



Week.	Mathematical aspect	Non-negotiable end points Year 5.	Non-negotiable end points Year 6	Curriculum statements – Year 5.	Curriculum Statements. Year 6.
1.	Number and place value: Roman Numerals solving problems	Knows the Roman numerals up to M = 1000. Knows the rules of reading Roman numerals including years.	Knows how to use the whole number system, including saying, reading and writing numbers accurately.	 To read numerals to 1000 (M) and recognise years written in Roman numerals. To interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers through zero. To round any number up to 1,000,000 to the nearest 10, 100, 1000, 10,000 and 100,000. To solve number problems and practical problems that involve all of the above. 	 To read, write, order and compare numbers at least to 10,000,000 and determine the value of each digit. To round any whole number to a required degree of accuracy. To use negative numbers in context and calculate intervals across zero. To solve number problems and practical problems that involve all of the above.
Number Number Which year is shown by MMV V 5 X 10 L 50 C 100 D 500 M 1000		nown by MMVIII?	Each diagram shows a number in numerals, words and Roman Numerals. 26 twenty six XLIX Complete the diagrams. Work out what numbers these Roman numerals represent: 1. VIII = 2. IV = 3. XII = 4. XV = 5. LX = 6. XL = 7. XIV = 8. XVII =	Each diagram shows a number in digits, words and Roman Numerals. 500 five hundred 1,000 Complete the diagrams.	
2.	Number and place value: Sequences Algebra: formulae	Knows how to describe linear number sequences, including those involving fractions and decimals, and find the term-to-term rule.	Knows how to use formulae in mathematics and science.	 To count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000. To read, write, order and compare numbers with up to three decimal places. To count using decimals and fractions including bridging zero, for example on a number line. 	 To generate and describe linear number sequences. To use simple formulae
Links to resources and policy documents: The following formula is used to convert a temperature in degrees Celsius (°C) to a temperature in degrees Fahrenheit (°F). $F = 1.8 \times C + 32$ Use the formula to convert a temperature of 20 degrees Celsius to degrees Fahrenheit.		Here are Alfie and Emma with their parents. Mother's height 160cm You can use the table below to predict how tall children will be when they are adults. There is one formula for boys and a different one for girls: Boy's predicted height Girl's predicted height 0.4(x+y) + 42 0.4(x+y) + 29 x is the father's height in cm. y is the mother's height in cm. Calculate the predicted height of Alfie when he is an adult.		The sequence of red shape: \[\begin{align*}	and so on. The sequence of green shapes starts and so on. Ali says, 'If I put a red and a blue shape together, they will make a shape that is the same as one of the green shapes.' Do you agree with Ali?





3.	Multiplication and Division: Properties of number	Know the terms factor, multiple, prime, square and cube numbers.	Know the terms factor, multiple, prime, square and cube numbers.	• recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3) ② solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes	• To identify common factors, common multiples and prime numbers;	
	and policy documents: on factors of each page 24 and 20 and 28 and	ir of numbers.		Now we are going to find some lowest common multiples for the following pairs of numbers. The lowest common multiple of 6 and 9 is The lowest common multiple of 8 and 6 is The lowest common multiple of 8 and 7 is	On a 100 square, shade the first 5 multiples of 7 and then the first 8 multiples of 5 What common multiple of 7 and 5 do you find? Use this number to find other common multiples of 7 and 5 The sum of two prime numbers is 36 What are the numbers? Multiply the lowest common multiple of 4 and 9 by the biggest common factor of 6 and 18.	
4.	All four operations: mental methods.	Knows efficient methods for adding, subtracting, multiplying and dividing	Knows how to use mental calculations with increasingly large numbers and more complex calculations.	 To add and subtract numbers mentally with increasingly large numbers To solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. To multiply and divide numbers mentally drawing upon known facts. 	 To perform mental calculations, including with mixed operations and large numbers. To solve addition and subtraction multi-step problems in contexts, deciding which operations to use and why. To use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy. 	
Links to resources a What is 2 minus 0.009 What is 5.7 added to	Cal	n you add brackets to make this tr	ue? 8)÷(2 + 4)= 4	Calculate 36·2 + 19·8 with a formal written column method with a mental method, explaining your reasoning.	Compare $31 + 9 \times 7$ and $(31 + 9) \times 7$ What's the same? What's different? Choose operations to go in the empty boxes to make these number sentences true. 6 3 7 = 16 6 3 7 = 27 6 3 7 = 9	
12 980 + = = 23,111 - 47 = = 6	13125 650			32 + 8 × 5	Put brackets in these number sentences so that they are true. $12-2\times 5=50$ $12-8-5=9$ $10\times 8-3\times 5=250$	
(+) x = 10				$16 \div 4 + 2 =$ $12 + 8 \div 4 =$	Common factors can be related to finding equivalent fractions. Calculate 900 ÷ (45 × 4).	





