

The 2017 KS2 Maths SATs Crib Sheet

Everything you need to teach
pupils for next year's SATs



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Paper 1 - Arithmetic



Question	Content Domain	Linked Lesson
1 $40 + 1,000 =$	<p>4N2B</p> <p>find 1000 more or less than a given number</p>	<ul style="list-style-type: none"> bit.ly/Exchange_when_adding
2 $707 + 1,818 =$	<p>4C2</p> <p>add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate</p>	<ul style="list-style-type: none"> bit.ly/Exchange_when_adding bit.ly/Exchange_when_subtracting
3 $\frac{4}{6} + \frac{3}{6} =$	<p>4F4</p>	<ul style="list-style-type: none"> bit.ly/Adding_subtracting_simple_fractions
4 $505 \div 1 =$	<p>4C6b</p> <p>use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers</p>	<ul style="list-style-type: none"> bit.ly/Multiply_by_0_1_and_multiples_of_10_and_100 bit.ly/Dividing_by_1_and_multiples_of_10 bit.ly/Mentally_multiplying

Question	Content Domain	Linked Lesson
5 $345 - 60 =$	3C1 add and subtract numbers mentally, including: <ul style="list-style-type: none"> • a three-digit number and ones • a three-digit number and tens • a three-digit number and hundreds 	<ul style="list-style-type: none"> • bit.ly/Adding_and_subtracting_mentally
6 $2.7 + 3.014 =$	5F8 read, write, order and compare numbers with up to three decimal places	<ul style="list-style-type: none"> • bit.ly/Thousandths_and_beyond
7 $\underline{\quad} = 4,500 + 600$	4C2 Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate	<ul style="list-style-type: none"> • bit.ly/Exchange_when_adding • bit.ly/Exchange_when_subtracting
8 $8 \times 33 =$	3C7 Write and calculate mathematical statements for multiplication and division using the multiplication tables that pupils know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods	<ul style="list-style-type: none"> • bit.ly/Short_division_without_remainders • bit.ly/Multiply_2_digits_by_1_digits

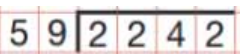
Question	Content Domain	Linked Lesson
9 $72 \div 9 =$	4C6a Recall multiplication and division facts for multiplication tables up to 12×12	<ul style="list-style-type: none"> bit.ly/Times_tables_12_x_12
10 $167 \times 4 =$	4C7 Multiply two-digit and three-digit numbers by a one-digit number using formal written layout	<ul style="list-style-type: none"> bit.ly/Multiply_3_digits_by_1_digits
11 $4,912 - 824 =$	4C2 Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate	<ul style="list-style-type: none"> bit.ly/Exchange_when_adding bit.ly/Exchange_when_subtracting
12 $\frac{62}{100} - \frac{38}{100} =$	4F4 Add and subtract fractions with the same denominator	<ul style="list-style-type: none"> bit.ly/Adding_subtracting_simple_fractions
13 $__ - 100 = 1,059$	3N2b Find 10 or 100 more or less than a given number	<ul style="list-style-type: none"> bit.ly/Adding_to_100

Question	Content Domain	Linked Lesson
14 $50 + (36 \div 6) =$	<p>6C9</p> <p>Use their knowledge of the order of operations to carry out calculations involving the four operations</p>	<ul style="list-style-type: none"> bit.ly/Order_of_4_operations bit.ly/Using_brackets_to_get_an_answer bit.ly/2tp9jzT
15 $\frac{4}{6} \times \frac{3}{5} =$	<p>6F5a</p> <p>Multiply simple pairs of proper fractions, writing the answer in its simplest form</p>	<ul style="list-style-type: none"> bit.ly/Multiplying_all_kinds_of_fractions bit.ly/Simplest_form
16 $30 \times 40 =$	<p>5C6a</p> <p>Multiply and divide numbers mentally drawing upon known facts</p>	<ul style="list-style-type: none"> bit.ly/Mentally_multiplying
17 $581 \div 7 =$	<p>5C7b</p> <p>Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context</p>	<ul style="list-style-type: none"> bit.ly/Short_division_with_remainders

