with introducing number system i.e. natural numbers, integers, whole numbers, rational & irrational numbers, approximation and estimation, standard form, ratio and proportion, percentages, speed, distance and time, scientific calculator usage. This basic knowledge is applied in learning algebra 1 and algebra 2: negative numbers, directed numbers, formulae, brackets and simplifying, linear equations, word problems based on linear equations, simultaneous equations, factorizing, quadratic equations, word problems based quadratic equations, algebraic fractions, subject change, variations, indices, inequalities, LPP. Afterward students will learn mensuration and geometry: area, the circle, arc length and sector area, chord of a circle, volume, surface area, fundamental results, Pythagoras' theorem, symmetry, similarity, circle theorems, constructions and loci, nets. At the end of term students will learn trigonometry: right angled triangle, scale drawing, 3D problems, sine, cosine and tangent for any angle, the sine rule, the cosine rule.

Resources.

- Text, Oxford Extended Mathematics for Cambridge IGCSE (by David Rayner);
- Section 1, Number – all
- Section 2, Algebra 1 – all
- Section 3, Mensuration – all
- Section 4, Geometry – all
- Section 5, Algebra 2 – all
- Section 6, Trigonometry – all
- www.myimaths.com for online h/w's.
- Further resources and links will be posted on www.edmodo.com.

Assessment.

- Chapter / Unit Test (CT/UT) – 25%
- Home works (at edmodo + www.myimaths.com) [HW's] – 15%
- Mid term exam (MTE) – 20%
- Mid term exam (MTE) – 40%

Year 10

Term 2

Mathematics

Course Content.

Second term will start with learning graphs: drawing accurate graphs, gradients, linear functions – graphs, plotting curves, interpreting graphs, graphical solution of equations, distance –time graphs, speed – time graphs. Then students will learn logics and vectors: sets, logical problems, vectors, column vectors, vector geometry, functions. Afterwards they will learn matrices & transformations: matrix operations, inverse matrix, simple transformations, compound transformations, transformations using matrices. At last students will learn statistics & probability: data display, mean, median & mode, cumulative frequency, simple probability, exclusive and independent events, tree diagrams, review, sample papers.

Resources.

- Text, Oxford Extended Mathematics for Cambridge IGCSE (by David Rayner);
- Section 7, Graphs – all
- Section 8, Sets, Vectors and Functions – all
- Section 9, Matrices and Transformations – all
- Section 10, Statistics and Probability – all
- www.myimaths.com for online h/w's.
- Further resources and links will be posted on www.edmodo.com.

Assessment.

- Chapter / Unit Test (CT/UT) – 25%
- Home works (at edmodo + www.myimaths.com) [HW's] – 15%
- Mid term exam (MTE) – 20%
- Mid term exam (MTE) – 40%

Year 10

Term 3

Mathematics

Course Content.

As in second term end, we have finished all ten topics of IGCSE extended maths i.e. Unit 1 (Number), Unit 2 (Algebra 1), Unit 3 (Mensuration), Unit 4 (Geometry), Unit 5 (Algebra 2), Unit 6 (Trigonometry), Unit 7 (Graphs), Unit 8 (Sets, Vectors and Functions), Unit 9 (Matrices and Transformations), Unit 10 (Statistics and Probability), so in third term we'll Revision exercises A & B at the end of each units. Also for overall review of course students will solve revision test papers plus specimen papers at the end of book from page 390 – 411. Afterward all students will practice IGCSE extended maths past papers from year 2010 – 2016. I'll give students some specified exam questions from IGCSE extended maths revision guide.

Resources.

- Text, Oxford Extended Mathematics for Cambridge IGCSE (by David Rayner);
- Complete Mathematics for Cambridge IGCSE – Revision Guide
- Past papers from 2010 – 2016.
- www.myimaths.com for online h/w's.
- Further resources and links will be posted on www.edmodo.com.

Assessment.

- Chapter / Unit Test (CT/UT) – 25%
- Home works (at edmodo + www.myimaths.com) [HW's] – 15%
- Mid term exam (MTE) – 20%
- Final term exam (FTE) – 40%

Note : Annual exam will consist all ten topics of IGCSE Ext. Maths i.e. Unit 1 (Number), Unit 2 (Algebra 1), Unit 3 (Mensuration), Unit 4 (Geometry), Unit 5 (Algebra 2), Unit 6 (Trigonometry), Unit 7 (Graphs), Unit 8 (Sets, Vectors and Functions), Unit 9 (Matrices and Transformations), Unit 10 (Statistics and Probability).