

Problem Solving

Problem Solving: Number and Place Value					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	use place value and number facts to solve problems	solve number problems and practical problems	solve number and practical problems ... with increasingly large positive numbers	solve number problems and practical problems	solve number and practical problems
Problem Solving: Number: Addition and Subtraction					
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: * 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 Solve problems involving addition, subtraction, multiplication and division
Problem Solving: Number: Multiplication and Division					
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	solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts	solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects	solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are	solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes solve problems involving addition, subtraction, multiplication and division and a combination of	solve problems involving addition, subtraction, multiplication and division <i>solve problems involving similar shapes where the scale factor is known or can be found</i> (copied from Ratio and Proportion)

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			connected to m objects	these, including understanding the meaning of the equals sign solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates	
PROBLEM SOLVING: Fractions (including decimals and percentages) and Ration and Proportion					
			<p>solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number</p> <p>solve simple measure and money problems involving fractions and decimals to two decimal places.</p>	<p>solve problems involving numbers up to three decimal places</p> <p>solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}, \frac{1}{4}, \frac{1}{5}, \frac{2}{5}, \frac{4}{5}$ and those with a denominator of a multiple of 10 or 25.</p>	<p>solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts</p> <p>solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison</p> <p>solve problems involving similar shapes where the scale factor is known or can be found</p>

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					solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.
PROBLEM SOLVING: Measurement					
	solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change		solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days (appears also in Converting)	use all four operations to solve problems involving measure (e.g. length, mass, volume, money) using decimal notation including scaling. solve problems involving converting between units of time	solve problems involving the calculation and conversion of units of measure , using decimal notation up to three decimal places where appropriate (appears also in Converting)
PROBLEM SOLVING: Geometry					
No specific requirements					
PROBLEM SOLVING: Statistics					
		solve one-step and two-step questions [e.g. 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables.	solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.	solve comparison, sum and difference problems using information presented in a line graph	
PROBLEM SOLVING: Algebra					
					express missing number problems algebraically