Question	Content Domain	Linked Lesson
18 $0.04 \div 10 =$	<p>6F9a</p> <p>Identify the value of each digit to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places</p>	<ul style="list-style-type: none"> bit.ly/Multiplying_and_dividing_decimals_by_10 bit.ly/Multiplying_and_dividing_decimals_by_100
19 $2,345 \times 1,000 =$	<p>5C6b</p> <p>Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000</p>	<ul style="list-style-type: none"> bit.ly/Multiplying_and_dividing_decimals_by_1000
20 17	<p>6C7b</p> <p>Divide numbers up to 4 digits by a twodigit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context</p>	<ul style="list-style-type: none"> bit.ly/Long_division
21 $9 - 3.45 =$	<p>4F8</p> <p>Compare numbers with the same number of decimal places up to two decimal places</p>	<ul style="list-style-type: none"> bit.ly/Hundredths_and_ordering_2dp_decimals

Question	Content Domain	Linked Lesson
22 	6C7a Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication	<ul style="list-style-type: none"> bit.ly/Long_multiplication
23 $\frac{3}{4} - \frac{3}{8} =$	5F4 Add and subtract fractions with the same denominator and denominators that are multiples of the same number	<ul style="list-style-type: none"> bit.ly/Adding_and_subtracting_fractions
24 	6C7a multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication	<ul style="list-style-type: none"> bit.ly/Long_multiplication
25 $37.8 - 14.671 =$	5F8 Read, write, order and compare numbers with up to three decimal places	<ul style="list-style-type: none"> bit.ly/Thousandths_and_beyond
26 $\frac{1}{4} + \frac{1}{5} + \frac{1}{10} =$	6F4 Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions	<ul style="list-style-type: none"> bit.ly/Adding_subtracting_all_kinds_of_fractions

Question	Content Domain	Linked Lesson
27 $\frac{4}{5} \div 4 =$	6F5b Divide proper fractions by whole numbers	<ul style="list-style-type: none"> bit.ly/Dividing_fractions_by_whole_numbers
28 $\frac{5}{8} \div 2 =$	6F5b Divide proper fractions by whole numbers	<ul style="list-style-type: none"> bit.ly/Dividing_fractions_by_whole_numbers
29 45% of 460 =	6R2 Solve problems involving the calculation of percentages [e.g. of measures such as 15% of 360] and the use of percentages for comparison	<ul style="list-style-type: none"> bit.ly/Simple_percentages bit.ly/Percentages_of_quantities
30 $2\frac{1}{3} + \frac{5}{6} =$	6F4 Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions	<ul style="list-style-type: none"> bit.ly/Adding_subtracting_all_kinds_of_fractions
31 7% of 500 =	6R2 Solve problems involving the calculation of percentages [e.g. of measures such as 15% of 360] and the use of percentages for comparison	<ul style="list-style-type: none"> bit.ly/Simple_percentages bit.ly/Percentages_of_quantities

Question	Content Domain	Linked Lesson
32 $\frac{2}{6} - \frac{1}{8} =$	6F4 Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions	<ul style="list-style-type: none"> bit.ly/Adding_subtracting_all_kinds_of_fractions
33 $0.9 \times 200 =$	6F9b Multiply one-digit numbers with up to two decimal places by whole numbers	<ul style="list-style-type: none"> bit.ly/Multiplying_decimals_by_1_digit_numbers
34 $15\% \times 1,000 =$	6R2 Solve problems involving the calculation of percentages [e.g. of measures such as 15% of 360] and the use of percentages for comparison	<ul style="list-style-type: none"> bit.ly/Simple_percentages bit.ly/Percentages_of_quantities
35 $1\frac{1}{2} \times 57 =$	5F5 Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	<ul style="list-style-type: none"> bit.ly/Multiplying_fractions_by_whole_numbers
36 	6C7b Divide numbers up to 4 digits by a two digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context	<ul style="list-style-type: none"> bit.ly/Long_division

Paper 2 - Reasoning

Question	Content Domain	Linked Lesson
1a William asks the children in Year 2 and Year 6 if they will walk to school. A bar graph shows the results. Work out how many children don't walk to school.	4S2 Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs	<ul style="list-style-type: none"> bit.ly/Solving_problems_from_tables_charts_graphs
1b How many more Year 6 children than Year 2 children walk to school?	4S2 Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs	<ul style="list-style-type: none"> bit.ly/Solving_problems_from_tables_charts_graphs
2 Circle the number that is 10 times greater than nine hundred and seven 9,7000 907 970 9,070	5C6b Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000	<ul style="list-style-type: none"> bit.ly/Multiplying_and_dividing_decimals_by_1000
3 Write the missing numbers to make a multiplication grid correct.	4C6a Recall multiplication and division facts for multiplication tables up to 12×12	<ul style="list-style-type: none"> bit.ly/Times_tables_12_x_12

