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| **Ch** | **Topic** | **Course Tasks** | **Key Skills** | **Experiences & Outcomes** |
| **1** | **Powers & Roots**  **Pages 8 - 10** |  | Introduce square numbers and square roots.  Introduce basic powers.  23 = 2 x 2 x 2 = 8  34 = 3 x 3 x3 x 3 = 81  √36 = 6, √1 000 000 = 1000 | Having explored the notation and vocabulary associated with whole number powers and the advantages of writing numbers in this form, I can evaluate powers of whole numbers mentally or using technology. **MTH 3-06a** |
| **2** | **Money**  **Pages 13 - 21** |  | Be able to choose the best value for money for  an option/contract/service.  e.g. best currency exchange  best mobile phone contract  best plumber service  (£20 call out fee and £25 per hour or ......)  **(MNU 3-09a)** | When considering how to spend my money, I can source, compare and contrast different contracts and services, discuss their advantages and disadvantages, and explain which offer best value to me. **MNU 3-09a** |
| **3** | **Multiples & Factors**    **Pages 26 – 32** | Group work:   * Fire work display(multiplies) (filing cabinet)   Brainteasers (filing cabinet)  **Active Assessments**:-  Five to two | Find the lowest common multiple (l.c.m.) and the highest common factor (h.c.f.) of a set of two  (or more) numbers.  Use h.c.f. and l.c.m. in contextualised problems.  e.g. synchronising flashing lights. **(MTH 3-05a)** | I have investigated strategies for identifying common multiples and common factors, explaining my ideas to others, and can apply my understanding to solve related problems. **MTH 3-05a** |
| Identify a prime number (up to 100).  Reduce any number to a product of prime factors.  e.g. 45 = 5 x 3 x 3  80 = 2 x 2 x 2 x 2 x 5 . **(MTH 3-05b)** | I can apply my understanding of factors to investigate and identify when a number is prime.  **MTH 3-05b** |
| **4** | **Patterns & Relationships**  **Pages 36 - 44** | * [www.mathsrevision.com](http://www.mathsrevision.com/) * [Practice online](http://www.mathsrevision.com/index_files/Maths/Presentations/S2_Presentations/S2_Pattern_Practice.xls) * Level E Problem Solving Booklets * Further examples in Foundation and General level past paper books   **CFE book – Growing growing grown…**  **The Flower bed Investigation – PUT IN FOLDER** | Look at more complex patterns involving square  numbers e.g. P = n2 + 1, and look further into triangular number patterns, like finding the 20th triangular or the connection between square and triangular numbers.  More problem type linear patterns of the form  P = mD + c, expressing them in words and symbols. **(MTH 3-13a)** | Having explored number sequences, I can establish the set of numbers generated by a given rule and determine a rule for a given sequence, expressing it using appropriate notation.  **MTH 3-13a** |
| **5** | **Algebra 2**  **Pages 48 - 53** | **Challenge & Breadth - Equation Challenges 1,2 & 3**  ( Breakout room ) | Construct/solve equations from given information .  Solve inequalities like ... 2a + 4 > 11, x – 1 ≤ 3.  Further equation solving e.g.  • 6x – 16 = 2x, • 5x – 2 = 3x + 10,  • 2(x + 4) = 14, • 4(2x – 1) = 28  **(MTH 3-15a)** | Having discussed ways to express problems or statements using mathematical language, I can construct, and use appropriate methods to solve, a range of simple equations. **MTH 3-15a** |
| Construct a formula from a diagram or a written  problem and evaluate it.  e.g. given F = C + 32, find F when C = 20. or .....  \*\*\* More complicated equations and inequalities have  been introduced to Level 3 from **(MTH 4-15a)** | Having discussed the benefits of using mathematics to model real-life situations, I can construct and solve inequalities and an extended range of equations. **MTH 4-15a** |
| **ASSESSMENT 1** | | | | |