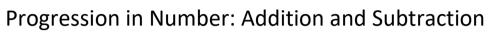


Progression in Number: Addition and Subtraction

Number Bonds		Mental Calculations	
R	know which pairs make a given number		
Y 1	represent and use number bonds and related subtraction facts within 20	 add and subtract one- digit and two-digit numbers to 20, including zero (This helps to establish addition and subtraction as related operations) read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs (appears also in Written Methods) 	
Y2	 recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 	 add and subtract numbers first using concrete objects, then 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 show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. 	
Y3		 add and subtract numbers mentally, including: a three-digit number and ones a three-digit number and tens a three-digit number and hundreds show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. (Consolidation from Year 2) 	
Y4		 add and subtract numbers mentally, including: a three-digit number and ones a three-digit number and tens a three-digit number and hundreds (Consolidation from Year 3) 	
Y5		add and subtract numbers mentally with increasingly large numbers	
Y6		 perform mental calculations, including with mixed operations and large numbers. use their knowledge of the order of operations to carry out calculations involving the four operations. 	



Written Methods Inverse operations, estimating and checking answers Problem Solving			
R		 inverse operation- partition a number of things into groups and recognise the groups can be recombined to make a total. 	
Y1	 read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs (appears also in Mental Calculation) 		 solve one-step problems that involve addition and subtraction, first using concrete objects and then pictorial representations, and missing number problems such as 7 = -9
Y2	• Record addition and subtraction calculations as a number sentence. 2 + 4 = 6	 recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems. 	 solve problems with addition and subtraction: first using concrete objects and then pictorial representations, including those involving numbers, quantities and measures applying their increasing knowledge of mental and written methods solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change (See Measurement)
Y3	 add and subtract numbers with up to three digits, using formal written methods of columna addition and subtraction 	 estimate the answer to a calculation and use inverse operations to check answers 	 solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction including previous years learning.
Y4	 add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate 	 estimate and use inverse operations to check answers to a calculation 	 solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why including previous years learning.
Y5	 add and subtract whole numbers with more tha 4 digits, including using formal written methods (columnar addition and subtraction) 	 use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy 	 solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why including previous years learning.
Y6	 add and subtract whole numbers with more than 4 digits, including using formal written 	 use estimation to check answers to calculations and determine, in the context of a problem, 	 solve addition and subtraction multi-step problems in contexts, deciding which operations



Progression in Number: Addition and Subtraction

methods (columnar addition and subtraction) levels of accuracy. (Consolidation from Year 5)

and methods to use and why including previous years learning.

• Solve problems involving addition, subtraction, multiplication and division