Planning grids

Year 4 scope and sequence

The following grid shows the concepts and objectives that are covered within each *Rising Stars Mathematics* Year 4 unit and provides page references to each of the various components.

Unit	Concept	Objectives	Textbook	Teacher's Guide	Practice Book	Homework Sheets
1	1a Counting	• Count in multiples of three, six and nine. • Count backwards through zero to include negative numbers.	12–13	26–7	4–7	182
	1b Place value	• Recognise the place value of each digit in a 4-digit number (thousands, hundreds, tens, and ones). • Identify, represent and estimate numbers using different representations. • Solve number and practical problems that involve all of the above and with increasingly large positive numbers.	14–15	28–9	8–12	183
2	2a Adding 4–digit numbers	• Add numbers with up to four digits using the formal written methods of columnar addition 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.	22–3	36–7	13–16	184
	2b Subtracting 4–digit numbers	• Subtract numbers with up to four digits using the formal written methods of columnar 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.	24–5	38–9	17–20	185
3	3a Counting	• Count in multiples of six and nine. • Recall multiplication and division facts for multiplication tables six, nine and twelve.	32–3	46–7	21–3	186
	3b Calculating mentally	• Use place value, known and derived facts to multiply and divide mentally, including multiplying together three numbers. • Recognise and using factor pairs and commutativity in mental calculations.	34–5	48–9	24–6	187
	3c Calculating on paper	• Multiply 2-digit and 3-digit numbers by a single-digit number using formal written layout. • Solve problems involving multiplying and adding, including using the distributive law to multiply 2-digit numbers by single-digit numbers.	36–7	50–1	27–30	188
4	4a Three types of triangle	• Identify acute and obtuse angles and compare and order angles up to two right angles by size.	44–5	58–9	31–4	189
	4b Triangles	• Identify acute and obtuse angles and compare and order angles up to two right angles by size. • Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes.	46–7	60–1	35–6	190
	4c Quadrilaterals	• Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes.	48–9	62–3	37–40	191
	4d Symmetry	• Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes. • Identify lines of symmetry in 2-D shapes presented in different orientations.	50–1	64–5	41–3	192
5	5a Counting in steps	• Count in multiples of seven. • Count backwards through zero to include negative numbers. • Solve number and practical problems that involve all of the above and with increasingly large positive numbers.	58–9	72–3	44–6	193
	5b Rounding, ordering and comparing	• Recognise the place value of each digit in a 4-digit number (thousands, hundreds, tens, and ones). • Order and compare numbers beyond 1000. • Identify, represent and estimate numbers using different representations. • Round any number to the nearest 10, 100 or 1000. • Solve number and practical problems that involve all of the above and with increasingly large positive numbers.	60–1	74–5	47–51	194
	5c Roman numerals	• Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value.	62–3	76–7	52–3	195

Introduction

Unit	Concept	Objectives	Textbook	Teacher's Guide	Practice Book	Homework Sheets
6	6a Using mental and written methods to solve problems	• Add and subtract numbers with up to four 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. • Convert between different units of measure (for example, kilometre to metre; hour to minute). • Read, write and convert time between analogue and digital 12- and 24-hour clocks. • Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.	70–1	84–5	54–8	196
	6b bar models and bar charts	• Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. • Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. • Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.	72–3	86–7	59–63	197
	6c Solving problems	• Add and subtract numbers with up to four 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. • Estimate, compare and calculate using different measures, including money, in pounds and pence.	74–5	88–9	64–5	198
7	7a families of fractions	• Recognise and show, using diagrams, families of common equivalent fractions. • 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. • Add and subtract fractions with the same denominator.	82–3	96–7	66–70	199
	7b Decimals and equivalences	• Count up and down in hundredths; recognise that hundredths arise when dividing an object by 100 and dividing tenths by ten. • Recognise and write decimal equivalents of any number of tenths or hundredths. • Recognise and write decimal equivalents to a quarter, half and three quarters. • Find the effect of dividing a single- or 2-digit number by ten and 100, identifying the value of the digits in the answer as ones, tenths and hundredths.	84–5	98–9	71–3	200
8	8a Multiplication table facts	• Count in multiples of 7. • Recall multiplication and division facts for the 7 and 11 times tables..	92–3	106–7	74–7	201
	8b Three at once	• Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers	94–5	108–9	78–80	202
	8c Written methods	• Multiply 2-digit numbers by a single-digit number using a formal written layout. • Solve problems involving multiplying and adding.	96–7	110–11	81–3	203
	8d Scaling	• Solve integer scaling problems.	98–9	112–13	84–6	204
9	9a Trapeziums and kites	• Compare and classify geometric shapes, including all types of quadrilaterals and triangles, based on their properties and sizes.	106–7	120–1	87–90	205
	9b Coordinates and translations	• Describe positions on a 2-D grid as coordinates in the first quadrant. • Describe movements between positions as translations of a given unit to the left/right and up/down. • Plot specified points and draw sides to complete a given polygon.	108–9	122–3	91–3	206
10	10a 25s and 1000s	• Count in multiples of 25 and 1000. • Find 1000 more or less than a given number.	116–17	130–1	94–6	207
	10b Place value and measures	• Recognise the place value of each digit in a 4-digit number (thousands, hundreds, tens, and ones). • Identify, represent and estimate numbers using different representations. • Solve number and practical problems that involve all of the above and with increasingly large positive numbers.	118–19	132–3	97–9	208
11	11a Solving problems using written methods	• Add and subtract numbers with up to four 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 simple measure and money problems involving fractions and decimals to two decimal places. • Estimate, compare and calculate different measures including money, in pounds and pence.	126–7	140–1	100–3	209
	11b Applying methods of addition and subtraction	• Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.	128–9	142–3	104–7	210

Unit	Concept	Objectives	Textbook	Teacher's Guide	Practice Book	Homework Sheets
12	12a Equivalences	• Recognise and write decimal equivalents of any number of tenths or hundredths. • Recognise and write decimal equivalents to quarter, half and three-quarters. • Recognise and show, using diagrams, families of common equivalent fractions. • Add and subtract fractions with the same denominator.	136–7	150–1	108–11	211
	12b Comparing and rounding decimals	• Round decimals with one decimal place to the nearest whole number. • Compare numbers with the same number of decimal places up to two decimal places.	138–9	152–3	112–15	212
13	13a Multiplying and dividing mentally	• Count in multiples of 25 and 1000. • Recall multiplication and division facts for multiplication tables up to 12×12.	146–7	160–1	116–19	213
	13b Multiplying on paper	• Multiply 2-digit and 3-digit numbers by a single-digit number using a formal written layout. • Solve problems involving multiplying and adding.	148–9	162–3	120–1	214
	13c Scaling	• Solve problems involving multiplying and adding, including integer scaling problems and harder correspondence problems such as n objects are connected with m objects.	150–1	164–5	122–4	215
14	14a Perimeter and area	• Measure and calculate the perimeter of rectilinear figures (including squares) in centimetres and metres. • Find the area of rectilinear shapes by counting squares.	158–9	172–3	125–8	216
	14b Perimeter and angles	• Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres. • Identify acute and obtuse angles and compare and order angles up to two right angles by size.	160–1	174–5	129–33	217
	14c Area and symmetry	• Complete a simple symmetrical figure with respect to a specific line of symmetry. • Find the area of rectilinear shapes by counting squares.	162–3	176–7	134–7	218