Question	Content Domain	Linked Lesson
<p>4 A table shows the heights of three mountains. Work out how much higher Mount Everest is than the combined height of Mount Kilimanjaro and Ben Nevis.</p>	<p>4C4/4S2</p> <p>Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why</p> <p>Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs</p>	<ul style="list-style-type: none"> • bit.ly/Number_problems_in_context • bit.ly/Solving_problems_from_tables_charts_graphs
<p>5 Complete a table with missing numbers (one row is done for the pupils).</p>	<p>4N2b</p> <p>Find 1000 more or less than a given number</p>	<ul style="list-style-type: none"> • bit.ly/Exchange_when_adding
<p>6 Write these numbers in order of size, starting with the smallest. 1.9 0.96 1.253 0.328</p>	<p>5F8</p> <p>Read, write, order and compare numbers with up to three decimal places</p>	<ul style="list-style-type: none"> • bit.ly/Exchanging_ordering_decimals_3dp

Question	Content Domain	Linked Lesson
<p>7 Write the missing numbers:</p> <p>60 months = ____ years 72 hours = ____ days 84 days = ____ weeks</p>	<p>4M4c</p> <p>Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days</p>	<ul style="list-style-type: none"> bit.ly/Solve_time_problems_with_same_units
<p>8 At the start of June, there were 1,793 toy cars in the shop. During June:</p> <ul style="list-style-type: none"> 8,728 more toy cars were delivered 9,473 toy cars were sold <p>How many toy cars were left in the shop at the end of June?</p>	<p>5C4</p> <p>Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why</p>	<ul style="list-style-type: none"> bit.ly/Choosing_operations
<p>9 Tick two of four shapes that have three quarters shaded.</p>	<p>4F2</p> <p>Recognise and show, using diagrams, families of common equivalent fractions</p>	<ul style="list-style-type: none"> bit.ly/Families_of_common_equivalent_fractions

Question	Content Domain	Linked Lesson
10 Round 84, 516 to the nearest 10, 100 and 1,000	5N4 Round any number up to 1000000 to the nearest 10, 100, 1000, 10000 and 100000	<ul style="list-style-type: none"> bit.ly/Rounding_any_numbers_to_1_million
11a Here is the rule for the time it takes to cook a chicken: Cooking time = 20 minutes plus an extra 40 minutes for each kilogram. How many minutes will it take to cook a 3kg chicken?	6A2 Use simple formulae	<ul style="list-style-type: none"> bit.ly/Simple_formulae
11b What is the mass of a chicken that takes 100 minutes to cook? (in KG)	6A2 Use simple formulae	<ul style="list-style-type: none"> bit.ly/Simple_formulae bit.ly/Substituting_into_simple_expressions
12 Tick each of four shapes that has the same number of faces as vertices.	6G2b Describe simple 3-D shapes	<ul style="list-style-type: none"> bit.ly/Simple_properties_3D_objects

Question	Content Domain	Linked Lesson
13 Ally and Jack buy some stickers. Ally buys a pack of 12 stickers for £10.49, Jack buys 12 single stickers for 99p each. How much more does Jack pay than Ally?	5M9a Use all four operations to solve problems involving measures [money] using decimal notation, including scaling	<ul style="list-style-type: none"> • bit.ly/Measure_problems_different_units • bit.ly/Simple_measure_and_money_problems
14 Amina planted some seeds. For every 3 seeds Amina planted, only 2 seeds grew. Altogether, 12 seeds grew. How many seeds did Amina plant?	6R4 Use all four operations to solve problems involving measures [money] using decimal notation, including scaling	<ul style="list-style-type: none"> • bit.ly/More_ratio_problems • bit.ly/Ratios_and_unitary_method
15 At the end of a film, the year is given in Roman numerals. Write the year MMVI in figures.	5N3b Read Roman numerals to 1000 (M) and recognise years written in Roman numerals	<ul style="list-style-type: none"> • bit.ly/More_roman_numerals

