GCSE Higher A Maths Learning Journey

South Lincolnshire Academies Trust

YEARS 12&13

Courses,Apprenticeship and Degrees in in Moths, Sciences, Economics, Business and Finance ….

Written Exam

Pure Maths

$$\frac{dy}{dx} = f(x)$$

$$\frac{dy}{dx} = f(x,y)$$

$$x_1\frac{\partial y}{\partial x_1} + x_2\frac{\partial y}{\partial x_2} = y$$

Statistics

Mechanics

Written Exam

Exam Questions and Techniques

Gradient and rates of change

Area under the curve

Circle Theorems

Transforming Functions

Revision

Numerical Methods

$$x_{n+1} = \sqrt[3]{3 - x_n}$$

Sine and Cosine Rule

Algebraic Fractions

Simultaneous Equations

Geometry and Measures Recap and Review

Further Quadratics

$$ax^2 + bx + c = a(x+d)^2 + e$$

Vectors

Equation of a circle

$$x^2 + y^2 = r^2$$

YEAR 11

Volume

Sketching Graphs

Sketching Graphs

Linear and Quadratic Equations and their graphs

Trg Recap

Growth & Decay

Amount = P $\left(1 + \frac{r}{100}\right)^n$

Surds

Equations & Graphs

Inequalities

Probability

Statistics Recap and Review

Properties of Polygons

Congruency and Similarity

Pythagoras and Trigonometry

Percentages

Introduction to Quadratics and rearranging Formula

Algebra Recap and Review

Number Recap and Review

Indices

Statistical Measures

Measures

Indices

Collecting and Representing Data

Perimeter and area

Rounding

Transformations

Standard Form

Real Life Graphs

YEAR 10

73% of 680

Basic Percentages

Equations

Scatter graphs

Circumference and Area

Ratio and Proportion

Scale Drawings And Bearings

Constructions and Loci

Measures

Angles

Basic Number

Number Recap

Standard Form

Bearings

Transformations

Sequences

6, 10, 14, 18, 22

Probability

Co-ordinates and Linear Graphs

Basic Decimals

Basic Algebra Review

Algebra Recap

6x+2 = 2(3x+1)

Sequences

1 3 6 10 …

Graphs

Proportional Reasoning

Formulae

$V = \pi r^2 \frac{h}{3}$

YEAR 9

Properties of Shape

Percentages

30% of 160 = $\frac{3}{10}$ × 160

= 160 ÷ 10 × 3

= 48

Calculating Space

Measuring Data

Circles

Data

Equations

x + 3 = 8

x + 3 - 3 = 8 - 3

Arithmetic with Fractions

Sequences

19, 15, 11, 7 …

Estimation

Algebraic Manipulation

2x+4-x-3 = x+1

Negatives

-3 X -5 = 15

Angles

Estimation

FDP

$\frac{1}{2}$ = 0.5 = 50%

Angles

Transformations

Calculating

Units of Measure

Algebra

Collect like terms

4a + 5 + 2a - 3

= 6a + 2

Constructions

The Number System

Ratio

Equations

Measuring Data

Fraction Decimal Percentages

percentage	fraction	decimal
30%	$\frac{3}{10}$	0.3

Data

Negative Numbers

Transformations

Angles

Y6 Mean