

Year 4

Progression of Objectives through I Can Statements

Using and Applying Maths	Solve one-step and two-step problems involving numbers, money or measures, including time; choose and carry out appropriate calculations, using calculator methods where appropriate	B1	<i>I can work out how to solve problems with one or two steps I can decide what calculation to work out and whether a calculator will help me I can think about the numbers in a calculation and choose a good way to do the calculation</i>
		D1	<i>I can work out how to solve problems with one or two steps I can solve problems using measurements I can choose what calculation to work out and I can decide whether a calculator will help me</i>
		D2	<i>I can work out how to solve problems with one or two steps I can solve problems involving measures and time I can choose what calculation to work out and I can decide whether a calculator will help me</i>
		A3	<i>I can work out how to solve problems with one or two steps I can choose what calculation to work out and I can decide whether a calculator will help me</i>
		B3	<i>I can work out how to solve problems with one or two steps I can decide what calculation to work out and whether a calculator will help me I can think about the numbers in a calculation and choose a good way to do the calculation</i>
		D3	<i>I can choose what calculation to work out and I can decide whether a calculator will help me I can work out how to solve problems with one or two steps I can solve problems involving measures and time</i>
	Represent a puzzle or problem using number sentences, statements or diagrams; use these to solve the problem; present and interpret the solution in the context of the problem	E1	<i>I can write down number sentences or drawings to help me solve a problem When I have solved a problem I reread the question to make sure the answer makes sense</i>
		E2	<i>I can write down number sentences or drawings to help me solve a problem When I have solved a problem I reread the question to make sure the answer makes sense</i>
		E3	<i>I can write down number sentences or drawings to help me solve a problem When I have solved a problem I reread the question to make sure that it makes sense</i>
	Suggest a line of enquiry and the strategy needed to follow it; collect, organise and interpret selected information to find answers	C1	<i>I can think about an experiment, predict what might happen and decide how I could go about finding out whether it is true</i>
		C2	<i>I can think of a question to ask about some information and organise the information to help me find out more about it</i>
		C3	<i>I can think about an investigation, predict what might happen and decide how I could go about finding information, perhaps by doing a survey or taking measurements</i>

Using and Applying Maths (cont.)	Identify and use patterns, relationships and properties of numbers or shapes; investigate a statement involving numbers and test it with examples	B1	<i>I can use what I know about polygons to group them into regular and irregular polygons</i>
		B2	<i>I can see number patterns in the answers to the 3 times table and can explain how the pattern works I can spot a rule about the number of lines of symmetry that regular polygons have</i>
		B3	<i>I can start with a calculation such as $18 - 3 = 15$ and use number patterns to create a family of calculations with the same answer: $180 - 30 = 150$ $190 - 40 = 150$ $200 - 50 = 150$ I can draw polygons on triangular grid paper and pick out some of the properties they have in common</i>
	Report solutions to puzzles and problems, giving explanations and reasoning orally and in writing, using diagrams and symbols	A1	<i>I can explain to someone else how I solve problems and puzzles</i>
		B1	<i>I can explain to the class how I solved a problem I can draw a diagram to show how I solved a problem</i>
		C1	<i>I can tell people what I have found out and show some graphs to back up my conclusions</i>
		A2	<i>I can explain how I solve problems, using diagrams and symbols to help me</i>
		B2	<i>I can write an explanation of how I solved a problem. I can include number sentences using the +, -, × or ÷ signs where I need to</i>
		C2	<i>I can tell people what I have found out and show some graphs to back up my conclusions</i>
		B3	<i>I can describe how I solved a problem about shapes using mathematical vocabulary</i>
C3	<i>I can explain how I solved a puzzle using a diagram to help me</i>		

