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| **S3 CfE Set 4 : August - September** |
| **Topic** | **Content** | CfE | Website Resources |
| **Money** | Currency conversion, VAT (as %) |  | <http://www.mathsrevision.com/index_files/Maths/Presentations/S4_Presentations/N4_Lifeskills/N4_Lifeskills_Foreign_Exchange_Practice.xlsm> [http://www.mathsrevision.com/index\_files/Maths/Presentations/S4\_Presentations/Level\_4/Level\_4+\_TJ\_Ch4\_MoneyMatters\_Practice\_VAT.xlsm](http://www.mathsrevision.com/index_files/Maths/Presentations/S4_Presentations/Level_4/Level_4%2B_TJ_Ch4_MoneyMatters_Practice_VAT.xlsm)  |
| **Time** | Finding time intervals (in 12hr & 24hr), Adding, subtracting time (over midnight) | MNU 2-10b | <http://www.mathsrevision.com/index_files/Maths/Presentations/S1_Presentations/S1_Time_Practice.xls>  |
| **Perimeter** | Finding perimeter of composite rectilinear within contextFinding missing lengths with knowledge of parallel length | MNU 2-11c | <http://www.mathsrevision.com/index_files/Maths/Presentations/S1_Presentations/BGE_TJ_2a_2b/Level_2_Perimeter_Area.xlsm>  |
| **Distance, Speed, Time** | Finding distance, speed or time(include time units in mins with mph)Include Scientific Notation | MNU 4-10bMTH 4-06b | <http://www.mathsrevision.com/index_files/Maths/Presentations/S1_Presentations/BGE_TJ_3a_3b/Level_3_DST.xlsm> <http://www.mathsrevision.com/index_files/Maths/Presentations/S4_Presentations/S4_General_Sign_Fig_Scientific_Notation.xls>  |
| **Measurement** | scale (liquid vol), temperature (incl negative numbers |  | <http://www.mathsrevision.com/index_files/Maths/Presentations/S1_Presentations/BGE_TJ_2a_2b/Level_2_Liquid_Volume_Recap.xls>  |
| **Ratios** | Simplifying ratios, sharing using a given ratio (in context)Checking shared amounts | MNU 3-08aMNU 4-08a | <http://www.mathsrevision.com/index_files/Maths/Presentations/S1_Presentations/BGE_TJ_3a_3b/Level_3_Ratio.xlsm>  |
| **Money** | Hire Purchase, Decisions needed for better deal | MNU 4.09a | <http://www.mathsrevision.com/index_files/Maths/Presentations/S1_Presentations/BGE_TJ_2a_2b/Level_2_Money_Best_Deals.xlsm>  |
| **Assessment** | **Numeracy A – Late August** |

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| **Topic** | **Content** | CfE | Website Resources |
| **Measurement** | Angles to nearest degree with protractor, Length to nearest mm.Tolerance | MNU 4-01a | <https://www.mathsisfun.com/geometry/protractor-using.html> <http://www.mathsrevision.com/index_files/Maths/Presentations/S4_Presentations/N4_Lifeskills/N4_Lifeskills_Tolerance_Practice.xlsm>  |
| **Statistics** | Interpreting pie charts, bar graphs, line graphs, tablesEvaluating sectors of pie charts (ie. 60/360x240=40people)Describing trends, relationshipsMaking choices (money, phone contracts, savings %) | MNU 4-20a | <http://www.mathsrevision.com/index_files/Maths/Presentations/S1_Presentations/BGE_TJ_3a_3b/Level_3_Angles1.xlsm>  |
| **Probability** | Finding probability (in decimal)Comparing probabilities to make decisions | MNU 3-22aMNU 4-22a | <http://www.mathsrevision.com/index_files/Maths/Presentations/S1_Presentations/BGE_TJ_3a_3b/Level_3_Probability.xlsm> <https://www.khanacademy.org/math/probability/probability-geometry/probability-basics/e/understanding-probability>  |
| **Assessment** | **Numeracy B – Early September** |

