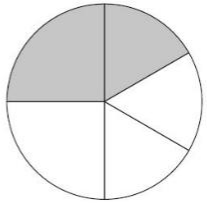
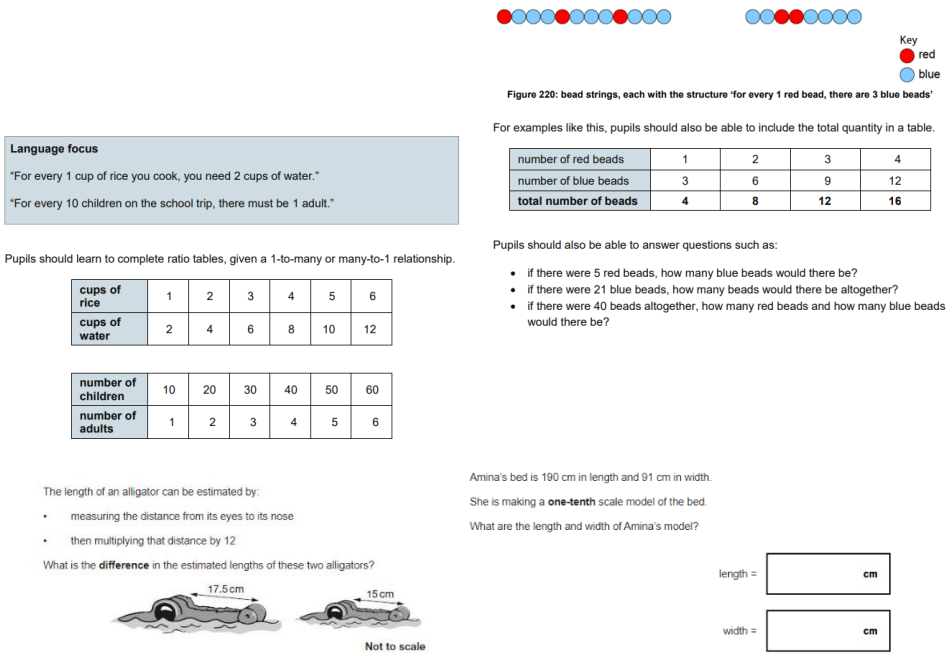
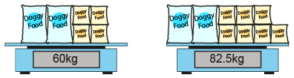
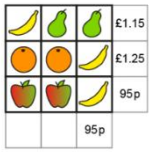
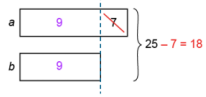
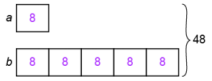
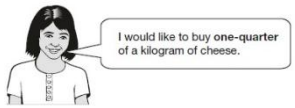
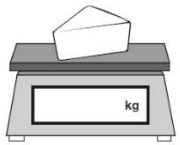
Key stage 2 Scheme of Work 2025-26 - Year 6
Spring Term

This table provides an overview of the curriculum for Year 5 for the Autumn Term. Pupils will be given the opportunity to master new methods and develop fluency through a range of problem solving lessons, calculation papers and times-tables challenges.

Week	Topic	Example Questions/Working
1-2 w/c 5/1 12/1	Number Place Value and Calculations - Review objectives from Autumn Term Calculation block putting the work in the context of problem solving. • read, write, order and compare numbers up to 10 000 000 and determine the value of each digit • round any whole number to a required degree of accuracy • use negative numbers in context, and calculate intervals across zero • solve number and practical problems that involve all of the above • identify common factors, common multiples and prime numbers • use their knowledge of the order of operations to carry out calculations involving the four operations Prior Knowledge • read, write, order and compare numbers up to 1 000 000 and determine the value of each digit (Y5 POS) • Interpret negative numbers in context, count forward and backward with positive and negative whole numbers, including through zero. (Y5 POS) • read Roman numerals to 1000 (M) and recognise years written in Roman numerals. (Y5 POS) • recognise and use square numbers and cube numbers, and the notation for squared (²) and cubed (³) (Y5 POS)	A **square** number and a **prime** number have a total of 22 What are the two numbers? ☐ + ☐ = 22 square number prime number 3,576,219 Which digit is in the **ten thousands** place? ☐ Round 3,576,219 to the **nearest million**. ☐ Chen chooses a **prime** number. He multiplies it by 10 and then rounds it to the nearest hundred. His answer is **400**. Write **all** the possible prime numbers Chen could have chosen. ☐ Here are the temperatures in four cities at midnight and at midday. Temperature City / At midnight / At midday Paris −4°C −2°C Oslo −13°C −7°C Rome 3°C 10°C Warsaw −6°C 2°C At **midnight**, how many degrees colder was Paris than Rome? ☐ **degrees** Which city was 6 degrees colder at midnight than at midday?