5.	Addition and subtraction: written methods	Knows efficient written methods for addition and subtractions	Knows and uses efficient written methods for addition and subtractions	 To add and subtract whole numbers with more than 4 digits, including using efficient written methods (columnar addition and subtraction). To solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. To use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy. To solve problems involving numbers up to three decimal places. 	 To solve problems involving addition, subtraction, multiplication and division. To use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.
25567 16397 +15984 57948 1 1 2 1 124.9 + 7.25 124.90 + 7.25 132.25	and policy documents: $ \begin{array}{r} 2 & 1 \\ 5 & 2.8 & 4 \\ - & 1 & 18.7 \\ \hline 5 & 1 & 15.7 \end{array} $ $ \begin{array}{r} 324.9 - 7.25 \\ 11.81 \\ 324.90 \\ - & 7.25 \\ \hline 317.65 \end{array} $	would you use to che	125 = 6212 14 = 6506 92 = 11 415	Ensure pupilsjunderstand why and how to line up the decimal point when some numbers begin in a different column. 0 9 1 3 1 9 kg	12, 400
6.	Multiplication and division: Written methods	Knows efficient written methods for multiplication and division	Knows and uses efficient methods for multiplication and division.	 To multiply numbers up to 4 digits by a one- or two-digit number using an efficient written method, including long multiplication for two-digit numbers. To divide numbers up to 4 digits by a one-digit number using the efficient written method of short division and interpret remainders appropriately for the context. 	 To solve problems involving addition, subtraction, multiplication and division. To use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.







Links to resources and policy documents:



 $581 \div 7$ could be calculated by the formal written method of short division or it could be calculated by rearranging the dividend, using known facts, into 560 and 21.

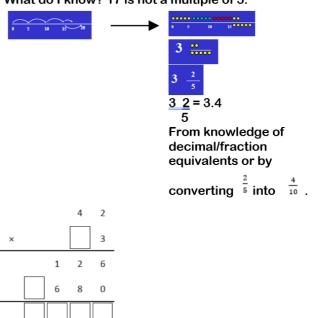
-								
Ψ	1	3	4	2				
			1	8	х			
1	Q	7	3	6				
1	3	4	2	0				
2	4	1	5	6				

Correct the errors in the calculation below. Explain the error. $266 \div 5 = 73.1$

28 5309 ÷ 8 x 27 0663r5 196 5 8)5 3 0 9 560 The remainder could be 756 expressed as five eighths, r5, as a decimal number, or rounded up or down as appropriate for the problem.

If $6 \div 2 = 3$ then $6000 \div 2 = 3000$ and $6000 \div 20 = 300$

17 ÷ 5 "What do I know? 17 is not a multiple of 5."



7. Geometry: properties of shape, diagonals

Knows the term diagonal and can make conjectures about the angles formed between sides, and between diagonals and parallel sides, and other properties of quadrilaterals.

Knows how to describe the properties of shapes and explain how unknown angles and lengths can be derived from known measurements.

