



Cambridge Primary Stage 6	
Topic	Objective <i>Pupils should be taught to:</i>
<b>Numbers and the number system</b>	6Nn1 Count on and back in fractions and decimals, e.g. 3s 1 s, 0.1s, and repeated steps of whole numbers (and through zero).
<b>Numbers and the number system</b>	6Nn2 Know what each digit represents in whole numbers up to a million.
<b>Numbers and the number system</b>	6Nn3 Know what each digit represents in one- and two-place decimal numbers.
<b>Numbers and the number system</b>	6Nn4 Multiply and divide any whole number from 1 to 10 000 by 10, 100 or 1000 and explain the effect.
<b>Numbers and the number system</b>	6Nn5 Multiply and divide decimals by 10 or 100 (answers up to two decimal places for division).
<b>Numbers and the number system</b>	6Nn6 Find factors of two-digit numbers.
<b>Numbers and the number system</b>	6Nn7 Find some common multiples, e.g. for 4 and 5.
<b>Numbers and the number system</b>	6Nn8 Round whole numbers to the nearest 10, 100 or 1000.
<b>Numbers and the number system</b>	6Nn9 Round a number with two decimal places to the nearest tenth or to the nearest whole number.
<b>Numbers and the number system</b>	6Nn10 Make and justify estimates and approximations of large numbers.

Macmillan Mathematics Level 6 A&B		
Macmillan Mathematics Unit	Examples <i>(Level, Unit, Page, Exercise number)</i>	Notes
Not covered		This objective is covered in Level 5, Units 1, 13, 21.
Not covered		This objective is covered in Level 4, Unit 1.
Not covered		This objective is covered in Level 5, Unit 1.
Not covered		This objective is covered in Level 5, Unit 1 and Level 4, Units 13-14.
Not covered		This objective is covered in Level 4, Unit 19 and Level 5, Unit 1.
<b>Unit 2</b> Number properties	L6A, U2, p18, ex1-4	
<b>Unit 2</b> Number properties	L6A, U2, p16, ex1-4	
<b>Unit 1</b> Integers and decimals	L6A, U1, p6, ex1-4	
<b>Unit 1</b> Integers and decimals	L6A, U1, p11, ex3-4	
<b>Unit 1</b> Integers and decimals	L6A, U1, p6, ex3-4	



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Topic	Objective <i>Pupils should be taught to:</i>
<b>Numbers and the number system</b>	6Nn11 Order and compare positive numbers to one million, and negative integers to an appropriate level.
<b>Numbers and the number system</b>	6Nn12 Use the $>$ , $<$ and $=$ signs correctly.
<b>Numbers and the number system</b>	6Nn13 Estimate where four-digit numbers lie on an empty 0–10 000 line.
<b>Numbers and the number system</b>	6Nn14 Order numbers with up to two decimal places (including different numbers of places).
<b>Numbers and the number system</b>	6Nn15 Recognise and extend number sequences.
<b>Numbers and the number system</b>	6Nn16 Recognise and use decimals with up to three places in the context of measurement.
<b>Numbers and the number system</b>	6Nn17 Recognise odd and even numbers and multiples of 5, 10, 25, 50 and 100 up to 1000.
<b>Numbers and the number system</b>	6Nn18 Make general statements about sums, differences and multiples of odd and even numbers.
<b>Numbers and the number system</b>	6Nn19 Recognise prime numbers up to 20 and find all prime numbers less than 100.
<b>Numbers and the number system</b>	6Nn20 Recognise the historical origins of our number system and begin to understand how it developed.

Macmillan Mathematics Level 6 A&B		
Macmillan Mathematics Unit	Examples <i>(Level, Unit, Page, Exercise number)</i>	Notes
<b>Unit 1</b> Integers and decimals	L6A, U1, p4, ex3-6	Pupils are not required to order large numbers, this is covered in Level 4, Unit 1.
<b>Unit 1</b> Integers and decimals	L6A, U1, p4, ex3-4	
Not covered		Pupils are not required to order large numbers, this is covered in Level 4, Unit 1.
<b>Unit 1</b> Integers and decimals	L6A, U1, p10, ex3 and 6	Pupils are expected to order numbers with up to three and four decimal places.
<b>Unit 13</b> Algebra	L6B, U13, p10 ex1-2	
<b>Unit 1</b> Integers and decimals	L6A, U1, p11, ex4-6	
Not covered		Pupils are required to recognise multiples of numbers (Unit 2), but not in relation to odd/even numbers.
Not covered		
<b>Unit 2</b> Number properties	L6A, U2, p19, Try this	Prime numbers are covered in Level 5, Unit 3.
Not covered		



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Topic	Objective <i>Pupils should be taught to:</i>
<b>Numbers and the number system</b>	6Nn21 Compare fractions with the same denominator and related denominators, e.g. $\frac{3}{4}$ with $\frac{7}{8}$
<b>Numbers and the number system</b>	6Nn22 Recognise equivalence between fractions, e.g. between $\frac{1}{100}$ , $\frac{1}{10}$ , $\frac{1}{2}$
<b>Numbers and the number system</b>	6Nn23 Recognise and use the equivalence between decimal and fraction forms.
<b>Numbers and the number system</b>	6Nn24 Order mixed numbers and place between whole numbers on a number line.
<b>Numbers and the number system</b>	6Nn25 Change an improper fraction to a mixed number, e.g. $\frac{17}{8}$ to $2\frac{1}{8}$ .
<b>Numbers and the number system</b>	6Nn26 Reduce fractions to their simplest form, where this is $\frac{1}{4}$ , $\frac{1}{2}$ , $\frac{3}{4}$ or a number of fifths or tenths.
<b>Numbers and the number system</b>	6Nn27 Begin to convert a vulgar fraction to a decimal fraction using division.
<b>Numbers and the number system</b>	6Nn28 Understand percentage as parts in every 100 and express $\frac{1}{2}$ , $\frac{1}{4}$ , $\frac{1}{3}$ , $\frac{1}{10}$ , $\frac{1}{100}$ as percentages.
<b>Numbers and the number system</b>	6Nn29 Find simple percentages of shapes and whole numbers.

Macmillan Mathematics Level 6 A&B		
Macmillan Mathematics Unit	Examples <i>(Level, Unit, Page, Exercise number)</i>	Notes
<b>Unit 3</b> Fractions	L6A, U3, p26, ex1-2	
<b>Unit 3</b> Fractions	L6A, U3, p24, ex1-4	
Not covered		This is covered in Level 5, Unit 21.
Not covered		This is covered in Level 4, Unit 17.
<b>Unit 3</b> Fractions	L6A, U3, p30, ex1	
<b>Unit 3</b> Fractions	L6A, U3, p25, ex3-4	
Not covered		This is covered Level 4, Unit 19.
<b>Unit 3</b> Fractions	L6A, U3, p32, ex1	Pupils are required to express more complicated fractions as percentages in Level 6.
<b>Unit 19</b> Percentages, profit and loss	L6A, U19, p62, ex1-4	Percentages of shapes is covered in Level 5, Unit 21.



Cambridge Primary Stage 6	
Topic	Objective <i>Pupils should be taught to:</i>
<b>Numbers and the number system</b>	6Nn30 Solve simple problems involving ratio and direct proportion.
<b>Calculation</b>	6Nc1 Recall addition and subtraction facts for numbers to 20 and pairs of one-place decimals with a total of 1, e.g. $0.4 + 0.6$ .
<b>Calculation</b>	6Nc2 Derive quickly pairs of one-place decimals totalling 10, e.g. 7.8 and 2.2, and two-place decimals totalling 1, e.g. $0.78 + 0.22$ .
<b>Calculation</b>	6Nc3 Know and apply tests of divisibility by 2, 4, 5, 10, 25 and 100.
<b>Calculation</b>	6Nc4 Use place value and number facts to add or subtract two-digit whole numbers and to add or subtract three-digit multiples of 10 and pairs of decimals, e.g. $560 + 270$ ; $2.6 + 2.7$ ; $0.78 + 0.23$ .
<b>Calculation</b>	6Nc5 Add/subtract near multiples of one when adding numbers with one decimal place, e.g. $5.6 + 2.9$ ; $13.5 - 2.1$ .
<b>Calculation</b>	6Nc6 Add/subtract a near multiple of 10, 100 or 1000, or a near whole unit of money, and adjust, e.g. $3127 + 4998$ ; $5678 - 1996$ .

Macmillan Mathematics Level 6 A&B		
Macmillan Mathematics Unit	Examples <i>(Level, Unit, Page, Exercise number)</i>	Notes
<b>Unit 17</b> Ratio <b>Unit 18</b> Proportion	L6A, U17, p40-49; L6A, U18, p50-55	
Not covered		Note that simple addition/subtraction facts are not covered in Level 6.
Not covered		Note that pairs of decimals totalling 10 is not covered in Level 6.
Not covered		
Not covered		Note that this is not covered explicitly in Level 6. At this level, pupils are required to add/subtract six-digit numbers.
Not covered		
Not covered		



Cambridge Primary Stage 6		Macmillan Mathematics Level 6 A&B		
Topic	Objective <i>Pupils should be taught to:</i>	Macmillan Mathematics Unit	Examples <i>(Level, Unit, Lesson, Page, Activity number)</i>	Notes
Calculation	6Nc7 Use place value and multiplication facts to multiply/divide mentally, e.g. $0.8 \times 7$ ; $4.8 \div 6$ .	Not covered		This method is covered in Level 5, Units 5 and 7.
Calculation	6Nc8 Multiply pairs of multiples of 10, e.g. $30 \times 40$ , or multiples of 10 and 100, e.g. $600 \times 40$ .	Not covered		Multiplication is covered in Unit 6, but not multiples of 10 explicitly.
Calculation	6Nc9 Double quickly any two-digit number, e.g. 78, 7.8, 0.78 and derive the corresponding halves.	Not covered		Division is covered in Unit 7, but not dividing by multiples of 10 explicitly.
Calculation	6Nc10 Divide two-digit numbers by single-digit numbers, including leaving a remainder.	Not covered		Pupils are expected to divide three-digit by two-digit numbers in Level 6, Unit 7. Dividing two-digit by single-digit numbers is not covered at Level 6.
Calculation	6Nc11 Add two- and three-digit numbers with the same or different numbers of digits/decimal places.	Not covered		Note that this is not covered explicitly in Level 6. At this level, pupils are required to add/subtract six-digit numbers.
Calculation	6Nc12 Add or subtract numbers with the same and different numbers of decimal places, including amounts of money.	Unit 5 Mixed operations	L6A, U5, p40, ex1-4; L6A, U5, p42, ex1-3	
Calculation	6Nc13 Find the difference between a positive and negative integer, and between two negative integers in a context such as temperature or on a number line.	Unit 1 Integers and decimals	L6A, U1, p4, ex2 and 5	
Calculation	6Nc14 Multiply pairs of multiples of 10, e.g. $30 \times 40$ , or multiples of 10 and 100, e.g. $600 \times 40$ .	Not covered		Multiplying multiples of 10 is covered in Level 4, Units 13-14.
Calculation	6Nc15 Multiply near multiples of 10 by multiplying by the multiple of 10 and adjusting.	Unit 6 Multiplication	L6A, U6, p50, ex1-2	



Cambridge Primary Stage 6	
Topic	Objective <i>Pupils should be taught to:</i>
Calculation	6Nc16 Multiply by halving one number and doubling the other, e.g. calculate $35 \times 16$ with $70 \times 8$ .
Calculation	6Nc17 Use number facts to generate new multiplication facts, e.g. the $17 \times$ table from $10 \times + 7 \times$ tables.
Calculation	6Nc18 Multiply two-, three- or four-digit numbers (including sums of money) by a single-digit number and two- or three-digit numbers by two-digit numbers.
Calculation	6Nc19 Divide three-digit numbers by single-digit numbers, including those leaving a remainder and divide three-digit numbers by two-digit numbers (no remainder) including sums of money.
Calculation	6Nc20 Give an answer to division as a mixed number, and a decimal (with divisors of 2, 4, 5, 10 or 100).
Calculation	6Nc21 Relate finding fractions to division and use them as operators to find fractions including several tenths and hundredths of quantities.
Calculation	6Nc22 Know and apply the arithmetic laws as they apply to multiplication (without necessarily using the terms commutative, associative or distributive).
Shapes and geometric reasoning	6Gs1 Classify different polygons and understand whether a 2-D shape is a polygon or not.

Macmillan Mathematics Level 6 A&B		
Macmillan Mathematics Unit	Examples <i>(Level, Unit, Lesson, Page, Activity number)</i>	Notes
Not covered		
Not covered		
Unit 6 Multiplication	L6A, U6, p54, ex1-2	Note that at Level 6, pupils are required to multiply by single-digit numbers only when decimals are involved. Most multiplication involves three-digit numbers at this level.
Unit 7 Division	L6A, U7, p64, ex1-4	Note that at Level 6, pupils are required to divide by single-digit numbers only when decimals are involved. Most division involves three-digit numbers at this level.
Not covered		
Not covered		Fractions as operators are covered in Level 4, Unit 17.
Not covered		Note that pupils work towards this in Unit 13 but do not fully cover objective.
Unit 10 Polygons and polyhedra	L6A, U10, p86, ex1-2	



Cambridge Primary Stage 6		Macmillan Mathematics Level 6 A&B		
Topic	Objective <i>Pupils should be taught to:</i>	Macmillan Mathematics Unit	Examples <i>(Level, Unit, Lesson, Page, Activity number)</i>	Notes
Shapes and geometric reasoning	6Gs2 Visualise and describe the properties of 3-D shapes, e.g. faces, edges and vertices.	Unit 10 Polygons and polyhedra	L6A, U10, p92, ex1-3	
Shapes and geometric reasoning	6Gs3 Identify and describe properties of quadrilaterals (including the parallelogram, rhombus and trapezium), and classify using parallel sides, equal sides, equal angles.	Not covered		Quadrilaterals are covered Level 4, Unit 10.
Shapes and geometric reasoning	6Gs4 Recognise and make 2-D representations of 3-D shapes including nets.	Unit 10 Polygons and polyhedra	L6A, U10, p94, ex1-3	
Shapes and geometric reasoning	6Gs5 Estimate, recognise and draw acute and obtuse angles and use a protractor to measure to the nearest degree.	Unit 9 Lines and angles	L6A, U9, p82, ex1	
Shapes and geometric reasoning	6Gs6 Check that the sum of the angles in a triangle is $180^\circ$ , for example, by measuring or paper folding; calculate angles in a triangle or around a point.	Unit 9 Lines and angles	L6A, U9, p81, ex2	
Position and movement	6Gp1 Read and plot co-ordinates in all four quadrants.	Unit 21 Co-ordinates	L6B, U21, p82, ex1-4	
Position and movement	6Gp2 Predict where a polygon will be after one reflection, where the sides of the shape are not parallel or perpendicular to the mirror line, after one translation or after a rotation through $90^\circ$ about one of its vertices.	Unit 11 Geometry problems Unit 21 Co-ordinates	L6A, U11, p102, ex1-4; L6B, U21, p79, ex2-3	Note that pupils are not required to predict rotations.
Length, mass and capacity	6MI1 Select and use standard units of measure. Read and write to two or three decimal places.	Unit 14 Area Unit 15 Surface area and volume	L6A, U14, p14-15, ex1-2; L6A, U15, p24-25, ex1-3	In both units, standard units of measure used. Note that only up to two decimal places is used here. See Level 5 for three decimal places and more coverage of measurements and units.



Cambridge Primary Stage 6		Macmillan Mathematics Level 6 A&B		
Topic	Objective <i>Pupils should be taught to:</i>	Macmillan Mathematics Unit	Examples <i>(Level, Unit, Lesson, Page, Activity number)</i>	Notes
Length, mass and capacity	6MI2 Convert between units of measurement (kg and g, l and ml, km, m, cm and mm), using decimals to three places, e.g. recognising that 1.245 m is 1 m 24.5 cm.	Not covered		Measures and units are covered in detail in Level 4, Units 21-22 and Level 5, Units 17-18.
Length, mass and capacity	6MI3 Interpret readings on different scales, using a range of measuring instruments.	Not covered		Measures and units are covered in detail in Level 4, Units 21-22 and Level 5, Units 17-18.
Length, mass and capacity	6MI4 Draw and measure lines to the nearest centimetre and millimetre.	Not covered		Measures and units are covered in detail in Level 4, Units 21-22 and Level 5, Units 17-18.
Length, mass and capacity	6MI5 Know imperial units still in common use, e.g. the mile, and approximate metric equivalents.	Not covered		
Time	6Mt1 Recognise and understand the units for measuring time (seconds, minutes, hours, days, weeks, months, years, decades and centuries); convert one unit of time into another.	Not covered		Time is covered in Level 5, Unit 19 and Level 4, Unit 19.
Time	6Mt2 Tell the time using digital and analogue clocks using the 24-hour clock.	Not covered		
Time	6Mt3 Compare times on digital and analogue clocks, e.g. realise a quarter to four is later than 3:40.	Not covered		
Time	6Mt4 Read and use timetables using the 24-hour clock.	Not covered		
Time	6Mt5 Calculate time intervals using digital and analogue times.	Not covered		





Cambridge Primary Stage 6		Macmillan Mathematics Level 6 A&B		
Topic	Objective <i>Pupils should be taught to:</i>	Macmillan Mathematics Unit	Examples <i>(Level, Unit, Lesson, Page, Activity number)</i>	Notes
Time	6Mt6 Use a calendar to calculate time intervals in days, weeks or months.	Not covered		
Time	6Mt7 Calculate time intervals in days, months or years.	Not covered		
Time	6Mt8 Appreciate how the time is different in different time zones around the world.	Not covered		
Area and perimeter	6Ma1 Measure and calculate the perimeter and area of rectilinear shapes.	<b>Unit 14</b> Area <b>Unit 15</b> Surface area and volume	L6B, U14, p14, ex1-2	Note that these are compound shapes. Area of normal rectangles is covered in earlier levels. Perimeter is covered in Level 5, Unit 17.
Area and perimeter	6Ma2 Estimate the area of an irregular shape by counting squares.	<b>Unit 14</b> Area <b>Unit 15</b> Surface area and volume	L6B, U14, p18, ex1	This method used with triangles, not irregular shape.
Area and perimeter	6Ma3 Calculate perimeter and area of simple compound shapes that can be split into rectangles.	<b>Unit 14</b> Area <b>Unit 15</b> Surface area and volume	L6B, U14, p14, ex1-2	
Organising, categorising and representing data	6Dh1 Solve a problem by representing, extracting and interpreting data in tables, graphs, charts and diagrams, e.g. line graphs for distance and time; a price 'ready-reckoner' for currency conversion; frequency tables and bar charts with grouped discrete data.	<b>Unit 22</b> Graphs and charts	L6B, U22, p86-93	
Organising, categorising and representing data	6Dh2 Find the mode and range of a set of data from relevant situations, e.g. scientific experiments.	<b>Unit 22</b> Graphs and charts <b>Unit 23</b> Probability and statistics	L6B, U22, p94, ex1; L6B, U23, p102, ex1	In Level 5, more contextual situations are given in Unit 23. Note that 'range' is not covered.
Organising, categorising and representing data	6Dh3 Begin to find the median and mean of a set of data.	<b>Unit 22</b> Graphs and chart <b>Unit 23</b> Probability and statistics	L6B, U22, p94, ex1; L6B, U23, p102, ex1	In Level 5, more contextual situations are given in Unit 23.



Cambridge Primary Stage 6	
Topic	Objective <i>Pupils should be taught to:</i>
<b>Organising, categorising and representing data</b>	6Dh4 Explore how statistics are used in everyday life.
<b>Probability</b>	6Db1 Use the language associated with probability to discuss events, to assess likelihood and risk, including those with equally likely outcomes.
<b>Using techniques and skills in solving mathematical problems</b>	6Pt1 Choose appropriate and efficient mental or written strategies to carry out a calculation involving addition, subtraction, multiplication or division.
<b>Using techniques and skills in solving mathematical problems</b>	6Pt2 Understand everyday systems of measurement in length, weight, capacity, temperature and time and use these to perform simple calculations.
<b>Using techniques and skills in solving mathematical problems</b>	6Pt3 Check addition with a different order when adding a long list of numbers; check when subtracting by using the inverse.
<b>Using techniques and skills in solving mathematical problems</b>	6Pt4 Recognise 2-D and 3-D shapes and their relationships, e.g. a cuboid has a rectangular cross-section.
<b>Using techniques and skills in solving mathematical problems</b>	6Pt5 Estimate and approximate when calculating, e.g. use rounding, and check working.
<b>Using understanding and strategies in solving problems</b>	6Ps1 Explain why they chose a particular method to perform a calculation and show working.

