



Mathematics Department – Third Form Scheme of Work 2016/17

Textbooks

[1] Edexcel Linear Foundation 1

[2] Edexcel Linear Foundation 2

[WKS] Worksheets

Unit 1: Fractions

[1] 2D Equivalent Fractions and Simplifying Fractions

2E Mixed Numbers and Improper Fractions

2F Adding and Subtracting Fractions

2I Expressing one quantity as a fraction of another

Unit 2: Decimals

[1] 14C Rounding with decimals

14D Addition and Subtraction of Decimals

Unit 3: Percentages

[2] 3A Converting between Fractions, Percentages and Decimals

[2] 3E Percentage of a Quantity

Unit 4: Negative Numbers and BIDMAS

[1] 3E Addition and Subtraction of Negative Numbers

14L Multiplication and Division of Negative Numbers

1C BIDMAS

Unit 5: Number

[1] 4A Multiples

4B Factors

4C Primes

4D Squares

4E Consolidation and Triangular Numbers

4F Squares and Square roots

HCF and LCM by listing numbers – Teacher Examples

Re-setting Test on units 1-5

Unit 6: Fractions and Decimals

[1] 14J Multiplying fractions

14K Dividing fractions

14E Multiplying and dividing with 1 decimal

14F Harder multiplying with 1 decimal

14G Multiplying 2 decimals

Teacher Examples Dividing by a decimal, up to 2 decimal places.

Unit 7: Algebra

[2] 4A Expressions

4C Collecting like terms

4B Multiplying Expressions

4D Expanding 1 bracket

4E Expanding brackets and simplifying

4F Factorising into 1 bracket

4G Substitution

Unit 8: Numeracy and Algebra

Number Work

BIDMAS

Fractions

Decimals

Percentages

Simplifying expressions

Solving Equations

Unit 9: Rounding and Approximation

[1] 14 M Rounding with Significant Figures

14N Estimation/Approximation

Unit 10: Algebra

[2] 8A Solving simple linear equations

8B,8C,8D More solving equations

8E Equations with brackets

8F Equations with variable on both sides

8G Setting up equations

More difficult equations with x in the denominator

8I Change the subject

Test A on units 6-10

Unit 11: Probability

[1] 11A Probability Scale

11B Calculating Probabilities

11C Complementary Events

[2] 9A Addition rule for events

9B Experimental Probability and Relative Frequency

9C,9E Combined events and 2-way tables

9D Expectation

Unit 12: Area and Perimeter

[1] 7A Metric Units

7B Metric Conversions

[2] 6A Perimeter of Rectangle, Square and Compound shapes

6C Area of Squares and Rectangles

6D Area of Compound Shapes

6E,6F Area of a Triangle

6G Area of a Parallelogram

6H Area of a Trapezium

Unit 13: Algebra

[WKS] Identities

Function notation

Unit 14: Sets and Venn Diagrams and using them to find the HCF and LCM

[WKS] Sets and Venn Diagrams

[2] 2C Product of prime factors

2D LCM and HCF using Venn diagrams

Unit 15: Probability

[H] 19G Tree Diagrams

19H Independent Events and Tree Diagrams

19I,19J More Tree diagram questions

19K Tree diagrams without replacement

Test B on Units 11-15

Unit 16: The Circle

[2] 13A Parts of the circle

13B Circumference of a circle

13C Area of a circle

13D Leaving π in the answer

Unit 17: Ratio and Proportion

- [2] 7A Simplifying ratios
- 7B Dividing amounts into a given ratio
- 7C Calculations with ratios
- 7E Direct Proportion
- 7F Best Buys

Unit 18: Pythagoras's Theorem

- [2] 16A Finding the hypotenuse
- 16B Finding a side
- 16C Pythagoras in context including distance between 2 coordinates

Unit 19: Conversion, Speed and Travel Graphs

- [1] 7C Imperial Units
- 7D Metric and Imperial Conversions
- [1] 9A Conversion Graphs
- [2] 7D Speed, Distance, Time
- [1] 9B Travel Graphs

Test C Units 16-19

Unit 20: Coordinates and Straight Line Graphs

- [1] 9C Coordinates and Midpoint of a Line
- 9D Drawing straight line graphs and solving simultaneous equations graphically
- 9E Gradient of a line
- Intercept on y-axis and development of general equation of a straight Line - $y=mx+c$
- Rules for gradients of parallel and perpendicular lines.

Unit 21: Sequences and Patterns

- [2] 10A Patterns in Number
- 10B Number Sequences
- 10C Generating a sequence from a formula
- 10D Finding the nth term from a sequence
- 10F Finding the nth term from practical problems
- 10E Special Sequences

Unit 22: Transformations

- [1] 8A Lines of symmetry

8B Rotational symmetry
12A Congruent Shapes
12B Tessellations(Question 1 only)

[2] 12B Reflections
12A Translations
12C Rotations
12D Enlargements

Unit 23: Angles

[1] 10A Measuring and drawing angles
10B Angles on a line, angles at a point and opposite angles
10C Angles in a Triangle
Completion of table and formula Pg269
10D Angles in a Quadrilateral and other polygons
10G Angles in Special Quadrilaterals
10F Angles in Parallel Lines
10H Bearings

Test D Units 20 - 23

Unit 24: Statistics and Data Handling

[1] 15A Pie Charts
15B Scattergraphs, Correlation and line of best fit, explain outliers
15C Just briefly mention surveys and collection sheets
15D Questionnaires
[2] 5A The Mode
5B The Median(Q1-7 only)
5C The Mean
5D The Range
5E Use of averages

Unit 25: Volume and Surface Area

[2] Chpt 6 Exam Questions
11A Units of Volume
11B Volume and Surface Area of a Cuboid
11C Volume and Surface Area of prisms
11D Volume and Surface Area of a Cylinder

Summer Assessment 2x1.5 hour papers. 1non-calculator, 1calculator

Unit 26: Numeracy Work and Problem Solving Skills