Counting and Understanding Number	Recognise and continue number sequences formed by counting on or back in steps of constant size	A1	<i>I can count on and back in eights</i>
		A2	<i>I can count on and back in sevens</i>
		A3	<i>I can count on and back using negative numbers</i>
	Partition, round and order four-digit whole numbers; use positive and negative numbers in context and position them on a number line; state inequalities using the symbols < and > (e.g. $-3 > -5$, $-1 < +1$)	A1	<i>I can read, write and put in order four-digit numbers and positive and negative numbers I can use the < and > signs with positive and negative numbers (e.g. $-3 < 1$)</i>
		A3	<i>I can read, write and put in order positive and negative numbers I can use the < and > signs with positive and negative numbers (e.g. $-3 < 1$)</i>
	Use decimal notation for tenths and hundredths and partition decimals; relate the notation to money and measurement; position one-place and two-place decimals on a number line	A2	<i>I can use decimals when I work with money and measurement</i>
		D2	<i>I can write lengths like 5 metres and 62 centimetres using decimal points</i>
		A3	<i>I know how to use decimal notation to write numbers such as one and one tenth, two and three tenths, three hundredths I can write two pounds forty and three pounds seven pence using decimal points I can put three numbers written in decimal notation in the correct places on a number line</i>
		D3	<i>I can order decimals on a number line</i>
	Recognise the equivalence between decimal and fraction forms of one half, quarters, tenths and hundredths	E1	<i>I know that two quarters, five tenths and fifty hundredths are the same as one half</i>
		E2	<i>I can recognise decimals and fractions that are equivalent</i>
		E3	<i>I know that $1/2$ can also be written as 0.5, $1/4$ as 0.25 and $3/4$ as 0.75 I know that one tenth can be written as $1/10$ or as 0.1 and that one hundredth can be written as $1/100$ or 0.01 I know that $25/100$ is the same as 0.25. It is also the same as $1/4$</i>
	Use diagrams to identify equivalent fractions (e.g. $6/8$ and $3/4$, or $70/100$ and $7/10$); interpret mixed numbers and position them on a number line (e.g. $31/2$)	E1	<i>I can use a fraction to describe a part of a whole I can show you on a diagram of a rectangle made from eight squares that one half is the same as two quarters or four eighths</i>
		E2	<i>I can find fractions that are equivalent to $1/4$ I can order mixed numbers and put them on a number line</i>
		E3	<i>I can use a 2 by 5 rectangle to show you that one fifth is the same as two tenths I can place mixed numbers in the correct place on a number line</i>
	Use the vocabulary of ratio and proportion to describe the relationship between two quantities (e.g. 'There are 2 red beads to every 3 blue beads, or 2 beads in every 5 beads are red'); estimate a proportion (e.g. 'About one quarter of the apples in the box are green')	E3	<i>I can solve simple ratio and proportion problems</i>

Knowing and Using Number Facts	Use knowledge of addition and subtraction facts and place value to derive sums and differences of pairs of multiples of 10, 100 or 1000	A1	<i>I can work out sums and differences of multiples of 100 or 1000</i>
		B1	<i>Because I know sums like $3 + 7 = 10$, I also know $30 + 70 = 100$ $300 + 700 = 1000$ $3000 + 7000 = 10\ 000$ Because I know differences like $6 - 4 = 2$, I also know $60 - 40 = 20$ $600 - 400 = 200$ $6000 - 4000 = 2000$</i>
		B3	<i>Because I know number facts such as $8 - 3 = 5$, I know that $80 - 30 = 50$. I can use this to work out calculations such as $86 - 36 = 50$ I can find differences between numbers such as 2993 and 3000 because I know facts such as $3 + 7 = 10$</i>
	Identify the doubles of two-digit numbers; use these to calculate doubles of multiples of 10 and 100 and derive the corresponding halves	A1	<i>I can double two-digit numbers</i>
		B2	<i>Because I know that double 7 is 14, I know that double 70 is 140 I can work out doubles of numbers with two digits</i>
		B3	<i>I can work out doubles of two-digit numbers Because I know that double 9 is 18, I know that double 900 is 1800 Because I know that double 80 is 160, I know that half of 160 is 80 I know that doubling and halving are inverse operations</i>
	Derive and recall multiplication facts up to 10×10 , the corresponding division facts and multiples of numbers to 10 up to the tenth multiple	A1	<i>I know my 8 times table and my 9 times table</i>
		B1	<i>I can work out division facts for the 1, 2, 3, 4, 5 and 6 times tables I can count in 6s from zero to 60</i>
		E1	<i>I can tell you answers to the 2, 3, 4, 5, 6 and 10 times tables, even when they are not in the right order If you give me a multiplication fact I can give you one or two division facts to go with it</i>
		A2	<i>I know my tables to 10×10 I can use the multiplication facts I know to work out division facts</i>
		B2	<i>I can tell you answers to the 8 times table, even when the questions are not in order</i>
		D2	<i>I know my tables to 10×10</i>
E2		<i>I can tell you answers to the 7 times tables, even when they are not in the right order If you give me a multiplication fact I can give you one or two division facts to go with it</i>	
A3		<i>I know my tables to 10×10 I can use the multiplication facts I know to work out division facts</i>	
B3		<i>I can tell you answers to the 9 times table, even when the questions are not in order If you give me a multiplication fact I can give you one or two division facts that go with it I know what a factor of a number means. I can find all the factors of 36</i>	
E3	<i>I know all multiplication facts up to 10×10, even when they are not in the right order</i>		