Macmillan Mathematics Level 6 A&B		
Macmillan Mathematics Unit	Examples <i>(Level, Unit, Lesson, Page, Activity number)</i>	Notes
<b>Unit 23</b> Probability and statistics	L6B, U23, p96-104	
<b>Unit 23</b> Probability and statistics	L6B, U23, p96-97	Note that probability is covered in more detail in Levels 4 and 5.
<b>Unit 8</b> Assess and review	L6A, U8, p70-71, ex1-8	
Not covered		Note that measurement is covered in detail in Level 4, Unit 21 and Level 5 Unit 22.
<b>Unit 5</b> Mixed operations	L6A, U5, p40, ex1-4	Note that inverse operations are covered in more detail in Levels 4 and 5.
<b>Unit 15</b> Surface area and volume	L6B, U15, p26, ex1-3	
<b>Unit 5</b> Mixed operations <b>Unit 6</b> Multiplication <b>Unit 7</b> Division	L6A, U5, p40, ex1-3; L6A, U6, p54, ex1; L6A, U7, p64, ex1-3	
Not covered		Pupils are not required to justify methods chosen.



Cambridge Primary Stage 6	
Topic	Objective <i>Pupils should be taught to:</i>
<b>Using understanding and strategies in solving problems</b>	6Ps2 Deduce new information from existing information and realise the effect that one piece of information has on another.
<b>Using understanding and strategies in solving problems</b>	6Ps3 Use logical reasoning to explore and solve number problems and mathematical puzzles.
<b>Using understanding and strategies in solving problems</b>	6Ps4 Use ordered lists or tables to help solve problems systematically.
<b>Using understanding and strategies in solving problems</b>	6Ps5 Identify relationships between numbers and make generalised statements using words, then symbols and letters, e.g. the second number is twice the first number plus 5 ( $n, 2n + 5$ ); all the numbers are multiples of 3 minus 1 ( $3n - 1$ ); the sum of angles in a triangle is $180^\circ$ .
<b>Using understanding and strategies in solving problems</b>	6Ps6 Make sense of and solve word problems, single and multi-step (all four operations), and represent them, e.g. with diagrams or on a number line; use brackets to show the series of calculations necessary.
<b>Using understanding and strategies in solving problems</b>	6Ps7 Solve simple word problems involving ratio and direct proportion.
<b>Using understanding and strategies in solving problems</b>	6Ps8 Solve simple word problems involving percentages, e.g. find discounted prices.
<b>Using understanding and strategies in solving problems</b>	6Ps9 Make, test and refine hypotheses, explain and justify methods, reasoning, strategies, results or conclusions orally.

Macmillan Mathematics Level 6 A&B		
Macmillan Mathematics Unit	Examples <i>(Level, Unit, Lesson, Page, Activity number)</i>	Notes
Not covered		Pupils solve problems (see 5Ps3), but are not required to deduce new information.
All units	All units: Try this feature	
Covered		
<b>Unit 13</b> Algebra <b>Unit 18</b> Proportion	L6B, U13, p5, Try this; L6B, U13, p10-11; L6B, U18, p51, ex4	This is a broad objective; lots of examples in the Algebra unit regarding relationships between numbers.
All units	All units: Try this features	
<b>Unit 17</b> Ratio <b>Unit 18</b> Proportion	L6B, U17, p41, ex4-5; L6B, U17, p42, ex1-4; L6B, U17, p44, ex2; L6B, U17, p48, ex1-5; L6B, U18, p52, ex2	
<b>Unit 19</b> Percentages, profit and loss	L6B, U19, p63, ex4; L6B, U19, p65, ex2; L6B, U19, p67, ex2; L6B, U19, p69, Assessment	
<b>Unit 23</b> Probability and statistics	L6B, U23, p105, Assessment	