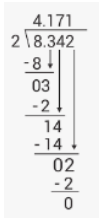
-[

| Division Master | BODMAS Master | Problem Solving Master | Conversion Master | Fraction Master | Decimal Master | Challenge Master |
|---|---|---|---|---|---|---|
| Students need to be able to divide up to 4 digit numbers by 1 and 2 digit divisors using algorithm strategy. Students must show how they calculated the answer.<br><br>**Example:**<br>  <br> | Students solve problems involving BODMAS strategies.<br><br>**Example:**<br>10 x 8 - 50 + 15 =<br>8 + (4 x 12) - (15 x 0) = | Solving addition, subtraction and multiplication worded problems. Students must show working out.<br><br>**Example:** | Convert fractions (lowest possible denominator) to decimals (three decimal places) to percentages (one decimal place) and vice versa.<br><br>**Example:**<br>25% = 0.25 = 1/4 | Addition and subtraction of fractions with related denominators.<br><br>**Example:**<br>$\frac{5}{10} + \frac{3}{5} + \frac{8}{20} =$<br><br>$\frac{9}{12} - \frac{5}{10} - \frac{2}{15} =$ | Add, subtract, multiply and divide decimal numbers up to 3 decimal places.<br><br>**Example:**<br>13.987 + 3.087 - 9.45 =<br>13 x 4.5 = | Students are required to complete all set tasks given with 100% accuracy in Study Ladder.<br><br>Set tasks are in the Year 7 Pattern and Algebra, Decimals and Fractions unit. |
| **Ideas:**<br>Students complete division problems that involve 1 digit divisors before moving onto 2 digit divisors.<br><br>Ask students "What is a remainder?" Ensure they understand this before using two digit divisors<br><br>Linking division problems to events, supports real-life understanding of Maths. | **Ideas:**<br>Revise order of BODMAS. Get students to use the digits in the number 2018 to write mathematical sentences for the numbers 1 to 20. They may use all operations (× + ÷ -), brackets, powers, square root or a decimal point. As an extension, ask them to explore the year in which they were born. They have to make mathematical sentences that:<br>- Equal to as many numbers between 1 - 100.<br>- The smallest number possible.<br>- The largest number possible. | **Ideas:**<br>Students practice 'Crazy Calculators' and/or Matheroo problems. | **Ideas:**<br>Students can use a meter ruler or number line to 100 to work with percentages, fractions and decimals. Cover part of the meter ruler and pose the questions:<br>- Estimate the percentage of the ruler that has been covered.<br>- Estimate the percentage of the ruler that isn't covered and explain your reasons.<br>- What can you tell me about the two estimates? (*they sum to 100)*<br>- Mark 10%, 25%, 50% and 75% on a ruler and express these as fractions and decimals.<br>Encourage students to use drawings such as a hundredths grid and materials such as bead strings, to explain how fractions, decimals and percentages represent the same amount. | **Ideas:**<br>It is important that students use a range of models as well as estimation, so that they can make sense of the algorithm and the answers that they obtain.<br><br>**Problem:** Mrs F was clearing food after the class party. She noticed that 3/8 of the chocolate cake was leftover and 7/8 of the vanilla cake was leftover. Both cakes were the same size, the only difference was the flavour. How much cake was left uneaten?<br><br>The answer is 12/5 , what could the question be?<br><br>A builder has $3\frac{3}{4}$ meters of wood, if he cuts $1\frac{2}{4}$ meters off, what length of the wood is left? | **Ideas:**<br>Use BODMAS problems with decimal numbers. | **Ideas:**<br>  |

| Division Master | BODMAS Master | Problem Solving Master | Conversion Master | Fraction Master | Decimal Master | Challenge Master |
|---|---|---|---|---|---|---|
| **Online Resources:**<br><br>Videos to Watch:<br>Dividing a Whole Number by a Decimal - Maths with Mr J:<br>https://www.youtube.com/watch?v=0H7eIU1ux0c<br><br>How to Divide a Decimal by a Decimal - Maths with Mr J:<br>https://www.youtube.com/watch?v=Val4TmjHXRY<br><br>Practice:<br>Who Wants to Be a Hundredaire:<br>http://www.math-play.com/Division-Millionaire/division-millionaire-game_html5.html<br><br>Drag and Drop Online:<br>https://mrnussbaum.com/drag-n-drop-math-online | **Online Resources:**<br><br>Videos to Watch:<br>Maths Antics Order of Operations:<br>https://www.youtube.com/watch?v=dAgfnK528RA<br><br>Practice:<br>Order Ops:<br>https://mrnussbaum.com/order-ops-online-game<br><br>High Stakes Heist:<br>https://www.abcya.com/games/order_of_operations<br><br>Millionaire Game:<br>https://www.math-play.com/Order-of-Operations-Millionaire/order-of-operations-millionaire.html<br><br>Math Frog:<br>https://cemc2.math.uwaterloo.ca/mathfrog/english/kidz/order.shtml | **Online Resources:**<br><br>Videos to Watch:<br>Solving Worded Problems:<br>https://www.youtube.com/watch?v=N_8srGGX0kk<br><br>Practice: | **Online Resources:**<br><br>Videos to Watch:<br>Mr J:<br>https://www.youtube.com/watch?v=-Xt4UDk7Kzw<br><br>Math Antics:<br>https://www.youtube.com/watch?v=JeVSmq1Nrpw<br><br>Practice:<br>nRich Matching Fractions, Decimals and Percentages:<br>https://nrich.maths.org/1249<br><br>Match Fractions, Decimals and Percentages:<br>https://mathsframe.co.uk/en/resources/resource/120/match_fractions_decimals_and_percentages#.UCdcd2MsCEY<br><br>Ordering Fractions, Decimals and Percentages:<br>https://mathsframe.co.uk/en/resources/resource/139/order-fractions-decimals-and-percentages | **Online Resources:**<br><br>Videos to Watch:<br>Math Antics - Adding and Subtracting Fractions:<br>https://www.youtube.com/watch?v=5juto2ze8Lg<br><br>Finding the Least Common Denominator:<br>https://www.youtube.com/watch?v=N-Y0Kvcnw8q<br><br>https://www.youtube.com/watch?v=pZEmFSP3Z0I&t=24s<br><br>Practice:<br>Fruit Splat:<br>https://www.sheppardsoftware.com/math/fractions/addition-game/<br><br>Speedway:<br>https://www.mathplayground.com/ASB_Speedway.html<br><br>Maths Play:<br>https://www.math-play.com/fractions-board-game/fractions-board-game_html5.html | **Online Resources:**<br><br>Videos to Watch:<br>Adding, Subtracting, Multiplying and Dividing Decimals with Mr J:<br>https://www.youtube.com/watch?v=UCBXoLb2ItI<br><br>Practice:<br>Decimal Math Games:<br>http://www.math-play.com/decimal-math-games.html<br><br>Splash Learn Decimal Games:<br>https://www.splashlearn.com/math/divide-decimals-games | **Online Resources:**<br><br>Practice:<br>Math Only:<br>https://www.math-only-math.com/word-problems-on-multiplication.html<br><br>Maths Playground:<br>https://www.mathplayground.com/tb_multiplication/index.html |