Knowing and Using Number Facts (cont.)	Use knowledge of rounding, number operations and inverses to estimate and check calculations	A1	<i>I can estimate and check the result of a calculation</i>
		B1	<i>I can round numbers in a calculation to help me estimate the answer to the calculation</i>
		A2	<i>I can estimate and check the result of a calculation</i>
		B2	<i>If I add two numbers I can use subtraction to check whether my answer is correct If I divide one number by another I can use multiplication to check whether my answer is correct</i>
		A3	<i>I can estimate and check the result of a calculation</i>
		B3	<i>I can use inverse operations to help me check calculations If you give me a number fact, I can tell you some related facts</i>
	Identify pairs of fractions that total 1	E1	<i>Using diagrams, I can find pairs of fractions that make 1 whole</i>
		E2	<i>Using diagrams, I can find pairs of fractions that make 1 whole</i>

Calculating	Add or subtract mentally pairs of two-digit whole numbers (e.g. $47 + 58$, $91 - 35$)	A1	<i>I can add and subtract two-digit numbers in my head (e.g. $26 + 47$, $43 - 16$)</i>
		D1	<i>I can use mental addition and subtraction to help me solve problems</i>
		A2	<i>I can add and subtract mentally pairs of two-digit numbers and find a difference by counting on</i>
		A3	<i>I can add and subtract mentally any two-digit numbers you give me, such as $56 + 22$, $58 + 39$, $64 - 37$, $98 - 89$</i>
	Refine and use efficient written methods to add and subtract two-digit and three-digit whole numbers and £.p	A2	<i>I can add and subtract three-digit numbers using a written method</i>
		D2	<i>I can add and subtract a two-digit and a three-digit number using an efficient written method</i>
		A3	<i>I can add and subtract two-digit and three-digit numbers using a written method</i>
		D3	<i>I can use written methods to add and subtract measurements made in our classroom</i>
	Multiply and divide numbers to 1000 by 10 and then 100 (whole-number answers), understanding the effect; relate to scaling up or down	A1	<i>I can multiply and divide by 10 and 100. I can explain what happens to the digits when I do this</i>
		A2	<i>I can multiply and divide numbers by 10 or 100 and describe what happens to the digits</i>
	Develop and use written methods to record, support and explain multiplication and division of two-digit numbers by a one-digit number, including division with remainders (e.g. 15×9 , $98 \div 6$)	A2	<i>I can multiply and divide a two-digit number by a one-digit number</i>
		D2	<i>I can record how to multiply and divide a two-digit number by a one-digit number</i>
		A3	<i>I can multiply and divide a two-digit number by a one-digit number I know how to interpret a remainder</i>
		E3	<i>I can use a written method to multiply a two-digit number by a one-digit number I can use a written method to divide a two-digit number by a one-digit number and find the remainder</i>
	Find fractions of numbers, quantities or shapes (e.g. $1/5$ of 30 plums, $3/8$ of a 6 by 4 rectangle)	E1	<i>I can find a fraction of a shape drawn on squared paper I can find a fraction of a number of cubes by sharing them in equal groups</i>
		E2	<i>I can find one fifth of a number by dividing it by 5</i>
		E3	<i>I can find the fraction of an amount, such as $2/5$ of £10</i>
	Use a calculator to carry out one-step and two-step calculations involving all four operations; recognise negative numbers in the display, correct mistaken entries and interpret the display correctly in the context of money	A1	<i>I can use a calculator to help me solve one-step and two-step problems I know how to enter prices such as £1.29 and £2.30 into a calculator I know that -7 on a calculator means negative 7</i>
		A3	<i>I know that when I am working with money, 5.4 on a calculator display means £5.40</i>