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| **S3 CfE Set 4 : September - October** |
| **Topic** | **Content** | CfE | Resources |
| **Algebra** | Collect Like termsExpand single bracket and factorise common factorEvaluate linear expressionsExtend a linear number or diagrammatic pattern and determining its formula | MTH 4-14aMTH 4-14bMTH 4-13a | <http://www.mathsrevision.com/index_files/Maths/Presentations/S1_Presentations/BGE_TJ_3a_3b/Level_3_Algebra.xlsm> <http://www.mathsrevision.com/index_files/Maths/Presentations/S1_Presentations/BGE_TJ_3a_3b/Level_3_Evaluating_Formulae.xlsm> <http://www.mathsrevision.com/index_files/Maths/Presentations/S4_Presentations/S4_General_Past_Paper_Patterns.xls>  |
| **Gradient** | Calculate gradient given horizontal and vertical distances | MTH 4-13b | <http://www.mathsrevision.com/index_files/Maths/Presentations/S4_Presentations/N4_Lifeskills/N4_Lifeskills_Gradient_Practice.xlsm>  |
| **Circle** | Circumference and area of a circle | MTH 4-16b | <http://www.mathsrevision.com/index_files/Maths/Presentations/S2_Presentations/S2_Circles_Practice.xls>  |
| **Area & Volume** | Area of a parallelogram, kite/rhombus, trapeziumSurface area of a prism (cuboid/triangular)Volume of a prism | MTH 4-11bMTH 4-11c | <http://www.mathsrevision.com/index_files/Maths/Presentations/S3_Presentations/S3_General_Area_Of_Quadrilaterals.xls> <http://www.mathsrevision.com/index_files/Maths/Presentations/S4_Presentations/S4_3_General_Volume_Surface_Area_TJ.xls>  |
| **Symmetry** | Line and Rotational | MTH 3-19a | <https://www.mathsisfun.com/geometry/symmetry.html>  |
| **Assessment** | **Late September** |

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| **Topic** | **Content** | CfE | Website Resources |
| **Statistics** | Frequency table with class intervalsDetermining statistics of a data set- mean, median, mode and rangeUsing mean, median, mode, range to compare data setsDrawing Pie chartsCalculate and interpret probability | MTH 4-20bMTH 4-21aMNU 3-22a | <https://www.youtube.com/watch?v=L31ccw-yefc> <http://www.mathsrevision.com/index_files/Maths/Presentations/S1_Presentations/BGE_TJ_3a_3b/Level_3_Statistics.xlsm> <https://www.youtube.com/watch?v=1oShnkmA_ww>  |
| **Assessment** | **Early October** |

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| S3 CfE Set 4 : October - November |
| **Topic** | **Content** | CfE | Website Resources |
| **Straight Line** | Drawing and recognising a graph of a linear equation. | MTH 4-18aMTH 4-13cMTH 4-13d | <https://www.youtube.com/watch?v=3SIZjceF09g>  |
| **Algebra 2** | Solving linear equations.Change the subject of a formula | MTH 4-15aExtension | <http://www.mathsrevision.com/index_files/Maths/Presentations/S1_Presentations/BGE_TJ_3a_3b/Level_3_Equations.xlsm>  |
| **Pythagoras’ theorem** | Given sides or from coordinates | MTH 4-16a | <http://www.mathsrevision.com/index_files/Maths/Presentations/S3_Presentations/S3_3_Pythagoras_Theorem_Practice.xls>  |
| **Scale Factors** | Using a fractional scale factor to enlarge or reduce a shape. | MTH 3-17cMTH 4-17b | <https://www.bbc.co.uk/education/guides/zpwycdm/revision/1>  |
| **Angles** | Basic angle properties including parallel lines, Triangles and quadrilateralsCircles properies- angle in a semi-circle- relationship between tangent and radius | MTH 4-17a | <http://www.mathsrevision.com/index_files/Maths/Presentations/S1_Presentations/BGE_TJ_3a_3b/Level_3_Angles1.xlsm>  |
| **Assessment** | **Early November** |

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| **Topic** | **Content** | CfE | Website Resources |
| **Trig** | Calculating a side and angle in a right-angled triangle. | MTH 4-16a | <http://www.mathsrevision.com/index_files/Maths/Presentations/S3_Presentations/S3_3_Credit_SOHCAHTOA_Revision.xls>  |
| **Statistics 2** | Constructing a scattergraph.Drawing and applying a best-fitting straight line. | MTH 4-21aMTH 4-13a& Extension | <http://www.mathsrevision.com/index_files/Maths/Presentations/S4_Presentations/N4_Lifeskills/N4_Lifeskills_Scattergraphs.pps>  |
| **Assessment** | **Late November** |
| **Revision** | All S3 topics covered | All Level 4 Topics | [https://sahsmathematics.wikispaces.com/NATIONAL+4](https://sahsmathematics.wikispaces.com/NATIONAL%2B4)  |
| **Assessment** | **December (AVU)** |

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| **S3 CfE Set 4 : January - February** |
| **Topic** | **Content** | CfE | Website Resources |
| **Decimals and Rounding** | * add and subtract numbers given to two decimal places
* multiply or divide a number given to two decimal places by a single-digit whole number
* multiply or divide a number given to two decimal places by multiples of 10, 100 and 1000
* round answers to the nearest significant figure or three decimal places
 | N5Numeracy | <https://www.bbc.com/education/subjects/zb27hyc>  |
| **Fractions and Percentages** | * find percentages and fractions of shapes and quantities
* recognise and use mixed fractions, eg 3½, ⅓, 4¼, 1/8, 2/6
* add and subtract simple fractions, eg ½ + ¼ and ⅔ - ⅓
* find the number of fractional parts in a mixed number, eg 2½ = 5 halves
* calculate compound percentage increase and decrease
* express a quantity as a percentage of another quantity
* convert equivalences between fractions, decimal fractions and percentages
 | N5Numeracy |

