

Penair School Mathematics



A Levels?

Post-16 Options

Go further with Mathematics! Remember Maths can open doors to so many alternative options! If you go onto study Maths this may help you with computer programming, accountancy, careers in Finance and banking, architecture, structural engineering.....The list is endless!

A Level Mathematics
A Level Further Mathematics
A Level Statistics
Level 3 Certificate Mathematical Studies (AQA)
International Advanced Level Mathematics (Edexcel)
Remember your GCSE Maths is necessary for *any and all* post-16 career and study decisions!

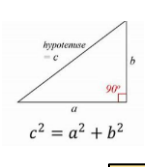
Green writing indicates GCSE Statistics topics

EXAMS

- Maths Paper 1
- Maths Paper 2
- Maths Paper 3
- AQA Certificate in Further Maths (set 0)
- GCSE Statistics

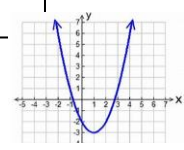
Continue your lifelong love of learning and personal development.

FEBRUARY TRIAL EXAMS



Reasoning

- Multiplicative
- Geometric
- Algebraic

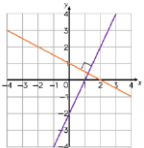


Algebra

- Expanding & factorising
- Changing the subject
- Functions

Graphs

- Gradients & lines
- Non-linear graphs
- Using graphs
- Equations of regression lines



Weekly after school revision begins!

YEAR 11

Work Experience

Final run through of all exams before Study Plus schedule begins.

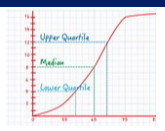
Summary Statistics Revision

- Sample space & probability
- Compare distributions
- Correlation & Spearman's rank



Proportions & Proportional Change

- Ratio & Fractions
- Percentages & Interest
- Probability
- Binomial/Normal distribution & control charts



NOVEMBER TRIAL EXAMS

Delving into Data

- Collecting, representing & interpreting data.
- Cumulative frequency
 - Time series
 - Index numbers



Using Number

- Non calculator methods
- Types of number sequences
- Indices & roots



YEAR 10 TRIALS

Proportion

- Enlargement & Similarity
- Solving ratio & proportion problems
- Rates

Reasoning With Geometry

- Deduction
- Rotation & Translation
- Pythagoras' Theorem.

Reasoning With Number

- Numbers
- Using percentages
- Maths & Money

Constructing in 2 & 3 Dimensions

- 3D Shapes
- Constructions & congruency

Reasoning With Algebra

- Straight Line Graphs
- Forming & solving equations
- Testing conjectures

YEAR 10

Developing Algebra

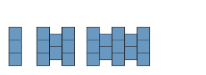
- Representing solutions & equations & inequalities
- Simultaneous Equations

Similarity

- Congruence, similarity and enlargement.
- Trigonometry

Representations

- Probability
- Venn diagrams
- Frequency Trees
- Scatter Graphs



Representations

- Working in the cartesian plane.
- Representing data inc choropleth maps
- Tables & Probability.

	Like Skateboards	Do Not Like Skateboards	Totals
Like models	80	25	105
Do Not Like models	45	10	55
Totals	125	35	160

Algebraic Techniques

- Brackets, equations & inequalities.
- Sequences
- Indices.

Developing Number

- Fractions & Percentages
- Standard Form
- Number Sense

Developing Geometry

- Angles in parallel lines & polygons.
- Area of trapezia & circles
- Line symmetry & reflection.

Reasoning With Data

- The Statistical Enquiry Cycle
- Measures of location

Proportional Reasoning

- Ratio & Scale
- Multiplicative Change
- Multiply & divide fractions.

YEAR 8

Fractional Thinking

- Addition & Subtraction with fraction

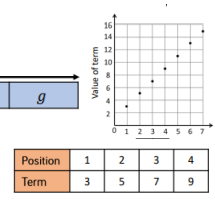
$$\frac{6}{10} + 0.3$$

Application of Number

- Problems with add & subtract
- Multiply & divide
- Fractions & decimals of amounts

Algebraic Thinking:

- Sequences
- Algebraic Notation
- Equality & Equivalence



YEAR 7

Reasoning With Number

- Developing number sense
- Sets & Probability
- Prime Numbers & Proof

Lines & Angles

- Constructing, measuring & using geometric notation..

Directed Number

- Four operations with directed number.

Place Value

- Ordering integers & decimals.
- Fraction, decimal, % equivalents

