

- Character strengths
- Cross Curricular Links
- Statistics
- Geometry
- Number
- Algebra
- Ratio and Proportion
- Probability

Year 7 ← **Fluency, Reasoning and Problem Solving** → Year 11

# Maths Learning Journey

**Exams & Post 16 Study**

Mathematics for A-Level

Reasoning Revision & Communication Revision & Exam Techniques

- PPE**
- Multiplicative Reasoning
  - Geometric Reasoning
  - Algebraic Reasoning
  - Transforming & Constructing
  - Listing & Describing
  - Show That

Prove that  $(n+1)^2 - (n-1)^2$  is always a multiple of 4.



**Integrity and Resilience**

Reflection PPE Using Number Delving into Data

- Gradients & Lines
- Non Linear Graphs
- Using Graphs
- Expanding & Factorising
- Changing the Subject
- Functions



- Data Representation
- Non Calculator Methods
- Number & Sequences
- Indices & Roots



**Question**  
What type of maths is best for business?

**Proportion & Proportional Change**

**Confidence and Respect**

Reasoning with Data Reflection Similarity Developing Algebra Geometry

**Construction & Trigonometry**



- Congruence, Similarity & Enlargement
- Trigonometry
- Representations, Equations & Inequalities
- Simultaneous Equations

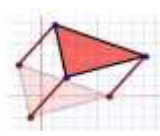


- Angles & Bearings
- Working with Circles
- Vectors
- Ratio & Fractions
- Percentages & Interest
- Probability

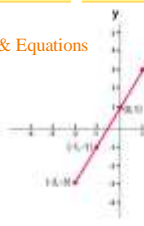
**Motivation and Self-Discipline**

Reasoning with Geometry Reasoning with Algebra Reasoning with Proportion Reasoning with Number

- Construction
- Trigonometry
- Working with Data
- Probability



- Expressions, Formulae & Equations
- Graphs
- Real Life Graphs
- Transformations
- Prisms



- Fractions
- Powers and Indices
- Accuracy
- Percentages
- Ratio & Proportion
- Using Measures

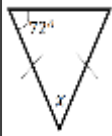


**Reflection Reasoning with Geometry**

**Open Mindedness and Courage**

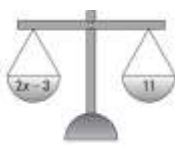
Direct Number & Fractional Thinking Algebraic Techniques Graphs & Construction Developing Geometry

**Question**  
When am I ever going to use this?



**Reflection Geometric Reasoning**

- Indices
- Expressions & Formulae
- Equations
- Working with 2D Shapes
- Properties of 3D Shapes



- Sequences
- Graphs
- Construction
- Calculations
- Negative Numbers
- Fractions

**Question**  
How is the golden ratio used in everyday life?

- Percentages
- Multiplicative Reasoning
- Working with Data
- Circles
- Pythagoras Theorem

**Curiosity and Compassion**

Proportional Reasoning Delving into Data Application of Number Algebraic Thinking Representations

- Ratio & Proportion
- Measurements
- Area
- Angles

**Question**  
Where else is data used?



- Fractions
- Place Values & Rounding
- Working with Decimals
- Investigation with Data
- Percentages

**Question**  
Who is Leonardo Bonacci?



- Sets and Probability
- Coordinates & Transformations
- Types of Number with Perimeter
- Using Letter Symbols
- Sequences



**YEAR 7**

We aim for our young mathematicians to leave their secondary mathematical education at the Aylesford School, as confident mathematical problem solvers, mathematically equipped to face the challenges of everyday life, and both further and higher education. Central to our mathematics curriculum is the development of mathematical Fluency, Reasoning and Problem Solving: