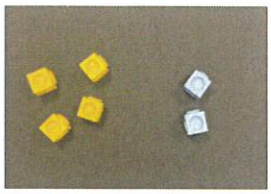
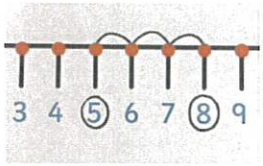
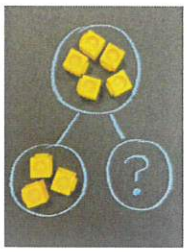
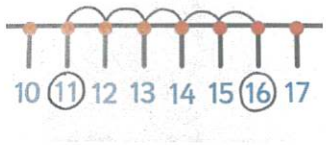
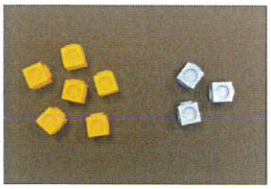
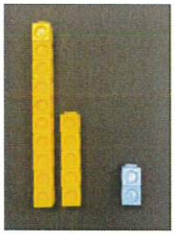
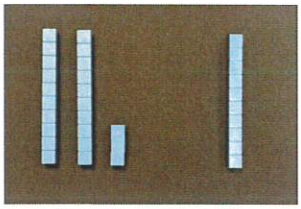
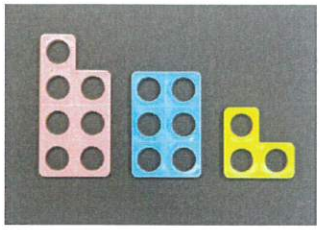
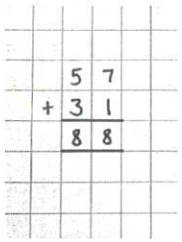
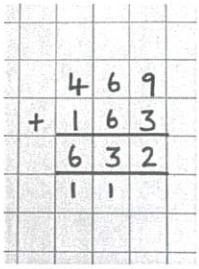
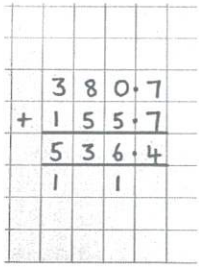
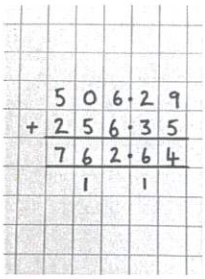
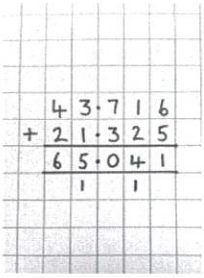
Snaith Primary School Calculation Policy

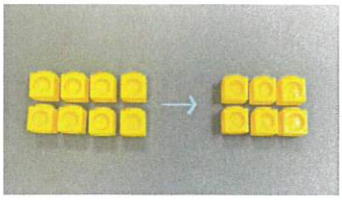
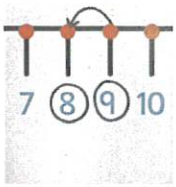
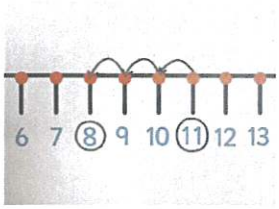
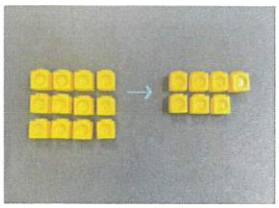
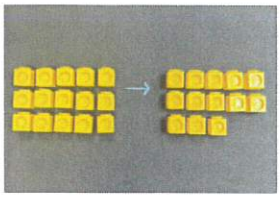
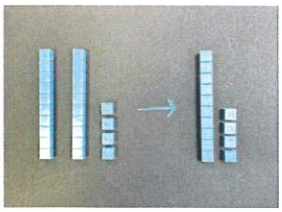
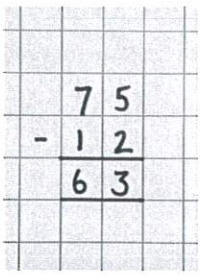
Updated 2025

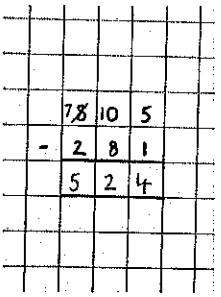
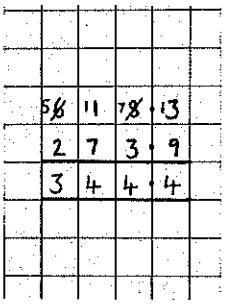
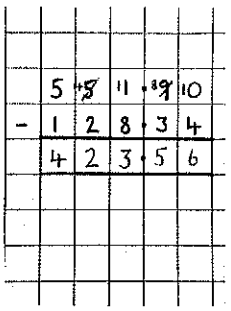
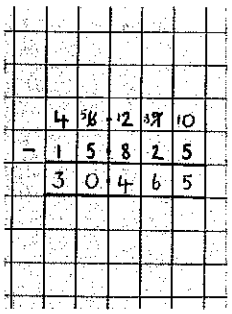
Addition Progression Poster

Reception ***Explore composition of numbers to 10.**	**Methods** *Add 1-digit numbers to 1-digit numbers using objects. For example: 4 + 2 = 6  *Use number lines to count on. For example: 5 + 3 = 8  *Use the whole part whole method to work out number sentences. For example: 3 + ? = 5 
Year 1 ***Add one-digit and two-digit numbers to 20, including zero *(using concrete objects and pictorial representations)***	**Methods** *Use a number line to count on. For example: 11 + 5 = 16.  *Use objects to count on. For example: 6 + 3 = 9 
Year 2 ***Add numbers using concrete objects, pictorial representations, and mentally, including: - a two-digit number and ones - a two-digit number and tens - two two-digit numbers - adding three one-digit numbers**	**Methods** *Use objects to count on. For example: 15 + 2 = 17  *Use base 10 to add tens. For example: 23 + 10 = 33 

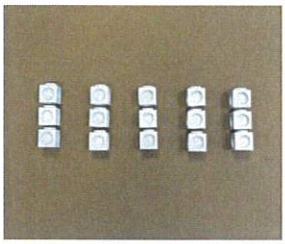
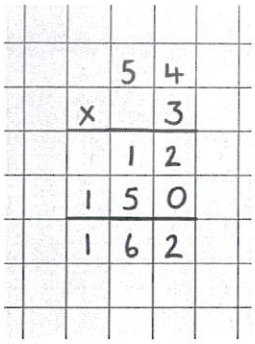
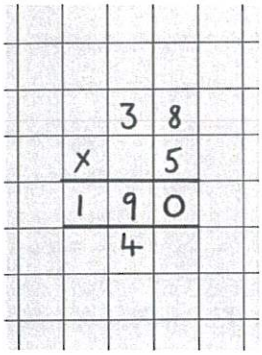
	*Use Numicon to add 3 1-digit numbers. For example: 7 + 6 + 3 = 16 Teach the children to look for number bonds.  Progress to column addition in preparation for KS1 SATS. Based on the example across: 57 + 31 = *Focus on place value when setting out the sum. *Add the units first and record underneath in the units column. *Then add the tens and record underneath in the column. 
Year 3 ***Add numbers with up to three digits, using a written method that will lead to a formal written method for addition**	**Method** Based on the example across: 469 + 163 = *Focus on place value when setting out the sum. *Add the units first, then the tens, then the hundreds. *Record the answer to each underneath in the correct column. *Teach and model carrying. *Record any carried tens/hundreds underneath. 
Year 4 ***Add numbers with up to 4 digits and decimals with one decimal place using the column written method**	**Method** Based on the example across: 380.7 + 155.7 = *Focus on place value when setting out the sum. *Record the decimal point for the answer at the start. *Add the tenths first, then the units, then the tens, then the hundreds. *Record the answer to each underneath in the correct column. *Teach and model carrying. *Record any carried units/tens/hundreds underneath. 
Year 5 ***Add whole numbers with more than 4 digits and decimals with two decimal places using the column written method**	**Method** Based on the example across: 506.29 + 256.35 = *Focus on place value when setting out the sum. *Record the decimal point for the answer at the start. *Add the hundredths first, then the tenths, then the units, then the tens, then the hundreds. *Record the answer to each underneath in the correct column. *Teach and model carrying. *Record any carried tenths/units/tens/hundreds underneath. 
Year 6 ***Add several numbers with more than 4 digits (including decimals up to three decimal places) using the column written method**	**Method** Based on the example across: 43.716 + 21.325 = *Focus on place value when setting out the sum. *Record the decimal point for the answer at the start. *Add the thousandths first, then the hundredths, then the tenths, then the units, then the tens. *Record the answer to each underneath in the correct column.= *Teach and model carrying. *Record any carried hundredths/tenths/units/tens underneath. 

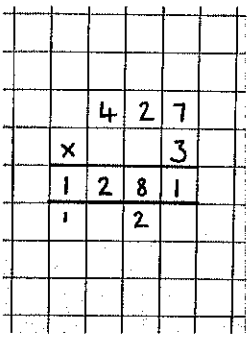
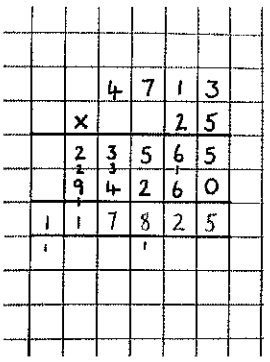
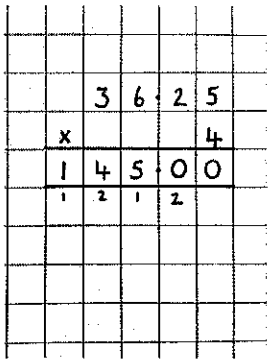
Subtraction Progression Poster

Reception ***Explore composition of numbers to 10.**	**Methods** *Subtract 1-digit numbers from 1-digit numbers using objects (e.g. multilink cubes). For example: 8 – 2 = 6  *Use a number line to count back. For example: 9 – 1 = 8  *Use practical games to practise subtracting.
Year 1 ***Subtract one-digit and two-digit numbers to 20, including zero *(using concrete objects and pictorial representations)***	**Methods** *Use a number line to count back. For example: 11 - 3 = 8.  *Use objects to count subtract. For example: 12 - 5 = 7 
Year 2 ***Subtract numbers using concrete objects, pictorial representations, and mentally, including: - a two-digit number and ones - a two-digit number and tens - two two-digit numbers**	**Method** *Use objects to subtract ones. For example: 15 - 2 = 13  *Use base 10 to subtract tens. For example: 24 - 10 = 14  Progress to column subtraction in preparation for KS1 SATS. Based on the example across: 75 - 12 = *Focus on place value when setting out the sum. *Subtract the units first and record underneath in the units column. *Then subtract the tens and record underneath in the column. 

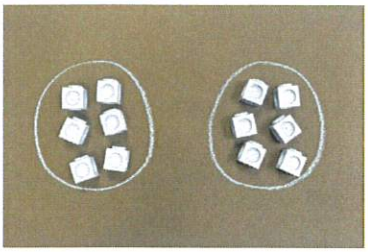
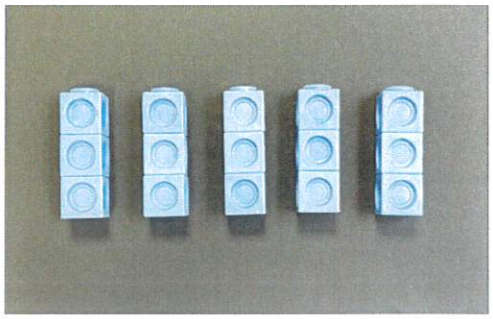
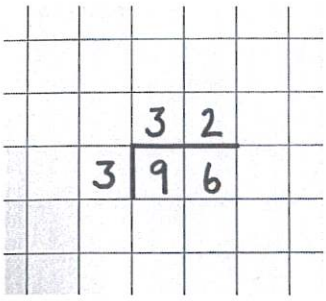
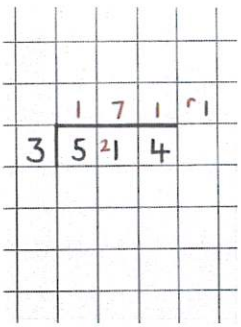
Year 3 *** Subtract numbers with up to three digits, using a written method that will lead to a formal written method for subtraction**	**Method** Based on the example across: 805 - 281 = *Focus on place value when setting out the sum. *Subtract the units first, then the tens and then the hundreds. *Record the answer to each underneath in the correct column. *Teach and model borrowing. *Record any borrowing to the left of the original digit. 
Year 4 **Subtract numbers with up to 4 digits and decimals with one decimal place using the column written method**	**Method** Based on the example across: 618.3 - 273.9 = *Focus on place value when setting out the sum – using place holders if needed. *Record the decimal point for the answer at the start. *Subtract the tenths first, then the units, then the tens etc. *Record the answer to each underneath in the correct column. *Teach and model borrowing. *Record any borrowing to the left of the original digit. 
Year 5 **Subtract whole numbers with more than 4 digits and decimals with two decimal places using the column written method**	**Method** Based on the example across: 551.9 - 128.34 = *Focus on place value when setting out the sum – using place holders if needed. *Record the decimal point for the answer at the start. *Subtract the hundredths first, then the tenths, then the units, etc. *Record the answer to each underneath in the correct column. *Teach and model borrowing. *Record any borrowing to the left of the original digit. 
Year 6 **Subtract whole numbers with more than 4 digits and decimals with three decimal places using the column written method**	**Method** Based on the example across: 46.29 - 15.825 = *Focus on place value when setting out the sum – using place holders if needed. *Record the decimal point for the answer at the start. *Subtract the thousandths first, then the hundredths, then the tenths, then the units, then the tens, etc. *Record the answer to each underneath in the correct column. *Teach and model borrowing. *Record any borrowing to the left of the original digit. 

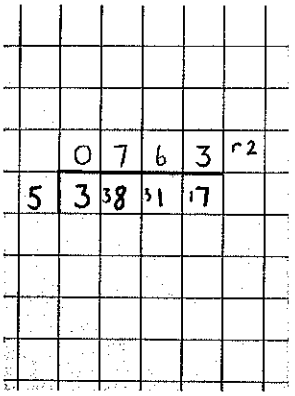
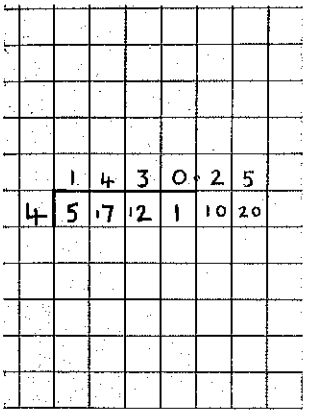
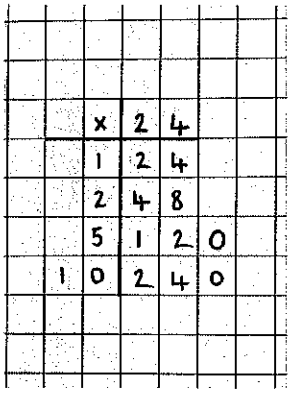
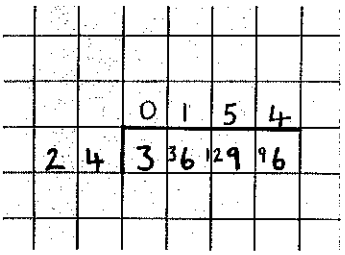
Multiplication Progression Poster

Year 1 **Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher**	**Method** Use objects or diagrams to set out the multiplication problem in arrays. Encourage counting in arrays when calculating the answer. For example: 4 x 2 = 8 
Year 2 **Calculate mathematical statements for multiplication using repeated addition) and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs** **Solve problems involving multiplication and division (including those with remainders), using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts**	**Method** Use objects or diagrams to set out the multiplication problem in arrays. Encourage counting in arrays when calculating the answer. For example: 5 x 3 = 15  Use repeated addition to solve multiplication problems. For example: for 4 x 3 count up in 3's to find the answer (12). Progress to using known times tables facts to solve problems.
Year 3 **Write and calculate mathematical statements for multiplication using the multiplication tables that they know (including for two-digit numbers times one-digit numbers) using mental and written methods which will later progress to formal written methods**	**Methods** **Begin by teaching long multiplication:** Based on the example across: 54 x3 = *Focus on place value when setting out the sum. *Multiply the units in the 1 digit number (3) by the units in the 2 digit number (4). Write the answer directly below. *Add a zero on the second line in the units column. *Then multiply the units in the 1 digit number (3) by the tens in the 2 digit number (5). Write the answer to the left of the zero – the answer will naturally become 10 times larger. *To calculate the final answer, add up the two answers using column addition.  **Progress to column multiplication:** Based on the example across: 38 x 5 = *Focus on place value when setting out the sum. *Multiply the units in the 1 digit number (5) by the units in the 2 digit number (8). *Next multiply the units in the 1 digit number (5) by the tens in the 2 digit number (3). *Teach and model carrying. *Record the carry underneath in the correct column. 

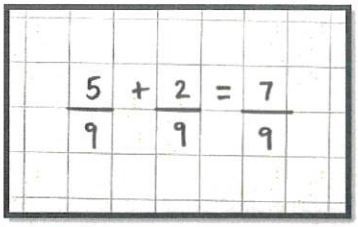
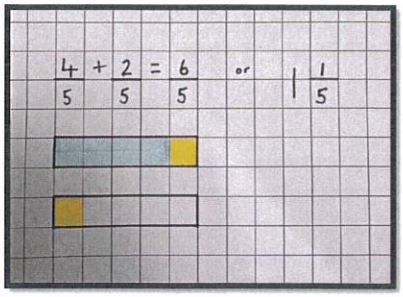
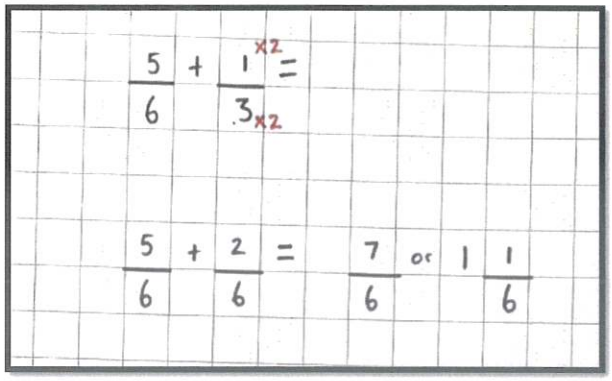
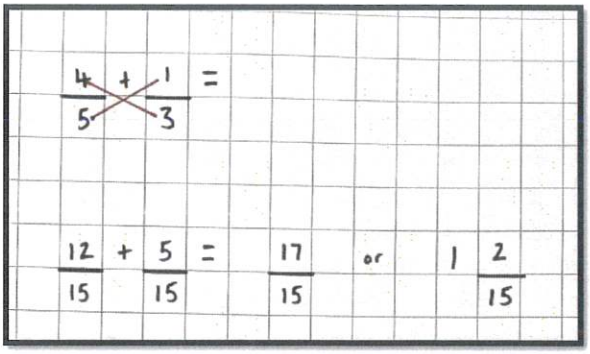
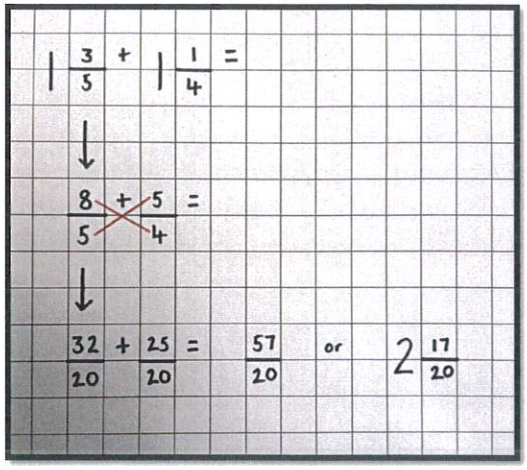
Year 4 **Multiply two-digit and three-digit numbers by a one-digit number using a written layout**	**Method** Based on the example across: 427 x 3 = *Focus on place value when setting out the sum. *Multiply the units in the 1 digit number (3) by the units in the 3 digit number (7). *Next multiply the units in the 1 digit number (3) by the ten in the 3 digit number (2). Finally multiply the units in the 1 digit number (3) by the hundreds in the 3 digit number (4). *Teach and model carrying. *Record the carry underneath in the correct column. 
Year 5 **Multiply numbers up to 4 digits by a one- or two-digit number using a written method**	**Method** Based on the example across: 4713 x 25 = *Focus on place value when setting out the sum. Use the rhyme 'line, miss a line, zero, line' to help remember the layout. *Multiply the units in the 2 digit number (5) by the units in the 4 digit number (3). Then multiply the units in the 2 digit number (5) by the tens in the 4 digit number (1) and so on. *Next record a zero on the second line. This is because you will be multiplying the 4 digit number by a ten (2) next. *Multiply the ten (2) by the units in the 4 digit number (3). Then multiply the ten in the 2 digit number (2) by the tens in the 4 digit number (1) and so on. *To calculate the final answer, add up the two answers using column addition. *Teach and model carrying. *Record the carry underneath in the correct column. 
Year 6 **Multiply numbers up to 4 digits by a one- or two-digit number using a written method** **Multiply one-digit numbers with up to two decimal places by whole numbers**	**Method** Based on the example across: 36.25 x 4 = *Focus on place value when setting out the sum. *Drop the decimal down into the answer bar before multiplying. *Multiply the units in the 1 digit number (4) by the hundredths in the 4 digit number (5). Then multiply the units in the 1 digit number (4) by the tenths in the 4 digit number (2) and so on. *Imagine the decimal isn't there whilst calculating. *Teach and model carrying. *Record the carry underneath in the correct column. 

Division Progression Poster

Year 1 **Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher**	**Method** Use objects or diagrams to solve division problems. Model sharing. For example, for 12 ÷ 2 =, share 12 into 2 equal groups. Count one group to find the answer. 
Year 2 **Calculate mathematical statements for multiplication using repeated addition) and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs** **Solve problems involving multiplication and division (including those with remainders), using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts**	**Method** Use objects or diagrams to solve division problems. Model grouping. For example, for 15 ÷ 3 =, group 15 into groups of 3. Count the number of groups to find the answer.  Progress to using known multiplication facts to solve division problems (fact families). For example, for 20 ÷ 5 =, we know the answer is 4 because 4 x 5 = 20.
Year 3 **Write and calculate mathematical statements for = division using the multiplication tables that they know, using mental and written methods which will later progress to formal written methods**	**Method** Continue to use known multiplication facts to solve division problems (fact families). For example, for 21 ÷ 3 =, we know the answer is 7 because 7 x 3 = 21. Introduce the bus stop method to solve 2 digit divided by 1 digit calculations for known times tables (NO REMAINDERS). For example: 96 ÷ 3 = *Step 1 - how many 3's divide into 9? Record 3 above. *Step 2 - how many 3's divide into 6? Record 2 above. 
Year 4 **Divide numbers up to 3 digits by a one-digit number using a written method (partial tables) and interpret remainders appropriately for the context**	**Method** Based on the example: 514 ÷ 3 = *Model how to carry remainders and how to record your final remainder *Step 1 - how many 3's divide into 5? Record 1 above and carry across the remaining 2. *Step 2 - how many 3's divide into 1? Record 7 above. *Step 3 - how many 3's divide into 4? Record 1 above and record the remainder 1. 

Year 5 **Divide numbers up to 4 digits by a one-digit number using a written method & interpret remainders appropriately for the context**	**Method** Based on the example: 3817 ÷ 5 = *Model how to carry remainders and how to record your final remainder *Step 1 - how many 5's divide into 3? Record 0 above and carry across the 3 *Step 2 - how many 5's divide into 38? Record 7 above and carry across the remaining 2 *Step 3 - how many 5's divide into 21? Record 4 above and carry across the remaining 1 *Step 4 - how many 5's divide into 17? Record 3 above and record remainder 2 
Year 6 **Divide numbers up to 4 digits by a one-digit number using a written method & interpret remainders appropriately for the context** **Use written division methods in cases where the answer has up to two decimal places**	**Methods** Based on the example: 5721 ÷ 4 = *Complete the bus stop as above until you reach the remainder stage. *Model how to calculate a decimal answer. *Start by placing a decimal point after the unit (0). *Place the remainder to the right of the units and place a zero next to it. *Continue the bus stop. *Next, place the remainder to the right of the tenths and place a zero next to it. *Complete the final division. 
Divide numbers up to 4 digits by a two-digit number using a written method	Based on the example: 3696 ÷ 24 = *Complete a coin card for the 2-digit divisor (24). *Complete the bus stop as modelled above. *Use the coin card as a starting point to find other times tables facts, if needed, for the divisor (24). *For example: 2 x 24 = 48 therefore 4 x 24 = 96 (simply double the fact). *Use column subtraction (if needed) to calculate tricky remainders.  

Adding Fractions Progression Poster

Year 3 *** Add fractions with the same denominator within one whole**	**Method** *Add the numerators together. *Keep the denominator the same. 
Year 4 *** Add fractions with the same denominator (using diagrams)**	**Method** *Add the numerators together. *Keep the denominator the same. *Use diagrams to help convert the answer to a mixed number fraction. 
Year 5 *** Add fractions with denominators that are the same and that are multiples of the same number**	**Method** *Make the denominators the same by multiplying one fraction. *Use times tables knowledge to make links. *Remember to multiply the numerator by the same amount too. 
Year 6 ***Add fractions with different denominators and mixed numbers, using the concept of equivalent fractions**	**Method** *Make both denominators the same. *Multiply the current denominators to find a common multiple – this will be your new denominator (e.g. 5 x 3 = 15). *Draw a cross like shown. *Multiply the two numbers joined by the first line to find first new numerator. *Repeat for the second line to find the second new numerator. *Once organised, add together the new fractions like above. *When adding mixed number fractions, make the mixed number fractions improper first then follow the same steps as above.  

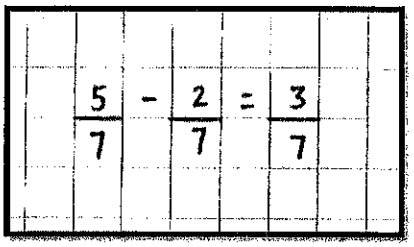
Subtracting Fractions Progression Poster

Year 3

*** Subtract fractions with the same denominator within one whole**

Method

*Subtract the numerators.
*Keep the denominator the same.

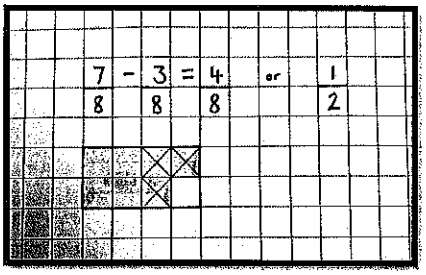


Year 4

*** Subtract fractions with the same denominator (using diagrams)**

Method

* Subtract the numerators.
*Keep the denominator the same.
*Use diagrams to help simplify.

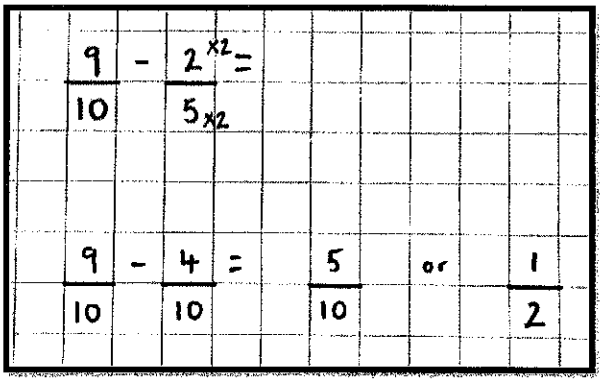


Year 5

*** Subtract fractions with denominators that are the same and that are multiples of the same number**

Method

*Make the denominators the same by multiplying one fraction.
*Use times tables knowledge to make links.
*Remember to multiply the numerator by the same amount too.

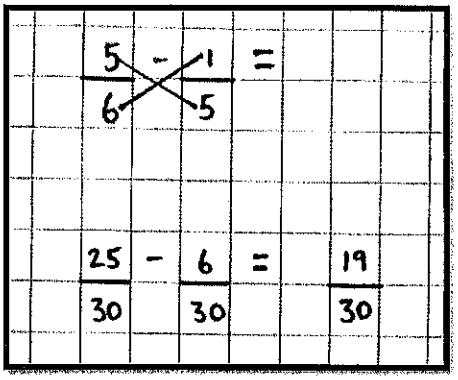


Year 6

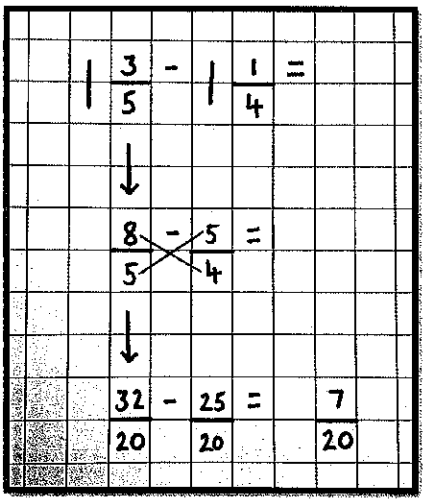
***Subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions**

Method

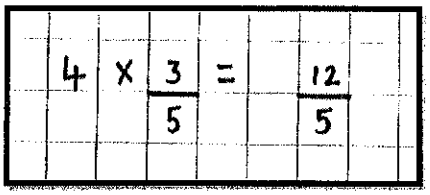
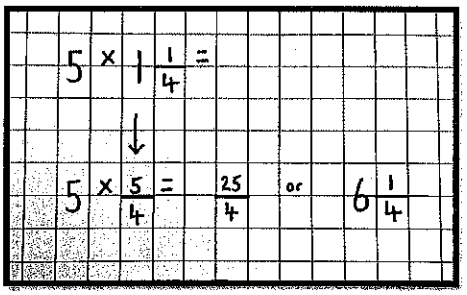
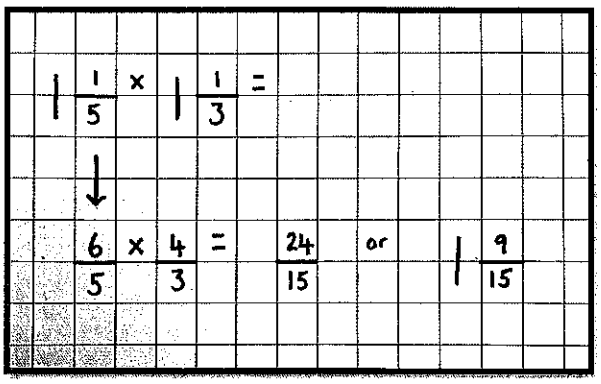
*Make both denominators the same.
*Multiply the current denominators to find a common multiple – this will be your new denominator (e.g. 6 x 5 = 30).
*Draw a cross like shown.
*Multiply the two numbers joined by the first line to find first new numerator.
*Repeat for the second line to find the second new numerator.
*Once organised, subtract the new fractions.



*When subtracting mixed number fractions, make the mixed number fractions improper first then follow the same steps as above.



Multiplying Fractions Progression Poster

Year 5 *** Multiply proper fractions and mixed number fractions by whole numbers**	**Method** *Multiply the numerator by the whole number. *If the answer is an improper fraction, make it a mixed number fraction.  *If multiplying a mixed number fraction, make it an improper fraction first then follow the same steps as above. 
Year 6 *** Multiply simple pairs of proper fractions, writing the answer in its simplest form**	**Method** *Simply, multiply both numerators together to find your new numerator (3 x 2). *Then, multiply both denominators together to find your new denominator (4 x 3). *Simplify your answer to its simplest form if possible. *If multiplying together mixed number fractions, make them both improper fractions first then follow the same steps as above. 

Dividing Fractions Progression Poster

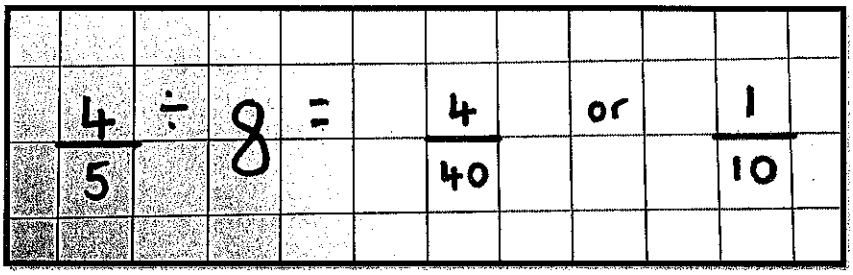
Year 6

*** Divide proper fractions by whole numbers**

Method

*Multiply (yes multiply) the denominator by the whole number to find the new denominator.

*Simplify your answer to the simplest form if possible.



*If dividing a mixed number fraction, make it improper first then follow the same steps as above.