- To know angles are measured in degrees; estimate and compare acute, obtuse and reflex angles
- To draw given angles and measure them in degrees (2).
- To identify: angles at a point and one whole turn (total 360º)
- angles at a point on a straight line and 1/2 a turn (total 1809)
- other multiples of 90°.
- To use the properties of a rectangle to deduce related facts and find missing lengths and angles.
- To distinguish between regular and irregular polygons based on reasoning about equal sides and angles.

- To compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons
- To illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius

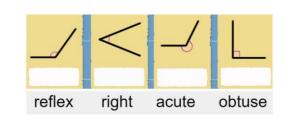
Links to resources and policy documents:

- The perimeter is 12cm.
- A is 2cm shorter than B.

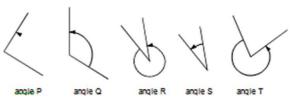
Billy says there are perpendicular and parallel lines in this rectangle. Is he correct? Prove it!



Length A = Length B = A right angle is _____ degrees. Acute angles are ____ than a right angle. Obtuse angles are ____ than a right angle.



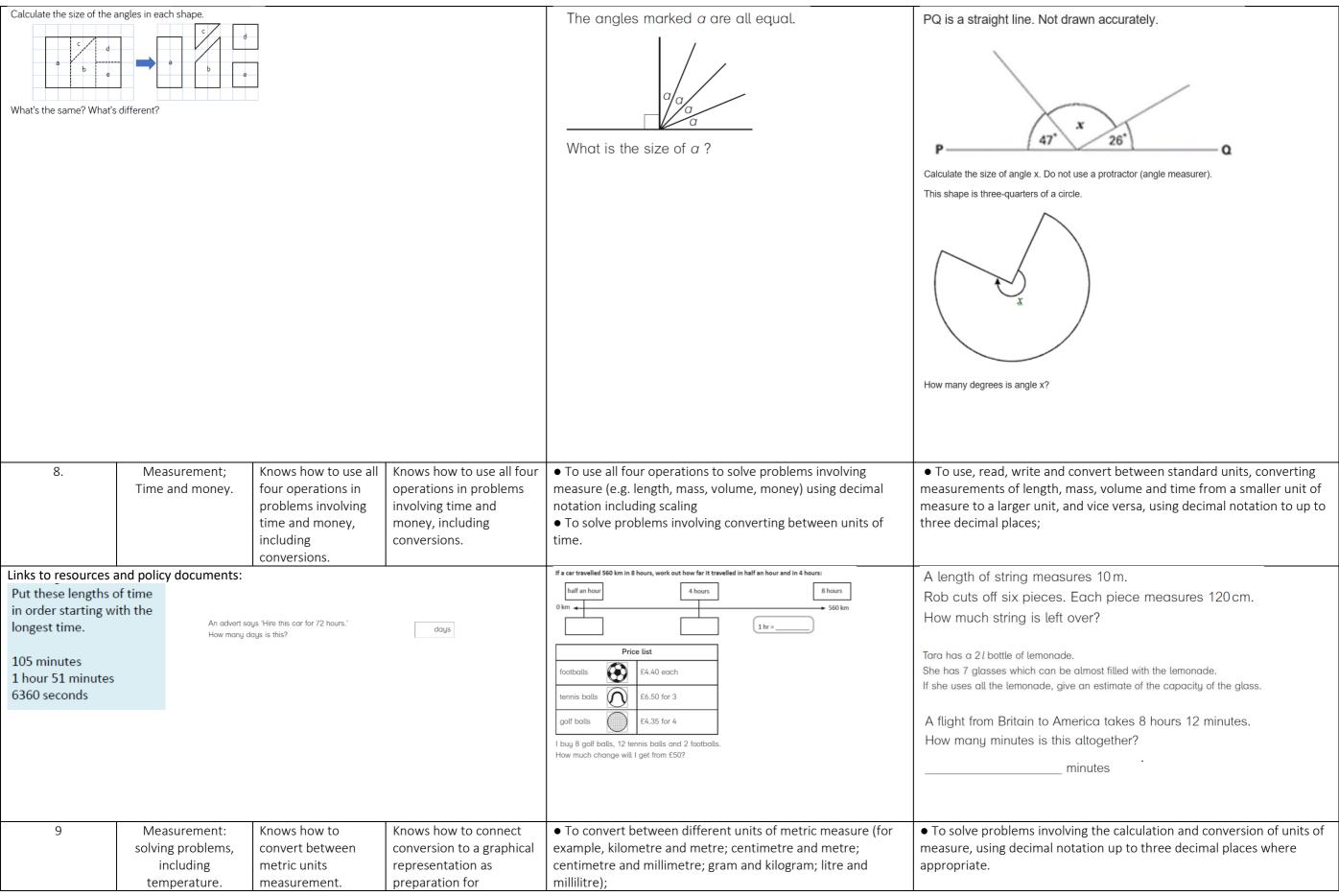
Look at these angles



Label each angle acute, obtuse or reflex. List the 5 angles in order from smallest to largest.





