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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> |
| **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 context  Finding 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 4-10b  MTH 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 3-08a  MNU 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, tables  Evaluating sectors of pie charts  (ie. 60/360x240=40people)  Describing trends, relationships  Making 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 3-22a  MNU 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 terms  Expand single bracket and factorise common factor  Evaluate linear expressions  Extend a linear number or diagrammatic pattern and determining its formula | MTH 4-14a  MTH 4-14b  MTH 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, trapezium  Surface area of a prism (cuboid/triangular)  Volume of a prism | MTH 4-11b  MTH 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 intervals  Determining statistics of a data set  - mean, median, mode and range  Using mean, median, mode, range to compare data sets  Drawing Pie charts  Calculate and interpret probability | MTH 4-20b  MTH 4-21a  MNU 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 4-18a  MTH 4-13c  MTH 4-13d | <https://www.youtube.com/watch?v=3SIZjceF09g> |
| **Algebra 2** | Solving linear equations.  Change the subject of a formula | MTH 4-15a  Extension | <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 3-17c  MTH 4-17b | <https://www.bbc.co.uk/education/guides/zpwycdm/revision/1> |
| **Angles** | Basic angle properties including parallel lines, Triangles and quadrilaterals  Circles 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 4-21a  MTH 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> |
| **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 | N5  Numeracy | <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 | N5  Numeracy |

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| **Topic** | **Content** | CfE | Website Resources |
| **Speed, Distance & Time** | * calculate speed, time and distance | N5  Numeracy | <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) | N5  Numeracy | <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 | N5  Numeracy | <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 | N5  Numeracy | <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 | N5  Numeracy |  |
| **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 | N5  Numeracy | 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 | N5  Numeracy |  |
| 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 | N5  Numeracy | 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 the  laws of indices | * Multiplication and division using   positive and negative indices  including fractions   * Calculations using scientific   notation | MTH 4-06a | <https://www.bbc.com/bitesize/guides/zqtv6yc/revision/1>  (6 sections)  Video:  <https://www.bbc.com/bitesize/clips/z84nvcw> |
| Expanding  brackets | * 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 algebraic  expression | * 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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