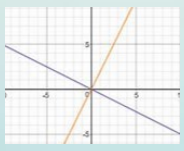
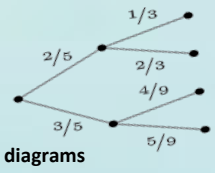
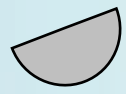
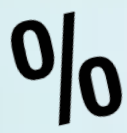
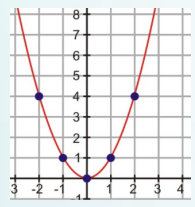
MATHEMATICS LEARNING JOURNEY

Our intent is…..

Students should leave TBHA confident in the application of maths that can then be transposed to their future employment.

- Be a critical thinker
- Able to critically analyse, compute and compare data
- Able to problem solve
- Show initiative
- Pose questions and offer potential solutions
- Good communication skills
- Be self-confident

Final GCSE exams

Revision — AO2 and AO3 questions

Graphs — Transforming Functions; Sketching; Gradients and Rates of Change

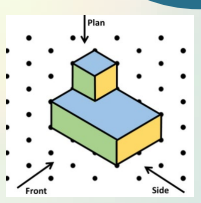
Probability — Tree diagrams; Conditional probability; Independent events

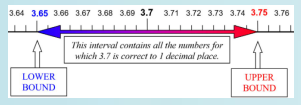
Proportion — Direct & Inverse; Graphically; Algebraically

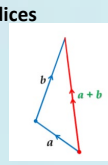
Shape — Trigonometry; Area, Perimeter and Circumference; Vectors

Number — Fractions & Percentages; Standard Form & Indices

Quadratics — Solving algebraically; Rearranging Formulae; Graphs







$a \leq b$

YEAR 11

Rationalise; Expressions; Trigonometry; Bounds; Tree Diagrams; Two-way tables; Solving; Graphically; Similarity; Plans & Elevations; Direct & Inverse; Sketching; Estimating & Rounding; Factors, Multiples & Primes; **Loci**; Constructions

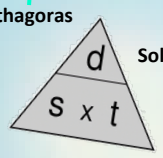
Denominators; Calculations; Surds; Equations; Simultaneous; Measures; Probability; Inequalities; Shape; Proportion; Graphs; Number; **Growth & Decay**; Iteration; Compound Interest

$a : b : c$

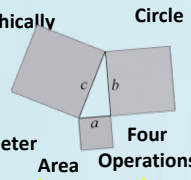
YEAR 10

Algebra Recap — Graphs

Volume — Pythagoras



Solving; Compound Measures; Venn Diagrams; Representation; Polygons; Congruence; Graphically; Algebraically; Equation of a Circle; Algebraic Fractions



1, 1, 2, 3, 5..

Probability; Mutually Exclusive; Frequency Trees

Sequences — Geometric; Quadratic; Arithmetic

Indices — Place Value; Standard Form

Stats — Averages

Number — Percentages; Multipliers

Transformations — Rotation; Enlargement; Bearings

Reflection; Translation

Ratio — Sharing; Simplifying

Graphs — Straight-line; Co-ordinates; Gradients

Data — Tables; Charts

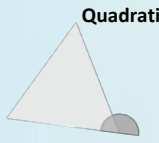
Shape — Perimeter; Area; Circumference

Fractions & Decimals — Four Operations; Recurring Decimals

Angles — Circle Theorems; Angle Facts

Number — Multiples; Factors; Rounding; Trigonometry; Pythagoras

Algebra — Notation; Rearranging; Quadratics



YEAR 9

Rounding; Calculations; Sources of data; Expressions; Equations; Construction; Loci; Linear Sequences; Graphs; Relative Frequency; Experimental; Area and surface area prisms; Volume of prisms; Prime factor decomposition; Reflection; Rotation; Frequency tables; Pythagoras; Polygons

Number

Data — Graphs, charts and tables

Algebra — formulae; identities

Geometry — Angle facts

Graphs — Functions; Quadratic Sequences

Probability — independent; Mutually exclusive

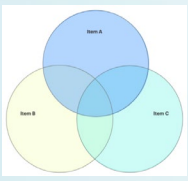
Measures — Plans and elevations; Units of measures

Indices — Index Laws; Powers and roots

Transformations — Translation; Enlargement

Fractions & Ratio

Averages — Mean, mode, median and range



YEAR 8

Statistical Representations — Ways to display data; Choose appropriate measures

Transformations — Rotations; Congruence; Reflections

Fractions — Multiplying & dividing; Adding & Subtracting

Algebra — Graphs; Sequences

Shape — Prisms; Linear relationships; Circles

Developing Number — Polygons; Calculating with percentages; Equivalent fractions, decimals and percentages

Data — Comparing data

Ratio — Sharing; Simplifying

Equations — Balance Equations

Directed Numbers — Comparing fractions & decimals; Ordering Numbers

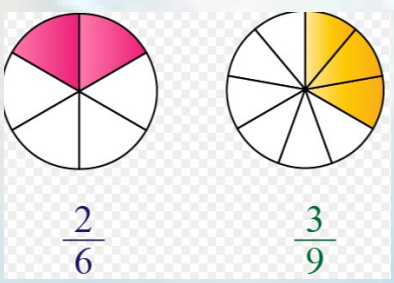
Lines & Angles — Develop geometric reasoning

Probability — Listing Outcomes; Calculating Probability; Likelihood of an event

Properties of Number — Multiples; Factors; Rounding; Prime Numbers; Estimating

Geometric Thinking — Plot coordinates; Four quadra

Algebraic Thinking — Understand and use algebraic notation; Simplify & Form Expressions



IMPACT

YEAR 7

Reasoning with Number — Place Value; Fractions

Distributive Law; Associative Law

What is the impact of studying our subject?

Students gain

- Number & measure sense
- Real life skills (money, time)
- Resilience
- Communication skills
- Problem solving skills

Students are able to

- Interpret data
- Analyse information
- Compare
- Question
- Reason