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| UNIT 2 |  | **Objectives (number of lessons)** | **Thresholds** | **Core Skills & Knowledge** | **Resources** |
| **Lesson1 - 2** | **Starter** | Exercise books should be given out and sheets glued in.  Establish classroom rules and expectations, emphasizing the importance of bringing a calculator to every maths lesson. | 3D = Developing  3S = Secure  3E = Excellent |  |  |
| **Main Activity** | **Mental and written calculations Review (2)**  Add, subtract, multiply and divide both integers and decimals. | 3S | Understand the 4 rules of operations for whole numbers and decimals. |  |
| **Lesson 3 - 4** | **Main Activity** | **Related calculations (2)**  Use a known calculation to work out related calculations, including inverse operations. | 3S | Develop skill in using a known calculation to work out a related calculation. |  |
| **Lesson 5 - 6** | **Main Activity** | **Solving linear equations (2)**  Solving equations with unknowns on one side and unknowns on both sides.  . | 3D | Develop skills learnt in Year 7&8 to solve linear equations with unknowns on one side, both sides of equation; with fractions; with brackets; and with a combination of them all. | FAM (pg 58-61): Foundation/  Higher Triominoes: Solving Equations. |
| **Lesson 7** | **Main Activity** | **Solving linear equations (1)**  Solving equations with brackets and fractions. | 3S / 3E  3S | Develop skills learnt in Year 7&8 to solve linear equations with unknowns on one side, both sides of equation; with fractions; with brackets; and with a combination of them all. | FAM (pg 58-61): Foundation/  Higher Triominoes: Solving Equations. |
| **Lesson 8** | **Main Activity** | **Forming, then solving linear equations (1)**  Students can find forming an equation to be quite challenging. It is worth spending time on this to build up their confidence and deepen their understanding of algebra. Suggestion: start with forming expressions then move onto forming equations. | 3S | Understand how to form then solve linear equations. | Maths4Everyone – Algebra – Words into longer expressions |
| **Lesson 9 -10** | **Main Activity** | Changing the subject (2) Re-arranging equations where the new subject appears once  Students struggle with this topic. Encourage students to look at the subject and describe the operations that are happening to it. They should write a list of operations *in the order that they happened*, then they need to apply the *inverse operation* in reverse order.  For example, if ay + b = c, you are asked to make ‘y’ the subject.  ‘y’ has been multiplied by ‘a’ then had ‘b’ added to it, students could write a list starting with: multiply by a, add b. In order to “undo” these operations we need to apply the inverse operations to *both side of the equation*, in the opposite order that they happened. For example, subtract b, then divide by a. This will rearrange the equation to give y = (c – b)/a. | 3S | Develop skill in rearranging formulae to ‘change the subject’ | Mathsloops: Changing the subject (Set B5)  <https://maths4everyone.com/skills/two-step-problems-2412.html> |
| **Lesson 11 - 13** | **Main Activity** | **Distributions Review (3)**  Calculate mean, median, mode averages and range of discrete data.  Understand advantages and disadvantages of each average.  Calculate averages from frequency table.  Estimate the mean from a grouped frequency table.  Students must understand why this is an *estimate* of the mean and not an accurate calculation i.e. the mid-point of the class interval is taken as an estimate of the value for x. | 3S  3S  3S | Understand the different averages and which average is appropriate given a particular scenario.  Calculate the mean from a frequency table.  Estimate the mean from a grouped frequency table. |  |
| **Lesson**  **14** | **Main**  **Activity** | Pie Charts Review (1) Being able to interpret and construct pie charts.  This is revision and should not take more than 1 lesson to construct and interpret pie charts. | 3D | Understand how to construct a pie chart.  Understand how to read, interpret and compare pie charts | Pie Charts Past Paper Problem Cards. |
| **Lesson**  **15** | **Main Activity** | Frequency Polygons (1) Construct and interpret frequency polygons for continuous data.  Emphasize the point that these graphs are usually used for continuous data, and the mid-point of the class intervals is plotted.  Suggestion: Corbettmaths has some good “textbook” questions. | 3S | Understand how to construct and interpret frequency polygons. | Corbettmaths Frequency Polygons textbook questions |
| **Lesson**  **15 - 17** | **Main**  **Activity** | **Quadrilaterals and Symmetry (3)**  Identifying and using the properties of quadrilaterals.  Revise reflective symmetry and order of rotational symmetry. | 3D  3D | Understand the properties of quadrilaterals.  Understand reflective symmetry and order of rotational symmetry. |  |
| **Lesson**  **18 - 19** | **Revision** | **It may be beneficial to spend a lesson or two revising the topics before giving the end of unit test.** |  |  |  |
| **Lesson**  **20-21** | **Test**  **& Feedback lesson** | **End of unit Test**  Student feedback forms can be given out after test to record student progress. |  |  | Test papers  Review sheets |