Mathematics: Foundation

**Lent 1:**

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| Week 1: |

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| Arc lengths and sectors  |
| Derive triangle results  |
| Enlargements and negative SF  |
| Loci  |
| Pythagoras  |

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| Week 2: |

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| --- |
| Similarity and Congruence  |
| Standard constructions  |
| Surface Area  |
| Trigonometric ratios  |
| Volume  |
| Alternate and corresponding angles  |

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| Week 3: |

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| Histograms with equal class widths  |
| Scatter graphs  |
| Comparing data using graphs  |
| Comparing Distributions  |
| Correlation  |

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| Week 4: |

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| Population  |
| Sampling  |
| Scatter Diagrams  |
| Time series  |
| Charts and Diagrams  |
| Pie Charts  |

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| Week 5: |

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| Circle terminology  |
| Circumference of a circle  |
| Congruent triangles  |
| Enlargements and fractional SF  |
| Perimeter of 2D shapes  |

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| Week 6: | Past Paper Practice |

**Lent 2:**

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| Week 1: |

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| Algebraic terminology  |
| Cubic and Reciprocal graphs  |
| Deduce quadratic roots algebraically  |
| Derive an equation  |
| Equation of a line  |

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| Week 2: |

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| Expand the product of two binomials  |
| Factorising quadratic expressions  |
| Fibonacci, quadratic and simple geometric sequences  |
| Graphical solution to equations  |
| Inequalities on number lines  |

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| Week 3: |

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| Linear equations  |
| Quadratic graphs  |
| Reciprocal real-life graphs  |
| Simplify indices  |
| Simplify surds  |

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| Week 4: |

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| Solve linear inequalities in one variable  |
| Writing formulae and expressions  |
| Changing the subject  |
| Collecting like terms  |
| Expressions  |
| Factorise single bracket  |

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| Week 5: |

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| Graphs of linear functions  |
| Graphs of quadratic functions  |
| Linear equations one unknown  |
| Multiplying single brackets  |
| Non-standard real life graphs  |

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**Pentecost 1:**

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| Week 1: |

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| Probability of dependent events  |
| Probability of independent events  |
| Mutually exclusive sum  |
| Relative Frequency  |
| Tables and Grids  |

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| Week 2: |

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| Theoretical Probability  |
| Unbiased Samples  |
| Venn Diagrams  |
| Frequency Trees  |
| Probability of equally likely outcomes  |

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| Week 3: |

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| Calculating with fractions  |
| Error intervals  |
| Index Laws  |
| Limits of accuracy  |
| Adding and subtracting fractions  |
| Checking calculations  |

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| Week 4: |

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| Compound measures  |
| Converting metric units  |
| Estimation  |
| Fractions and percentages  |
| Fractions and ratio problems  |

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| Week 5: |

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| Compound Units  |
| Gradient & the rate of change  |
| Growth and decay  |
| Interpret Proportion  |
| Percentage change  |

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| Week 6: | Exam Paper Practice |

Mathematics: Higher

**Lent 1:**

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| Week 1: |

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| Direct and inverse proportion  |
| Compound Units  |
| Gradient & the rate of change  |
| Growth and decay  |
| Interpret Proportion  |

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| Week 2: |

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| Index Laws (negative and fractional)  |
| Product rule  |
| Recurring Decimals  |
| Upper and lower bounds  |
| Finance 1  |
| Powers and Roots  |

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| Week 3: |

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| --- |
| Relative Frequency  |
| Tables and Grids  |
| Theoretical Probability  |
| Unbiased Samples  |
| Venn Diagrams  |

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| Week 4: |

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| Powers and Roots  |
| Product of prime factors  |
| Using Pi  |
| Calculating with fractions  |
| Error intervals  |

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| Week 5: |

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| Percentage change  |
| Problems involving ratio  |
| Proportion and ratio  |
| Ratio and fractions  |
| Ratio Sharing  |

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| Week 6: | Exam Paper Practice |

**Lent 2:**

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| Week 1: |

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| Composite functions  |
| Expand the product of two or more binomials  |
| Factorising difficult quadratic expressions  |
| Geometric Sequences  |
| Graphs of exponential functions  |

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| Week 2: |

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| Quadratic equations (needing re-arrangement)  |
| Quadratic equations (quadratic formula)  |
| Real-life exponential graphs  |
| Represent quadratic inequalities  |
| Simultaneous equations (nonlinear)  |

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| Week 3: |

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| Quadratic equations (graphical methods)  |
| Represent linear inequalities  |
| Simultaneous equations (linear)  |
| Algebraic argument  |
| Algebraic terminology  |

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| Week 4: |

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| Cubic and Reciprocal graphs  |
| Deduce quadratic roots algebraically  |
| Derive an equation  |
| Equation of a line  |
| Expand the product of two binomials  |

 |
| Week 5: |

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| --- |
| Fibonacci, quadratic and simple geometric sequences  |
| Graphical solution to equations  |
| Inequalities on number lines  |
| Linear equations  |
| Quadratic graphs  |

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**Pentecost 1:**

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| --- | --- | --- | --- | --- | --- | --- |
| Week 1: |

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| --- |
| Arc lengths and sectors  |
| Derive triangle results  |
| Enlargements and negative SF  |
| Loci  |
| Pythagoras  |

 |
| Week 2: |

|  |
| --- |
| Similarity and Congruence  |
| Standard constructions  |
| Surface Area  |
| Trigonometric ratios  |
| Volume  |

 |
| Week 3: |

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| Boxplots  |
| Cumulative frequency  |
| Histograms with unequal class widths  |
| Quartiles and Interquartile Range  |
| Histograms with equal class widths  |

 |
| Week 4: |

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| --- |
| Scatter graphs  |
| Comparing data using graphs  |
| Comparing Distributions  |
| Correlation  |
| Population  |

 |
| Week 5: |

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| Perimeter of 2D shapes  |
| Plans and elevations  |
| Polygons  |
| Solve geometrical problems  |
| Vector arithmetic  |

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| Week 6: | Exam Paper Practice |