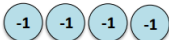




$$\frac{6}{10} + 0.3$$

### Fractional Thinking

- Addition and subtraction with fractions



+1

### Directed Number

- Four operations with directed number

### Application of Number

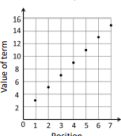
- Solving problems with addition and subtraction
- Multiplication and division
- Fractions and decimals of amounts

### Place Value and Proportion

- Place value
- Ordering integers and decimals
- Fraction, decimal and percentage equivalence

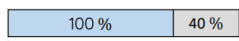
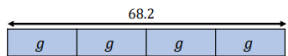
### Algebraic Thinking

- Sequences
- Understand and use algebraic notation
- Equality and equivalence



Position	1	2	3	4
Term	3	5	7	9

$$2(x + 4) \quad 2x + 8$$



140%

### Lines and Angles

- Constructing, measuring and using geometric notation

### Reasoning with Number

- Developing number sense
- Sets and probability
- Prime numbers and proof

# Mathematics



St Augustine of Canterbury High School

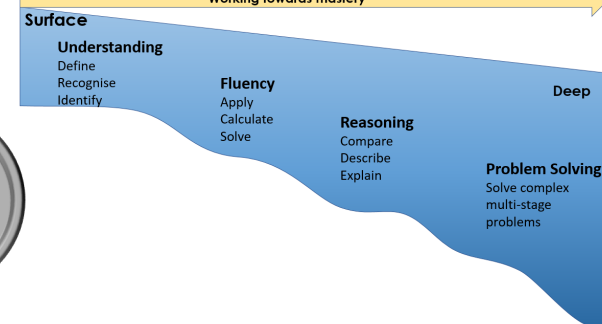
### Revision and Communication

- Transforming and constructing
- Listing and describing
- Show that...

Examinations

Further Maths  
A Level Maths  
Core Maths

Working towards mastery



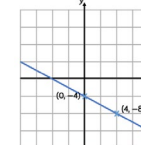
### Using Number

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

11

### Graphs

- Gradients and lines
- Non-linear graphs
- Using graphs



### Algebra

- Expanding and factorising
- Changing the subject
- Functions

### Reasoning

- Multiplicative
- Geometric
- Algebraic

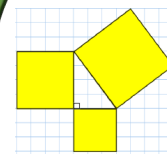
### Representations

- Solving problems using graphs, tables and algebra

### Reasoning with Proportion

- Enlargement and similarity
- Solving ratio and proportion problems
- Rates

10



### Similarity

- Congruence, similarity and enlargement
- Trigonometry

### Developing Algebra

- Representing solutions of equations and inequalities
- Simultaneous equations

### Geometry

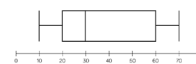
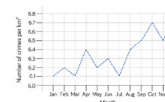
- Angles and bearings
- Working with circles
- Vectors

### Proportions and Proportional Change

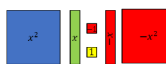
- Ratio and fractions
- Percentages and interest
- Probability

### Reasoning with Data

- The data handling cycle
- Measures of location



9



### Reasoning with Algebra

- Straight line graphs
- Forming and solving equations
- Testing conjectures

### Constructing in 2 and 3 Dimensions

- Three dimensional shapes
- Constructions and congruency

### Reasoning with Number

- Numbers
- Using percentages
- Maths and money

### Reasoning with Geometry

- Deduction
- Rotation and Translation
- Pythagoras' Theorem

### Proportional Reasoning

- Ratio and scale
- Multiplicative change
- Multiplying and dividing fractions

### Representations

- Working in the cartesian plane
- Representing Data
- Tables and Probability

### Algebraic Techniques

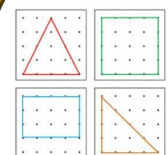
- Brackets, equations and inequalities
- Sequences
- Indices

### Developing Number

- Fractions and percentages
- Standard index form
- Number sense

### Developing Geometry

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



8



# Mathematics

**More Algebra**

- Algebraic fractions
- Surds
- functions

**Vectors and Geometric Proof**

- Vector notation
- Vector arithmetic
- Solving geometric problems

**Proportion and Graphs**

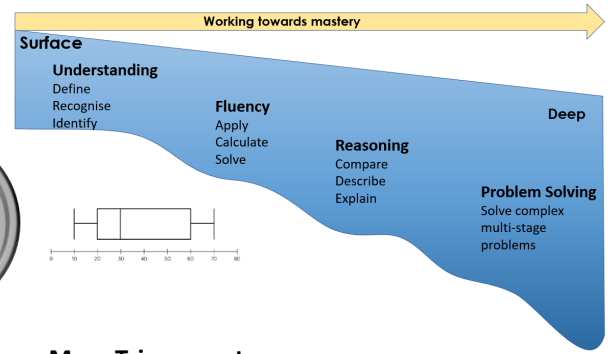
- Direct and inverse proportion
- Exponential functions
- Translating graphs

**Revision**

**Examinations**

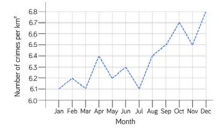
Further Maths  
A Level Maths  
Core Maths

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



**More Trigonometry**

- Graphing trigonometric functions
- Sine rule
- Cosine rule
- Transforming graphs



**Reasoning with Proportion**

- Enlargement and similarity
- Solving ratio and proportion problems
- Rates

**Representations**

- Solving problems using graphs, tables and algebra

**Circle Theorems**

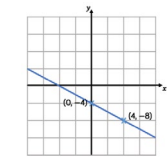
- Proof and application of circle theorems

