Year 11 (Additional Mathematics)

Term 1 **Mathematics**

Course Content.

The course begins with introducing Sets Theory, relations and functions. This basic knowledge is applied in learning: sets notation, Venn diagram, addition theorem, factorizing quadratic polynomials, solving quadratic equations by completing square and by quadratic formula. After that students will learn: laws of indices and logarithms, solving simultaneous equations, simplifying logarithmic and exponential functions. At the end students will learn: slopes of lines, conditions of two lines to be parallel/perpendicular, graphing straight lines, different forms of a straight line, defining a radian, relationship b/n radians and degree measures, derivative as slope of the tangent to a curve, algebra of derivatives, applications of derivatives, integrations as an antonym of derivative/differentiation, algebra of integration.

Resources.

- Text, Pearson – Longman : Additional Mathematics;
- Section 1, Sets – all
- Section 2, Functions – all
- Section 3, Quadratic Functions – all
- Section 4, Indices and Surds – all
- Section 5, Simultaneous Equations – all
- Section 6, Factors of Polynomials – all
- Section 7, Logarithmic and Exponential Functions – all
- Section 8, Straight Line Graphs – all
- Section 9, Circular Measure – all
- Section 15, Differentiation – all
- Section 16, Applications of Differentiation – all
- Section 17, Integration – 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 11

Term 2 **Mathematics**

Course Content.

Second term will start with learning trigonometry and vectors: trigonometric identities, solving trigonometric equations, factorials, permutation and combinations, Pascal's triangle, binomial expansion. Afterwards students will go through: matrices and determinants. At the end students will learn: further differentiation and integration, applications of differentiation and integration, revision, past papers.

Resources.

- Text, Pearson – Longman : Additional Mathematics;
- Section 10, Trigonometry – all
- Section 11, Permutations and Combinations – all
- Section 12, Binomial Expansion – all
- Section 13, Vectors – all
- Section 14, Matrices – all
- Section 18, Further Differentiation and Integration – all
- Section 19, Applications of Further Differentiation and Integration – all
- www.myimaths.com for online h/w's.
- Further resources and links will be posted on www.edmodo.com.
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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%

Course Content.

As in second term end, we have finished all nineteen topics of IGCSE additional maths i.e. Unit 1 (Sets), Unit 2 (Functions), Unit 3 (Quadratic Functions), Unit 4 (Indices and Surds), Unit 5 (Simultaneous Equations), Unit 6 (Factors of Polynomials), Unit 7 (Logarithmic and Exponential Functions), Unit 8 (Straight Line Graphs), Unit 9 (Circular Measure), Unit 10 (Trigonometry), Unit 11 (Permutations and Combinations), Unit 12 (Binomial Expansions), Unit 13 (Vectors), Unit 14 (Matrices), Unit 15 (Differentiation), Unit 16 (Applications of Differentiation), Unit 17 (Integration), Unit 18 (Further Differentiation and Integration), Unit 19 (Applications of Differentiation and Integration), so in third term we'll Revision papers 7 & 8 at the end of book, pages 491 – 493. Afterward all students will practice IGCSE additional maths past papers from year 2010 – 2016. I'll give students some specified exam questions from IGCSE additional maths revision guide.

Resources.

- Text, Pearson – Longman : Additional Mathematics;
- www.myimaths.com for online h/w's.
- Further resources and links will be posted on www.edmodo.com.
- www.yacapaca.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 nineteen topics of IGCSE Add. Maths i.e. . Unit 1 (Sets), Unit 2 (Functions), Unit 3 (Quadratic Functions), Unit 4 (Indices and Surds), Unit 5 (Simultaneous Equations), Unit 6 (Factors of Polynomials), Unit 7 (Logarithmic and Exponential Functions), Unit 8 (Straight Line Graphs), Unit 9 (Circular Measure), Unit 10 (Trigonometry), Unit 11 (Permutations and Combinations), Unit 12 (Binomial Expansions), Unit 13 (Vectors), Unit 14 (Matrices), Unit 15 (Differentiation), Unit 16 (Applications of Differentiation), Unit 17 (Integration), Unit 18 (Further Differentiation and Integration), Unit 19 (Applications of Differentiation and Integration).