Week	Topic	Example Questions/Working
3-4 w/c 19/1 26/1	Fractions, Decimals and Percentages – Mixed Numbers and Improper Fractions • add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions • multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, 1/4 × 1/2 = 1/8] • divide proper fractions by whole numbers [for example, 1/3 ÷ 2 = 1/6] • use common factors to simplify fractions; use common multiples to express fractions in the same denomination • compare and order fractions, including fractions > 1 associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, 3/8] Prior Knowledge • Recognise mixed numbers and improper fractions and convert from one form to another. (Y5 POS) • Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams. (Y5 POS) • Add and subtract fractions with the same denominator and multiples of the same number. (Y5 POS)	$2\frac{1}{2} - \frac{3}{4} =$ ☐ $\frac{4}{12} = \frac{1}{3}$ (÷4 above and ÷4 below) Figure 226: simplifying $\frac{4}{12}$ by dividing the numerator and denominator by the highest common factor $\frac{4}{12} = \frac{2}{6} = \frac{1}{3}$ (÷2 ÷2 above and ÷2 ÷2 below) Figure 227: simplifying $\frac{4}{12}$ in 2 steps 1. Fill in the missing symbols (<, > or =). You will need to simplify some of the fractions and express each pair with a common denominator. $\frac{5}{7} \bigcirc \frac{2}{3}$ $\frac{6}{10} \bigcirc \frac{3}{5}$ $\frac{7}{9} \bigcirc \frac{3}{4}$ $\frac{5}{7} \bigcirc \frac{6}{8}$ $\frac{2}{3} \bigcirc \frac{7}{10}$ $\frac{2}{6} \bigcirc \frac{3}{9}$ $\frac{3}{11} \bigcirc \frac{1}{3}$ $\frac{1}{5} \bigcirc \frac{2}{11}$ Circle the improper fraction that is equivalent to $6\frac{7}{8}$ $\frac{67}{8}$ $\frac{48}{8}$ $\frac{62}{8}$ $\frac{55}{8}$ $\frac{76}{8}$ In this circle, $\frac{1}{4}$ and $\frac{1}{6}$ are shaded.  What fraction of the whole circle is **not** shaded?

Week	Topic	Example Questions/Working
5-6 w/c 2/2 9/2	Ratio and Proportion – • solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts. • solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison • solve problems involving similar shapes where the scale factor is known or can be found • solve problems involving unequal sharing and grouping using knowledge of fractions and multiples Prior Knowledge • Recognise the per cent symbol (%) and understand that per cent relates to "number of parts per hundred", and write percentages as a fraction with a denominator 100 as a decimal fraction (Y5 POS)	

Week	Topic	Example Questions/Working
7 w/c 23/2	Algebra – Use of worded formulas • use simple formulae • generate and describe linear number sequences • express missing number problems algebraically • find pairs of numbers that satisfy an equation with two unknowns • enumerate possibilities of combinations of two variables. Prior Knowledge • solve problems, including missing number problems. (Y3 POS) • use the properties of rectangles to deduce related facts and **find missing** lengths and angles (Y5 POS)	4. The balances show the combined masses of some large bags of dog food and some small bags of dog food.  How much does each bag-size cost? 6. The diagram shows the total cost of the items in each row and column. Fill in the 2 missing costs.  **Example problem 1** Question: The sum of 2 numbers is 25, and the difference between them is 7. What are the 2 numbers? Solution:  **Figure 222: using a bar model to solve a problem with 2 unknowns – example 1** $a = 9 + 7 = 16$ $b = 9$ The numbers are 16 and 9. **Example problem 2** Question: The sum of 2 numbers is 48. One number is one-fifth times the size of the other number. What are the 2 numbers? Solution:  **Figure 223: using a bar model to solve a problem with 2 unknowns – example 2** $a = 8$ $b = 5 \times 8 = 40$ The numbers are 8 and 40.
8-9 w/c 2/3 9/3	Measures, Time and Calculations –Converting units of measurement and practising calculation methods through problem solving with Measures. Also to include revision of time. • solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate • use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places	Amina is shopping. She says,  Write one-quarter on the scales as a decimal.   The International Space Station orbits the Earth at a height of 250 miles. What is the height of the International Space Station in **kilometres?** Use 8 kilometres equals 5 miles. km

