

### S2 Unit 3 Topics (2017-18)

- Number and Number Processes (Integers, bodmas)
- Expressions and Equations (bodmas, evaluate, substitute)
- Angle, Symmetry and Transformation (bearings and scale drawing)
- Fractions, Decimals and Percentages
- Patterns and relationships (straight line)
- Money
- Properties of 2D Shapes and 3D Objects (pythag/converse/trig)
- Measurement (surface area)
- Time

Level 2	Level 3	Level 4
<b>Number and Number Processes</b> • MNU 2-03c	<b>Number and Number Processes</b> • MNU 3-03a • MNU 3-03b	<b>Number and Number Processes</b> MNU 4-03a MNU 4-03b
Simple order of operation. x ÷	Multiplication & division to 12 <sup>th</sup> table 4 operator problems with whole numbers and decimals to 3dp. Communicate method and answer in context Extend to long multiplication?	Using order of operations. Bodmas/Bomdas to solve problems inc brackets Interpreting multi-step problems
<b>Expressions and Equations</b>	<b>Expressions and Equations</b> • MTH 3-14a	<b>Expressions and Equations</b> • MTH 4-14a
	Collecting like terms Evaluating with two variables, positive and negative	Expanding brackets and simplifying Evaluate and solve inc brackets Solving inequalities Factorising (common factor)
<b>Fractions, Decimals and Percentages</b> • MNU 2-07a • MNU 2-07b	<b>Fractions, Decimals and Percentages(revisited)</b> • MNU 3-07a	<b>Fractions, Decimals and Percentages</b> • MNU 4-08a
Fract↔%↔Dec Fract, % problems	Revise Fract↔%↔Dec Work with equivalent F/D/% to solve problems with and without calculator	+ - x ÷ (inc mixed numbers) Calculating % incr/decrease Knowledge of proportion to solve problems (straight line)
<b>Patterns and Relationships</b>	<b>Patterns and Relationships</b> • MTH 3-13a	<b>Patterns and Relationships</b> • MTH 4-13b,c,d
	Write and use a rule for linear sequences.	Calculate gradient. Equations of x and y axes, horizontal and vert lines. Table of values, formula and graph.
<b>Money</b>	<b>Money</b>	<b>Money</b>

<ul style="list-style-type: none"> <li>• <b>MNU 2-09c</b></li> </ul>		<ul style="list-style-type: none"> <li>• <b>MNU 409b</b></li> </ul>
<p>Money calculations. Rounding in money. Budgeting. Profit and Loss. Benefits and risks of bank cards and digital technologies</p>	<p>Best value when comparing products and best value for me Budgeting Knowledge of financial terms, credit/debit, APR, pa, direct debit/standing order, interest rate</p>	<p>Credit and debit for earnings and deductions Net income VAT</p>
<p><b>Props of 2D and 3D Objects</b></p> <ul style="list-style-type: none"> <li>• <b>MTH 2-16a</b></li> </ul>	<p><b>Props of 2D and 3D Objects</b></p> <ul style="list-style-type: none"> <li>• <b>MTH 3-16a</b></li> </ul>	<p><b>Props of 2D and 3D Objects</b></p> <ul style="list-style-type: none"> <li>• <b>MTH 4-16a</b></li> </ul>
<p>Name 2D shapes. Regular, irregular, diagonal, radius, diameter, circumference (faces, edges and vertices) Nets.</p>	<p>Accurately draw 2D shapes using mathematical instruments and methods.</p>	<p>Pythagoras' Theorem Trigonometry. Select and use approp strategy in problems.</p>
<p><b>Angle, Symmetry and Transformation</b></p> <ul style="list-style-type: none"> <li>• <b>MTH 2-17c</b></li> <li>• <b>MTH 2-17d</b></li> <li>• <b>MTH 2-16a</b></li> </ul>	<p><b>Angle, Symmetry and Transformation</b></p> <ul style="list-style-type: none"> <li>• <b>MTH 3-17a</b></li> <li>• <b>MTH 3-17b</b></li> </ul>	<p><b>Angle, Symmetry and Transformation</b></p> <ul style="list-style-type: none"> <li>• <b>MTH 4-17a</b></li> </ul>
<p>Use 8-point compass and 3-figure bearings to describe, follow and record directions. Interpret scales and scale drawings with simple scales, e.g. 1cm:2km</p>	<p>Angle properties with intersecting and parallel lines(right, straight, vert opp, corr, alternate), in triangles, quadrilaterals. Naming angles Bearings, including scale drawings</p>	<p>Radius and tangent. Angle in semicircle. Solve related problems, inc Pythagoras and Trig.</p>
<p><b>Measurement</b></p> <ul style="list-style-type: none"> <li>• <b>MNU 2-11b</b></li> <li>• <b>MNU 2-11c</b></li> </ul>	<p><b>Measurement</b></p> <ul style="list-style-type: none"> <li>• <b>MNU 3-11b</b></li> </ul>	<p><b>Measurement</b></p> <ul style="list-style-type: none"> <li>• <b>MNU 4-11b</b></li> </ul>
<p>Perimeter in mm, cm, m Area of rectangle, squares and right angled triangles in mm<sup>2</sup> cm<sup>2</sup> and m<sup>2</sup> Drawing shapes with a given perimeter or area. Volume of cube and cuboid. Converting between common units of measurement Awareness of imperial units</p>	<p>Area of non-right angled triangle Area of rectangles, squares, triangles with inconsistent units Compound area.</p>	<p>Area and circumference of circle. SA of a cylinder.</p>
<p><b>Time</b></p> <p><b>MNU 2-10a</b></p>	<p><b>Time</b></p> <ul style="list-style-type: none"> <li>• <b>MNU 3-10a</b></li> </ul>	<p><b>Time</b></p> <ul style="list-style-type: none"> <li>• <b>MNU 4-10b</b></li> </ul>
<p>12hr↔24hr Time intervals Simple conversions hrs mins ↔ decimal time</p>	<p>S,D T Distance Time Graphs. Time Intervals, including across hours and days</p>	<p>Revise S, D, T using formula and decimal times ↔ hours and mins. Time zones</p>
<p><b>Revision and Test 3</b></p>	<p><b>Revision and Test 3</b></p>	<p><b>Revision and Test 3</b></p>

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