## Year 10-F Mathematics

## Expressions & Formulae

Basic algebra, substitution, expanding brackets, factorization, quadratic expansion, quadratic factorization, and changing the subject of a formula

## Ratio, Speed & Proportion

Ratio, speed, distance, time, direct proportion and best buys

#### **DID YOU KNOW?**

Learning algebra helps to develop your critical thinking skills. This includes problem solving, logic, patterns, and reasoning. You need to know algebra for many professions, especially those in science and maths.

## Volumes & Surface Area

3D Shapes, volume and surface area of a cuboid, volume and surface area of a prism and cylinder

#### **DID YOU KNOW?**

People who were good at maths as young children go on to earn more than other similar children by the time they are 30, a study has found. Source: BBC NEWS

## Linear Equations

Solving linear equations using the balance method, sole equations with brackets, solve equations with an unknown on both sides

## Curved Shapes & Pyramids

Sectors, pyramids, cones and spheres.

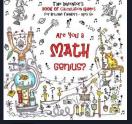
## Constructions & Loci

Constructing triangles, angles, bisectors, perpendicular bisectors, defining a locus, loci problems



#### **DID YOU KNOW?**

A locus (plural: loci) (Latin word for "place", "location") is a set of all points (commonly, a line, a line segment, a curve or a surface), whose location satisfies or is determined by one or more specified conditions.





## Reading Books Linear Graphs

Graphs and equations, gradient of a line, y= mx + c, find the equation from a graph, parallel lines, real life graphs, simultaneous equations using graphs

## Autumn Test

1 x Calculator Paper

# Transformations & Probability

Rotational symmetry, translations, reflections, rotations, enlargements, combined transformations, calculating probabilities, probability of not happening, mutually exclusive events, experimental probability, expected outcomes and choices



## Mid-Year Test

1 x Non-Calculator Paper 1 x Calculator Paper

#### **DID YOU KNOW?**

A googol is the large number 10<sup>100</sup> In decimal notation, it is written as the digit 1 followed by one hundred zeroes.

## Percentages

Equivalence, Percentage of a quantity, increase/decrease, one quantity as a percentage of another, compound measures, compound interest, repeated percentage change, reverse percentages, direct and inverse proportion.

## Statistics

Sampling, pie charts, scatter diagrams and lines of best fit, grouped data and averages

> End of Year Test 1 x Non Calculator 1 x Calculator

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