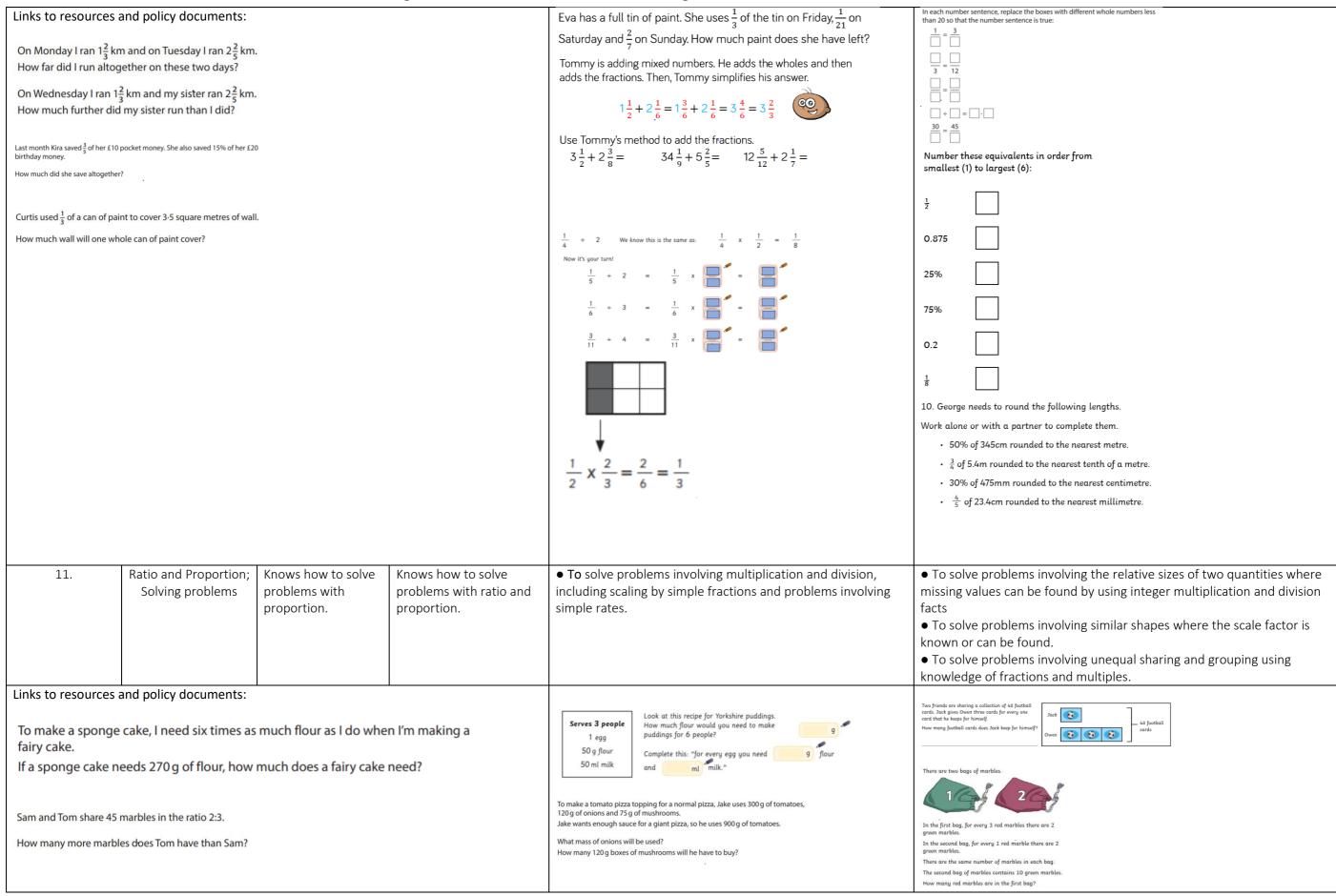






	understanding linear/proportional graphs. Knows approximate conversions		• To understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints;	• To use, read, write and convert between standard units, converting measurements of length, mass, 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	
			of imperial/metric units. Knows how to use a number line to add and subtract positive and negative integers for measures such as temperature.		
Links to resources a	and policy documents:		temperature.	Use the number line to answer the questions.	When we convert:
1 inch ≈ 2.	5 centimetres	Today, Aberdeen is than Newcast This Junchtime, Sout	between that of Manchester and Southampton. The temperature in Norwich will be 8°F warmer than Ediphyrich.	 What is 6 less than 4? What is 5 more than -2? What is the difference between 3 and -3? 	b kilograms to tonnes we by 1000 b kilograms to tonnes we by 1000 1. Here are 2 clocks. How much faster is the one on the right?
Use a number line to calculate:		11°C warmer than Today, the temperat will be 6°C below Plymouth	Belfast. De 8 C Warmer than Lainburgh today. The temperature in Manchester this lunchtime is -2°C. This lunchtime, the temperature in Edinburgh will be exactly halfway between that of Birmingham and Aberdeen This lunchtime, the temperature in Edinburgh will be exactly halfway between that of Birmingham and Aberdeen This lunchtime, London will be 4°C warmer than Leeds.	There are mm in one centimetre. There are mm in one kilometre. There are m in one kilometre. There	millimetres (mm) contimetres (cm) metres (m) kilometres (km)
10.	Fractions:	Knows how to	Knows how to calculate	• To add and subtract fractions with the same denominator	To solve problems which require answers to be rounded to specified
