## Year 9 (Checkpoint Maths)

**Term 1** **Mathematics**

**Course Content.**

The course begins with introducing number system i.e. natural numbers, integers, whole numbers, rational & irrational numbers. This basic knowledge is applied in learning: algebra of fraction and indices, simplifying indices and expanding brackets, factorizing expressions, substitution into a formula, change of subject, directed numbers, estimating square and cube roots, constructing and solving equations, linear inequalities and simultaneous equations. The further students will be taught conceptual geometry: 3D shapes, maps and scale drawings, bearings, properties of angles, polygons and circles, Pythagoras' theorem, loci and tessellations. Afterwards statistics will be taught that includes: planning, collecting, organizing and analyzing data. At the end measurements are introduced: length, mass and volumes, area and errors in measurements.

**Resources.**

- Text, Oxford International Maths for Cambridge Secondary 1;
- Section 1, Fractions and indices – all
- Section 2, Expressions and formulae – all
- Section 3, Shapes and mathematical drawings – all
- Section 4, Number – all
- Section 5, Measures – all
- Section 6, Planning, collecting and processing data – all
- Section 7, Rounding, multiplying and dividing – all
- Section 8, Equations and inequalities – all
- Section 9, Geometry – all
- www.myimaths.com for online h/w's.
- Further resources and links will be posted on edmodo.

**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 9

**Term 2** **Mathematics**

**Course Content.**

Second term will start with learning mental strategies: BIDMAS, word problems, inverse operations, compound measures, real – life graphs, ratios & proportions, direct and inverse proportions. Then focus will be on learning practical arithmetic: Profit and loss, discounts and sales, taxes, percent change. After that students will be taught transformation i.e. spatial maths: Translations, rotations, reflections, enlargements, similar triangles. Afterwards students will learn scatter graphs and correlation. Processing and interpreting data, linear functions/expressions, equation of line, solving simultaneous equations graphically. At last students will learn: Area, perimeter and volume, probability.

**Resources.**

- Text, Oxford International Maths for Cambridge Secondary 1;
- Section 10, Mental strategies – all
- Section 11, Compound measures – all
- Section 12, Presenting data and interpreting results – all
- Section 13, Ratio and proportion – all
- Section 14, Sequences, functions and graphs – all
- Section 15, Transformations – all
- Section 16, Fractions, decimals and percentages – all
- Section 17, Area, perimeter and volumes – all
- Section 18, Probability – all
- Section 19, Quadratics – all
- www.myimaths.com for online h/w's.
- Further resources and links will be posted on edmodo.

**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 9

**Term 3** **Mathematics**

**Course Content.**

Third term will start with foundation and fundamental topics of IGCSE Number & Algebra 1: Firstly focus will be on learning practical arithmetic and numbers system like arithmetic, number facts and sequences, approximations and estimation, standard index form, ratios & proportions, percentages, speed, distance and time, calculator based exercises. After that, students will be taught basic algebra i.e. negative numbers, directed numbers, formulae, brackets and simplifying. Afterwards students will learn linear equations, problems solved by linear equations, simultaneous equations, problems solved by simultaneous equations, factorizing, quadratics equations, problems solved by quadratic equations.

**Resources.**

- Text, Oxford Extended Mathematics for Cambridge IGCSE;
- Section 1, Number (1.1 – 1.8) – all
- Section 2, Algebra 1 (2.1 – 2.10) – 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%
- Final term exam (FTE) – 40%

***Note : Annual exam will cover 50% of year 9 topics and 50%of IGCSE Ext. Maths, Units 1(Number) & 2 (Algebra).***