**Equations and Graphs**

- Solving simultaneous equations graphically
- Graphs of quadratic and cubic functions

**Further Statistics**

- Cumulative frequency
- Box plots
- histograms



**10**

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**Area and Volume**

- Area of circles and sectors
- Surface area
- Volume of prisms, spheres and cones

**Transformations and Constructions**

- Transformations
- Bearings
- Constructions
- Loci

**Equations and Inequalities**

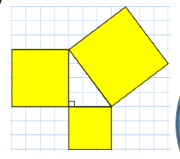
- Solving quadratic equations
- Simultaneous equations
- Solving inequalities

**Probability**

- Combined events
- Tree diagrams
- Venn diagrams

**Multiplicative Reasoning**

- Growth and decay
- Compound measures



**Reasoning with Geometry**

- Deduction
- Rotation and Translation
- Pythagoras' Theorem

**Reasoning with Number**

- Numbers
- Using percentages
- Maths and money

**Constructing in 2 and 3 Dimensions**

- Three dimensional shapes
- Constructions and congruency

**Reasoning with Algebra**

- Straight line graphs
- Forming and solving equations
- Testing conjectures



**9**

**Reasoning with Data**

- The data handling cycle
- Measures of location

**Developing Geometry**

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

**Developing Number**

- Fractions and percentages
- Standard index form
- Number sense

**Algebraic Techniques**

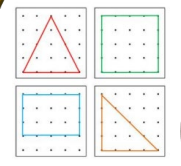
- Brackets, equations and inequalities
- Sequences
- Indices

**Representations**

- Working in the cartesian plane
- Representing Data
- Tables and Probability

**Proportional Reasoning**

- Ratio and scale
- Multiplicative change
- Multiplying and dividing fractions



**8**

**Lines and Angles**

- Constructing, measuring and using geometric notation

**Reasoning with Number**

- Developing number sense
- Sets and probability
- Prime numbers and proof

**Fractional Thinking**

- Addition and subtraction with fractions



**Directed Number**

- Four operations with directed number

**Application of Number**

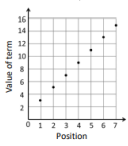
- Solving problems with addition and subtraction
- Multiplication and division
- Fractions and decimals of amounts

**Place Value and Proportion**

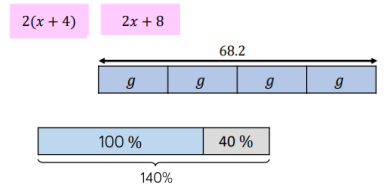
- Place value
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- Sequences
- Understand and use algebraic notation
- Equality and equivalence



Position	1	2	3	4
Term	3	5	7	9



140%

# Mathematics

**Fractional Thinking**

- Addition and subtraction with fractions

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- Four operations with directed number

**Application of Number**

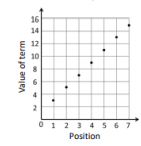
- Solving problems with addition and subtraction
- Multiplication and division
- Fractions and decimals of amounts

**Place Value and Proportion**

- Place value
- Ordering integers and decimals
- Fraction, decimal and percentage equivalence

**Algebraic Thinking**

- Sequences
- Understand and use algebraic notation
- Equality and equivalence



Position	1	2	3	4
Term	3	5	7	9

$2(x+4)$     $2x+8$

68.2

100%   40%

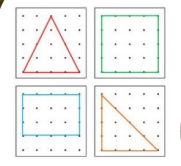
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**Lines and Angles**

- Constructing, measuring and using geometric notation

**Reasoning with Number**

- Developing number sense
- Sets and probability
- Prime numbers and proof



**Reasoning with Geometry**

- Deduction
- Rotation and Translation
- Pythagoras' Theorem

**Reasoning with Number**

- Numbers
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- Maths and money

**Proportional Reasoning**

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**Representations**

- Working in the cartesian plane
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- Measures of location

**Reasoning with Proportion**

- Enlargement and similarity
- Solving ratio and proportion problems
- Rates

**Representations**

- Solving problems using graphs, tables and algebra

**Perimeter, Area and Volume 2**

- Circles
- Pyramids and cones
- Spheres

**Quadratic Equations and Graphs**

- Expanding double brackets
- Plotting and using quadratic graphs
- Solving quadratic equations

**Constructions**

- Plans and elevations
- Constructions and accurate drawings
- Loci

**Graphs**

- Linear graphs
- Finding the gradient
- Distance-time graphs
- Real-life graphs

**Transformations**

- Translation
- Reflection
- Rotation
- Enlargement

**Ratio and Proportion**

- Writing and using ratio
- Proportion, graphs and problems

**More Algebra**

- Non-linear graphs
- Simultaneous equations
- Rearranging formulae
- Proof

**Revision**

**Examinations**

**Further Maths**

**A Level Maths**

**Core Maths**

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

**Multiplicative Reasoning**

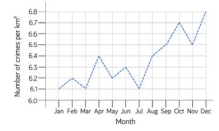
- Percentages
- Growth and decay
- Compound measures
- Direct and inverse proportion

**Probability**

- Calculating probability
- Experimental probability
- Tree diagrams
- Venn diagrams

**Right-angled Triangles**

- Pythagoras theorem
- Trigonometry in 2D



10

F O U N D A T I O N T I E R

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