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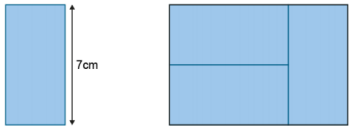
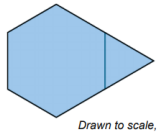
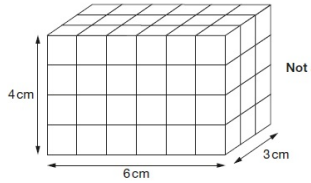
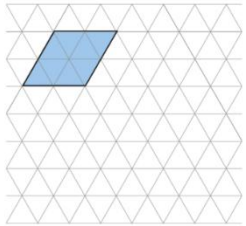
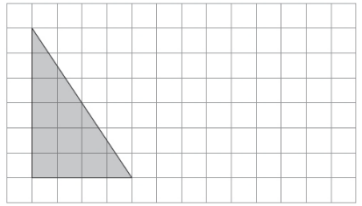
	• convert between miles and kilometres • multiply one-digit numbers with up to two decimal places by whole numbers • use written division methods in cases where the answer has up to two decimal places • solve problems which require answers to be rounded to specified degrees of accuracy • perform mental calculations, including with mixed operations and large numbers • solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why • solve problems involving addition, subtraction, multiplication and division use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy Prior Knowledge • convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) (Y5 POS) • understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints (Y5 POS) • read, write and convert time between analogue and digital 12- and 24-hour clocks (Y4 POS) solve problems involving converting from hours to minutes, minutes to seconds, years to months, weeks to days (Y4POS)	There are 28 pupils in a class. The teacher has 8 litres of orange juice. She pours 225 millilitres of orange juice for every pupil.  How much orange juice is left over? Write these masses in order, starting with the **lightest**. 1.25 kg 0.99 kg 1.025 kg 0.009 kg kg kg kg kg lightest A box contains 2.6 kg of washing powder.  Jack uses 65 grams of powder for each wash. He uses all the powder. How many washes did Jack do?

Week	Topic	Example Questions/Working
10-11 w/c 16/3 23/3	Area, Perimeter and Volume – Review of rectangles and extend to triangles, parallelograms and Volume • recognise that shapes with the same areas can have different perimeters and vice versa • recognise when it is possible to use formulae for area and volume of shapes • calculate the area of parallelograms and triangles • calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm^3) and cubic metres (m^3), and extending to other units [for example, mm^3 and km^3]. • compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius Prior Knowledge • calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes (Y5 POS) • measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres (Y5 POS) • estimate volume [for example, using 1 cm3 blocks to build cuboids (including cubes)] and capacity [for example, using water] (Y5 POS) • identify: angles at a point and one whole turn (total 360°) angles at a point on a straight line and ½ a turn (total 180°) other multiples of 90°(Y5 POS)	Problem: find the perimeter of the large rectangle on the right.  **Figure 235: problem involving a compound shape made from 3 identical rectangles** *Drawn to scale, not actual size* 6. Here is a picture of a pentagon made from a regular hexagon and an equilateral triangle. The perimeter of the triangle is 24cm. What is the perimeter of the pentagon?  *Drawn to scale, not actual size* Amina made this cuboid using centimetre cubes.  **Not actual size** Stefan makes a cuboid that is 5 cm longer, 5 cm taller and 5 cm wider than Amina's cuboid. What is the **difference** between the number of cubes in Amina's and Stefan's cuboids? 2. Here is a rhombus on a triangular grid. Draw a different shape with the same area on the grid.  Draw a rectangle on the grid that has **half** the area of the shaded triangle. Use a ruler. 

Some of the examples have been taken from Mathematics Guidance: Key Stages 1 and 2 published by the DfE and NCETM.