Question	Content Domain	Linked Lesson
<p>16 Layla completes one-and-a-half somersaults in a dive. How many degrees does Layla turn through her dive?</p>	<p>5G4b</p> <p>Identify:</p> <ul style="list-style-type: none"> Angles at a point and one whole turn (total 360°) Angles at a point on a straight line and 1/2 a turn (total 180°) Other multiples of 90 	<ul style="list-style-type: none"> bit.ly/Angles_straight_lines_whole_turns
<p>17 The vertices of a quadrilateral have these coordinates.</p> <p>(1, 5) (5, 4) (1, -3) (-3, 4)</p> <p>One side of the quadrilateral has been drawn on the grid. Complete the quadrilateral.</p>	<p>6P3</p> <p>Describe positions on the full co-ordinate grid (all four quadrants)</p>	<ul style="list-style-type: none"> bit.ly/Coordinates_all_four_quadrants

Question	Content Domain	Linked Lesson
18 A cat sleeps for 12 hours each day. 50% of its life is spent asleep. A koala sleeps for 18 hours each day. What percentage of its life is spent asleep?	6R2 Solve problems involving the calculation of percentages [e.g. of measures such as 15% of 360] and the use of percentages for comparison	<ul style="list-style-type: none"> • bit.ly/Simple_percentages • bit.ly/Percentages_of_quantities 19
19 Amina posts three large letters. The postage costs the same for each letter. She pays with a £ 20 note. Her change is £14.96. What is the cost of posting one letter?	6C8/5M9a Solve problems involving addition, subtraction, multiplication and division Use all four operations to solve problems involving measures [money] using decimal notation, including scaling	<ul style="list-style-type: none"> • bit.ly/Choosing_operations • bit.ly/Measure_problems_different_units • bit.ly/Simple_measure_and_money_problems
20 Adam says 0.25 is smaller than $\frac{2}{5}$. Explain why he is correct	6F11 Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts	<ul style="list-style-type: none"> • bit.ly/Percentages_to_fractions_and_vice_versa • bit.ly/Percentages_to_decimals_and_vice_versa

Question	Content Domain	Linked Lesson
21 On a map, 1cm represents 20km. The distance between two cities is 250 km. On a map, what is the distance between the two cities?	<p>5M9b/6R3</p> <p>Use all four operations to solve problems involving measure [e.g. length] using decimal notation, including scaling</p> <p>Solve problem involving similar shapes where the scale factor is known or can be found</p>	<ul style="list-style-type: none"> • bit.ly/Choosing_operations • bit.ly/Scales_on_diagrams_and_maps
22 Looking at two similar right-angled triangles, write the ratio of side a to side b.	<p>6R3</p> <p>Solve problem involving similar shapes where the scale factor is known or can be found</p>	<ul style="list-style-type: none"> • bit.ly/Scales_on_diagrams_and_maps
23 In a circle, $\frac{1}{4}$ and $\frac{1}{6}$ are shaded. What fraction of this circle is not shaded?	<p>6F4</p> <p>Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions</p>	<ul style="list-style-type: none"> • bit.ly/Adding_subtracting_all_kinds_of_fractions

Paper 3 - Reasoning

Question	Content Domain	Linked Lesson
1 Write the missing number to make this division correct. $75 \div \underline{\quad} = 7.5$	<p>5C6b</p> <p>Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000</p>	<ul style="list-style-type: none"> bit.ly/Dividing_whole_numbers_by_10_and_100
2 A group of friends earns £80 by washing cars. They share the money equally. They get £16 each. How many friends are in the group?	<p>3C8</p> <p>Solve problems, including missing number problems, involving multiplication and division, including integer scaling problems and correspondence problems in which n objects are connected to m objects</p>	<ul style="list-style-type: none"> bit.ly/Number_problems_in_context
3 Chen uses three digit cards. 5, 6, and 9. She makes a 2-digit number and a 1-digit number. She multiplies them together. Her answer is a multiple of ten. What could Chen's multiplication be?	<p>4C8</p> <p>Solve problems involving multiplying and adding, including using the distributive law to multiply twodigit numbers by one digit, integer scaling problems and harder correspondence problems in which n objects are connected to m objects</p>	<ul style="list-style-type: none"> bit.ly/More_mental_multiplying_and_dividing bit.ly/Multiply_2_digits_by_1_digits