Understanding Shape	Draw polygons and classify them by identifying their properties, including their line symmetry	B1	<i>I know facts about regular polygons such as the number of sides and number of angles I can pick out irregular polygons that have at least one right angle</i>
		B2	<i>I can use what I know about triangles to group them into equilateral triangles, isosceles triangles and other triangles I can pick out triangles that have a right angle from other triangles I can recognise symmetrical polygons, including those with more than one line of symmetry</i>
		B3	<i>I can pick out 2D shapes that have more than one line of symmetry I can draw lots of different polygons on squared paper and tell you their mathematical names I can draw all the shapes made from squares placed edge to edge and tell you what sort of polygon each one is</i>
	Visualise 3-D objects from 2-D drawings; make nets of common solids	B1	<i>If I see a drawing of a cube or a pyramid I can visualise the solid shapes I can make a net for an open cube and fold it to check that it is correct</i>
		B2	<i>If I see a drawing of a cube I can imagine the solid shape I can make different nets for cubes and fold them to check they are correct</i>
		B3	<i>When I look at a drawing of a 3D shape I can work out what shapes I need to make its net, such as four triangles and a square to make a square based pyramid</i>
	Recognise horizontal and vertical lines; use the eight compass points to describe direction; describe and identify the position of a square on a grid of squares	D1	<i>I know when a line is horizontal or vertical I can describe the position of a square on a grid of squares</i>
		D2	<i>I can use the eight compass points I can give directions, follow directions and say how good someone else's directions are</i>
	Know that angles are measured in degrees and that one whole turn is 360°; compare and order angles less than 180°	D2	<i>I know that angles are measured in degrees I know that a whole turn is 360 degrees or four right angles</i>
		D3	<i>I know if an angle is smaller than 180° I can put a set of angles in order, from smallest to largest I can estimate in degrees the size of an angle less than a right angle</i>

Measuring	Choose and use standard metric units and their abbreviations when estimating, measuring and recording length, weight and capacity; know the meaning of 'kilo', 'centi' and 'milli' and, where appropriate, use decimal notation to record measurements (e.g. 1.3 m or 0.6 kg)	C1	<i>I can measure lengths, weights, and times to help me find out more about a question I am exploring</i>
		D1	<i>I can estimate and measure a weight I know the relationships between units of weight I can write a mass in kilograms using a decimal point</i>
		C2	<i>I can measure carefully lengths to the nearest half centimetre so that my measurement is accurate</i>
		D2	<i>I can estimate and measure a length using metres, centimetres or millimetres I know the relationships between metres, centimetres and millimetres</i>
		C3	<i>I can estimate the length of a line in centimetres and millimetres and then measure the line to see how close my estimate was</i>
		D3	<i>I can estimate and measure a capacity I know the relationship between litres and millilitres I can write a capacity in litres using a decimal point</i>
	Interpret intervals and divisions on partially numbered scales and record readings accurately, where appropriate to the nearest tenth of a unit	C1	<i>I can measure lengths to the nearest half centimetre, weights in grams and kilograms, and times in seconds</i>
		D1	<i>I can use kitchen scales or a bathroom scale to measure a weight I can read a weight in kilograms and grams from a scale marked in kg</i>
		C2	<i>I can use different kinds of rulers and measuring tapes to measure lengths accurately</i>
		D2	<i>I can use a measuring tape, metre stick or ruler to measure a length accurately</i>
		C3	<i>I can use different kinds of rulers and measuring tapes to measure lengths accurately</i>
		D3	<i>I can read the scale on a measuring cylinder or measuring jug</i>
	Draw rectangles and measure and calculate their perimeters; find the area of rectilinear shapes drawn on a square grid by counting squares	D2	<i>I can draw a rectangle and work out its perimeter</i>
		D3	<i>I can find the area of shapes by counting squares</i>
	Read time to the nearest minute; use am, pm and 12-hour clock notation; choose units of time to measure time intervals; calculate time intervals from clocks and timetables	D1	<i>I can tell the time to the minute on a clock with hands I can write down a time using am and pm I can work out how long it takes to do something if I know the start and end times</i>
D3		<i>I can solve time problems where I have to work out start and finish times I can use a timetable</i>	

Handling Data	Answer a question by identifying what data to collect; organise, present, analyse and interpret the data in tables, diagrams, tally charts, pictograms and bar charts, using ICT where appropriate	C1	<i>I can collect data and put it in a table to help me explore an idea and find out more about it</i>
		C2	<i>I can choose from tables, diagrams, tally charts, pictograms and bar charts to show data so that it is easy to understand</i>
		C3	<i>I can collect data in different ways and decide whether to put it in a table, diagram, tally chart, pictogram or bar chart so that it is easy to understand</i>
	Compare the impact of representations where scales have intervals of differing step size	C2	<i>I can compare graphs with different scales and decide which is the most useful</i>
		C3	<i>I can compare graphs with different scales and decide which is the most useful</i>