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| **Topic** | **Content** | CfE | Website Resources |
| **Speed, Distance & Time** | * calculate speed, time and distance
 | N5Numeracy | <http://www.machinehead-software.co.uk/bike/speed_distance_time_calc.html>  |
| **Area and Volume** | * calculate volume (cylinder, triangular prism), area (triangles and composite shapes) and perimeter (circumference)
 | N5Numeracy | <https://www.bbc.com/education/guides/z2mtyrd/revision/2> <https://www.bbc.com/education/guides/z26nb9q/revision/2>  |
| **Ratio and Proportion** | * calculate ratio including dimensions from scale drawings, eg scale of 1:10
* calculate direct and indirect proportion
 | N5Numeracy | <https://www.bbc.com/education/topics/zxw76sg> |
| **Reading Scales** | To the nearest marked, minor unnumbered division on an instrument for length, weight, volume and temperature | N5Numeracy | <https://www.youtube.com/watch?v=6JyDRJBJQgU> |
| **Interpreting and justifying measurements or calculations** | Identifying relevant measurements and results of calculations to make a decision.Using evidence from the results of measurements or calculations to justify decisions | N5Numeracy |  |
| **Assessment** | **N5 Numeracy A – Early February** |

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| **Topic** | **Content** | CfE | Website Resources |
| Graphs and Charts | * a table with at least five categories of information
* a chart where all the values are not given or where the scale is not obvious, eg comparative/compound bar chart
* a graph where part of the axis is missing or the scale is not obvious, eg conversion line graph
* a diagram, eg stem and leaf, scatter diagram or a map
 | N5Numeracy | Stem & Leaf:<https://www.mathsisfun.com/data/stem-leaf-plots.html>Scatter diagram: <https://www.mathsisfun.com/data/scatter-xy-plots.html> |
| Make and justify decisions using data | * make decisions based on patterns, trends or relationships in data
* use evidence from the interpretation of data to justify decisions
* understand the effects of bias and sample size
 | N5Numeracy |  |
| Make and justify decisions using probability | * recognise patterns, trends and relationships and use these to state the probability of an event happening
* use evidence from the interpretation of probability to justify decisions
* analyse the probability of combined events, identifying the effects of bias and describing probability through the use of percentages, decimal fractions, fractions and ratio to make and justify decisions
 | N5Numeracy | Comparing Probabilities (fractions):<https://www.youtube.com/watch?v=WqnXhCEgW20>Comparing Probabilities (decimals):<https://www.youtube.com/watch?v=00IQay8YJns> |
| **Assessment** | **N5 Numeracy B – Late February** |

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| S3 CfE Set 4 : March - June |
| **Topic** | **Content** | CfE | Website Resources |
| Working with surds | * Simplification
* Rationalising denominators
 | MTH 4-06a | <https://www.bbc.com/bitesize/guides/z9jtw6f/revision/1>(3 sections)  |
| Simplifying expressions using thelaws of indices | * Multiplication and division using

 positive and negative indices including fractions* Calculations using scientific

 notation* $(a^{m})^{n}=a^{mn}$
 | MTH 4-06a | <https://www.bbc.com/bitesize/guides/zqtv6yc/revision/1>(6 sections)Video:<https://www.bbc.com/bitesize/clips/z84nvcw>  |
| Expandingbrackets | * a(bx + c) + d(ex + f )
* ax(bx + c)
* (ax + b)(cx + d)
* (ax + b)(cx2 + dx + e)

where a, b, c, d, e, f are integers | MTH 4-14a | <https://www.bbc.com/bitesize/guides/z2yg87h/revision/1>(2 sections) |
| Factorising an algebraicexpression | * Common factor
* Difference of squares p2 x2 – a2
* Common factor with difference of squares
* Trinomials with unitary x2 coefficient
* Trinomials with non-unitary x2 coefficient
* Quadratic formula
 | MTH 4-14b | <https://www.bbc.com/bitesize/guides/zmvrd2p/revision/1>(4 sections)Video:<https://www.bbc.com/bitesize/clips/z84nvcw>  |
| Completing the square | * Convert y = x2 + bx + c to y = (x + p)2 + q
 |  | <https://www.bbc.com/bitesize/guides/zxcjrwx/revision/1>(2 sections) |
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