Question	Content Domain	Linked Lesson
<p>4a A graph shows the temperature in °C from 2am to 3pm. Work out how many degrees warmer it was at 3pm than at 3am.</p>	<p>6N5/6S1</p> <p>Use negative numbers in context, and calculate intervals across zero</p> <p>Interpret and construct pie charts and line graphs and use these to solve problems</p>	<ul style="list-style-type: none"> • bit.ly/Calculate_intervals_across_zero • bit.ly/Add_subtract_positive_and_negative_numbers • bit.ly/Drawing_line_graphs • bit.ly/Interpreting_pie_charts • bit.ly/Interpreting_conversion_graphs
<p>4b At 6 pm the temperature was 4 degrees lower than at 3pm. What was the temperature at 6pm?</p>	<p>6N5/6S1</p> <p>Use negative numbers in context, and calculate intervals across zero</p> <p>Interpret and construct pie charts and line graphs and use these to solve problems</p>	<ul style="list-style-type: none"> • bit.ly/Calculate_intervals_across_zero • bit.ly/Add_subtract_positive_and_negative_numbers • bit.ly/Drawing_line_graphs • bit.ly/Interpreting_pie_charts • bit.ly/Interpreting_conversion_graphs

Question	Content Domain	Linked Lesson
5 The children at Farmfield School are collecting money for charity. Their target is to collect £360. So far they have collected £57.73 How much more money do they need to reach their target?	3M9a/4F10b Add and subtract amounts of money to give change, using both pounds (£) and pence (p) in practical contexts // Solve simple measure and money problems involving fractions and decimals to two decimal places	<ul style="list-style-type: none"> bit.ly/Measure_problems_different_units bit.ly/Introduce_decimals_in_money bit.ly/Simple_measure_and_money_problems
6 William wants to travel to Paris by train. He needs to arrive in Paris by 5:30pm. Circle the latest time on a timetable that William can leave.	5S1 Complete, read and interpret information in tables, including timetables	<ul style="list-style-type: none"> bit.ly/All_kinds_of_tables
7 There is a triangle drawn on a coordinate grid. The triangle is translated 7 right and 5 up. Draw the triangle in its new position.	6P2 Draw and translate simple shapes on the co-ordinate plane, and reflect them in the axes	<ul style="list-style-type: none"> bit.ly/More_transformations
8 Write three factors of 30 that are not factors of 15.	6C5 Identify common factors, common multiples and prime numbers	<ul style="list-style-type: none"> bit.ly/Common_factors bit.ly/Common_multiples bit.ly/Factors_and_prime_numbers

Question	Content Domain	Linked Lesson
9 There is a morning timetable for Chen's class (this week). Work out the total number of hours for English on the timetable.	5S1/4S2 Complete, read and interpret information in tables, including timetables Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs	<ul style="list-style-type: none"> bit.ly/All_kinds_of_tables bit.ly/Solving_problems_from_tables_charts_graphs
10 A bottle contains 568 millilitres of milk. Jack pours out half a litre. How much milk is left?	4M5 Convert between different units of measurement [e.g. kilometre to metre; hour to minute]	<ul style="list-style-type: none"> bit.ly/Convert_larger_to_smaller_lengths bit.ly/Converting_between_CM_and_MM bit.ly/Converting_between_CM_and_metres bit.ly/Converting_between_metres_and_kilometres
11 A bicycle wheel has a diameter of 64 cm. What is the radius of the bicycle wheel?	6G5 Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius	<ul style="list-style-type: none"> bit.ly/Intro_to_circles

Question	Content Domain	Linked Lesson
12 Bags of white balloons contain 24 balloons. Bags of red balloons contain 12. Adam buys 5 bags of white balloons. Chen buys 3 bags of red balloons. Adam says 'I have four times as many balloons as Chen'. Explain why Adam is correct.	<p>4C8</p> <p>Solve problems involving multiplying and adding, including using the distributive law to multiply twodigit numbers by one digit, integer scaling problems and harder correspondence problems such</p>	<ul style="list-style-type: none"> • bit.ly/More_mental_multiplying_and_dividing
13 Circle the pentagon with exactly four acute angles.	<p>6G2a/4G4</p> <p>Compare and classify geometric shapes based on their properties and sizes</p> <p>Identify acute and obtuse angles and compare and order angles up to two right angles by size</p>	<ul style="list-style-type: none"> • bit.ly/Regular_and_irregular_polygons • bit.ly/Comparing_ordering_triangles
14 3 pineapples cost the same as 2 mangoes. One mango costs £1.35. How much does one pineapple cost?	<p>6R1/5M9a</p> <p>Solve problems involving the relative sizes of two quantities, where missing values can be found by using integer multiplication and division facts</p> <p>Use all four operations to solve problems involving measures [money] using decimal notation, including scaling</p>	<ul style="list-style-type: none"> • bit.ly/Intro_to_ratios_and_rates • bit.ly/Solving_simple_ratio_problems • bit.ly/Measure_problems_different_units

