Progression in Number: Addition and Subtraction

	Number Bonds	Mental Calculations
R	• know which pairs make a given number	
Y1	• 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.

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	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 columnar 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 than 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

	methods (columnar addition and subtraction) (Consolidation from Year 5) levels of accuracy.	and methods to use and why including previous years learning. • Solve problems involving addition, subtraction, multiplication and division