



MATHEMATICS – PROGRESSION MAP

Number: Addition and Subtraction

| NUMBER BONDS | | | | | | |
|---|--|--|---|--------|---|--|
| EYFS | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts | represent and use number bonds and related subtraction facts within 20 | recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 | | | | |
| MENTAL CALCULATION | | | | | | |
| Automatically recall number bonds for numbers 0–5 and some to 10. | add and subtract one-digit and two-digit numbers to 20, including zero | add and subtract numbers using concrete objects, pictorial representations, and mentally, including: <ul style="list-style-type: none"> * a two-digit number and ones * a two-digit number and tens * two two-digit numbers * adding three one-digit numbers | 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 | | add and subtract numbers mentally with increasingly large numbers | perform mental calculations, including with mixed operations and large numbers |
| | read, write and interpret mathematical statements involving | show that addition of two numbers can be done in any order (commutative) and | | | | use their knowledge of the order of operations to carry out calculations involving |



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| | addition (+), subtraction (-) and equals (=) signs (appears also in Written Methods) | subtraction of one number from another cannot | | | | the four operations |
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WRITTEN METHODS

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| | read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs (appears also in Mental Calculation) | | add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction | add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate | add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) | |
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INVERSE OPERATIONS, ESTIMATING AND CHECKING ANSWERS

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| | | recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems. | estimate the answer to a calculation and use inverse operations to check answers | estimate and use inverse operations to check answers to a calculation | use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy | use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy. |
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PROBLEM SOLVING



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| | solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = \square - 9$ | solve problems with addition and subtraction: <ul style="list-style-type: none">* using concrete objects and pictorial representations, including those involving numbers, quantities and measures* applying their increasing knowledge of mental and written methods | solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction | solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why | solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why | solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why |
| | | <i>solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change (copied from Measurement)</i> | | | | Solve problems involving addition, subtraction, multiplication and division |