10.	Calculating Calculating %	calculate with fractions. Knows how to find LCM and HCF for simplifying. Knows how to find 10% and 1% of an amount using division by 10 and 100.	with accuracy.	 To add and subtract fractions with the same denominator and multiples of the same number. To multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams To recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal. To solve problems which require knowing percentage and decimal equivalents of ¹/₂, ¹/₄, ¹/₅, ²/₅, ⁴/₅ and those fractions with a denominator of a multiple of 10 or 25. 	degrees of accuracy. To recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.









Badger Class Maths Medium Term Planning: Summer term Class 5 – Y5/6.							
12.	Statistics; Knows how to read Reading timetables line graphs line graphs Information. Knows how to read and draw graphs relating two variables, arising from their own enquiry		and draw graphs relating two variables, arising	 To complete, read and interpret information in tables, including timetables To solve comparison, sum and difference problems using information presented in a line graph; 	To interpret and construct pie charts and line graphs and use these to solve problems.		
			and in other subjects.				
Links to resources and policy documents: The buses on this timetable all take the same time to travel the route. Complete the table. Mill Road 0726 0842 High St 0729 0803 Southey Green 0816 0858 Pitsmoor Road 0759 0833 Snig Hill 0812 0928 Hunters Bar 0904 0946 Fulwood 0845 0919 1. A Line Graph Showing the Temperature of a Day in August a) What was the temperature at 17:00? b) What time was the highest temperature recorded? c) At which times was the temperature at 17:00? d) What was the difference in temperature between the lowest and highest temperature?		information. from their own enq	from their own enquiry	· · · · · · · · · · · · · · · · · · ·	This two-way table shows the staff at Liverpool police station. Male Female Total		
					07:25 08:35 B.A. BA1385 V V V V V V V V V V V V V V V V V V V		