Question	Content Domain	Linked Lesson
15 Look at these letters: A C E L Z. Circle the letter that has both parallel and perpendicular lines.	3G2 Identify horizontal, vertical lines and pairs of perpendicular and parallel lines	<ul style="list-style-type: none"> bit.ly/All_kinds_of_lines
16 There are 2,400 leaflets in a box. William and Ally take 450 leaflets each. Adam and Chen share the rest of the leaflets equally. How many leaflets does Adam get?	5C8b Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign	<ul style="list-style-type: none"> bit.ly/Missing_number_problems bit.ly/Rounding_estimating_solving_missing_number_problems
17 Circle the number that is greater: 1 1/2 vs 1.2 1 1/4 vs 1.3 1 5/100 vs 1.4 1 3/5 vs 1.5	6F11/6F3 Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts Compare and order fractions, including fractions >1	<ul style="list-style-type: none"> bit.ly/Percentages_to_fractions_and_vice_versa bit.ly/Percentages_to_decimals_and_vice_versa

Question	Content Domain	Linked Lesson
18 A square number and a prime number have a total of 22. What are the two numbers?	<p>5C5c/5C5d</p> <p>Establish whether a number up to 100 is prime and recall prime numbers up to 19</p> <p>Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3)</p>	<ul style="list-style-type: none"> bit.ly/Factors_and_prime_numbers bit.ly/Square_and_cube_numbers
19 Dev thinks of a whole number. He multiplies it by 4. He rounds his answer to the nearest 10. The result is 50. Write all the possible numbers that Dev could have started with.	<p>4N6</p> <p>Solve number and practical problems that involve 4N1–4N5 and with increasingly large positive numbers</p>	<ul style="list-style-type: none"> bit.ly/Rounding_numbers_in_context
20 A square tile measures 20cm by 20cm. A rectangular tile is 3cm longer and 2cm narrower than the square tile. What is the difference in area between the two tiles?	<p>5M7b/5C7a</p> <p>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</p> <p>Multiply numbers up to 4 digits by a one or two digit number using a formal written method, including long multiplication for two digit numbers</p>	<ul style="list-style-type: none"> bit.ly/Areas_of_rectangles_and_squares bit.ly/Areas_of_shapes_made_up_of_rectangles bit.ly/Long_multiplication

Question	Content Domain	Linked Lesson
21a The numbers in a sequence increase by the same amount each time. Write the missing numbers.	<p>6F4/6A3</p> <p>Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions</p> <p>Generate and describe linear number sequences</p>	<ul style="list-style-type: none"> bit.ly/Adding_subtracting_all_kinds_of_fractions bit.ly/Linear_sequences bit.ly/Generalising_linear_sequences
21b The numbers in a sequence increase by the same amount each time. Write the missing numbers.	<p>6F4/6A3</p> <p>Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions //</p> <p>Generate and describe linear number sequences</p>	<ul style="list-style-type: none"> bit.ly/Adding_subtracting_all_kinds_of_fractions bit.ly/Linear_sequences bit.ly/Generalising_linear_sequences
22 In a diagram, the shaded rectangles are all of equal width. Calculate the width of one shaded triangle.	<p>6A1</p> <p>Express missing number problems algebraically</p>	<ul style="list-style-type: none"> bit.ly/Introducing_functions bit.ly/Function_machines_and_missing_numbers bit.ly/Letters_in_missing_number_problems

Question	Content Domain	Linked Lesson
23 Using a pattern of number pairs. Complete the rule of a number pattern.	6A4 Find pairs of numbers that satisfy an equation with two unknowns	<ul style="list-style-type: none"> • bit.ly/Missing_number_problems • bit.ly/Rounding_estimating_solving_missing_number_problems
24 Cube A and cuboid B have the same volume. Using a drawing that is not to scale, calculate the missing length on cuboid B.	6M8b/6R1 Recognise when it is possible to use the formulae for the volume of shapes Solve problems involving the relative sizes of two quantities, where missing values can be found by using integer multiplication and division facts	<ul style="list-style-type: none"> • bit.ly/More_volume • bit.ly/Intro_to_ratios_and_rates • bit.ly/Solving_simple_ratio_problems

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Millie, Year 5, Worcester