

FRACTIONS AND DECIMALS CONCEPT SEQUENCE

KINDERGARTEN	1	Halve shapes and lengths, explaining it is half as big / long. Halve different shapes, explaining why halves are different sizes / areas.	Essential related concept is Measurement and Geometry (Area) 10.
	2	Halve shapes, lengths and groups.	Essential related concepts are Multiplication and Division 2, Patterns and Algebra 9, Measurement and Geometry 27.
YEAR 2	3	Quarter shapes, explaining quarters are a quarter as big as 1 shape, and half as big as a half.	Essential related concepts are Time 10, Measurement and Geometry 27.
	4	Quarter groups by quartering and by halving a half, relating to dividing into 4 equal groups.	Essential related concept is Multiplication and Division 8.
	5	Eighth shapes, explaining eighths are an eighth as big as 1 shape, and half as big as a quarter and quarter as big as a half.	
	6	Eighth groups by eighthing, relating to dividing into 8 equal groups.	
YEAR 3	7	Role of the denominator as the number we are dividing by.	Essential related concepts are Multiplication and Division 9, 10, 11, 12, 13, 14, 15, 16, 17, Patterns and Algebra 18.
	8	Multiplicative relationships between fractions while building a fraction wall.	
	9	Non-unit fractions and the role of numerator as the number of parts we are concerned with.	
	10	Locate unit and non-unit fractions on a number line and identify that fractions with the same numerator and denominator are equal to 1.	

YEAR 4	11	<p>Explain multiplicative place value of decimals to tenths by dividing 1 by 10 to get tenths.</p> <p>Explain multiplicative place value of decimals to tenths by multiplying tenths by 10 to get 1.</p> <p>Explain standard and non-standard place value of decimals to tenths.</p> <p>Express tenths as both fraction and decimal.</p>	Essential related concepts are Place Value 18, 20, Measurement and Geometry 39, 45, 47.
	12	<p>Multiplicative place value of decimals to hundredths by dividing a tenth by 10 to get hundredths.</p> <p>Multiplicative place value of decimals to hundredths by multiplying hundredths by 10 to get tenths.</p> <p>Standard and non-standard place value of decimals to hundredths.</p> <p>Expressing hundredths as both fraction and decimal.</p>	Essential related concepts are Place Value 21, Measurement and Geometry 39, 45, 47.
	13	Equivalent unit and non-unit fractions with concrete material and the relationship between numerator and denominator.	
	14	Equivalent unit and non-unit fractions on a number line.	
	15	Number patterns involving fractions, (halves, quarters and thirds), that increase through addition and decrease through subtraction, including past 1 and on number line.	Essential related concepts are Addition and Subtraction 26, Patterns and Algebra 22.
	16	<p>Recognise that amounts of money are written with two decimal places.</p> <p>Recognise cents as a fraction of a dollar.</p> <p>Identify other countries' currencies as decimal.</p>	Essential related concepts are Money and Financial Mathematics 11, Place Value 22.
	17	Round a number with one or two decimal places to the nearest whole number.	

YEAR 5	18	Multiplicative place value of whole numbers and decimals to hundredths by multiplying and dividing by 10, 100 and 1000. Standard and non-standard place value of decimals to hundredths, expressing hundredths as both fraction and decimal.	Essential related concepts are Place Value 24, Measurement and Geometry 51, 57.
	19	Role of the vinculum as meaning divided by. Role of the numerator as the number of parts we started with.	Essential related concept is Multiplication and Division 23.
	20	Division with remainders divided to create fractions.	
	21	Multiplicative place value of whole numbers and decimals to thousandths by multiplying and dividing by 10, 100 and 1000. Standard and non-standard place value of decimals to thousandths, expressing thousandths as both fraction and decimal.	Essential related concepts are Place Value 25, Measurement and Geometry 51, 57.
	22	Order decimals to thousandths on a number line, recording decimals as fractions and decimals.	Essential related concept is Place Value 26.
	23	Add and subtract fractions and mixed numerals with the same denominator.	Essential related concept is Addition and Subtraction 28.
	24	Number patterns involving fractions, decimals and whole numbers, that increase through addition and decrease through subtraction, including on number line.	Essential related concepts are Patterns and Algebra 27, Place Value 27.

YEAR 6	25	Multiplicative place value of whole numbers and decimals of any size by multiplying and dividing by 10, 100 and 1000. Express decimals as both fractions and decimals.	Essential related concepts are Place Value 28, Measurement and Geometry 59, 64, 67.
	26	Multiply and divide decimals to thousandths by whole numbers and powers of 10. Record remainders as fractions and decimals when dividing by 10.	Essential related concepts are Multiplication and Division 25, Place Value 29, Measurement and Geometry 59, 64, 67.
	27	Division is multiplication by a fraction.	Essential related concepts are Multiplication and Division 26
	28	Fractions in their simplest form by dividing numerator and denominator by highest common factor creating equivalent fractions through calculation, identifying we have divided by 1.	
	29	Percentages as hundredths, related to fractions and decimals .	
	30	Calculate percentage discounts of 10%, 25% and 50% on sale items.	Essential related concept is Money and Financial Mathematics 13.
	31	Describe probabilities using fractions, decimals and percentages, including on a number line.	Essential related concept is Statistics and Probability 18, Place Value 30.
	32	Add and subtract whole numbers and decimals of any size using place value.	Essential related concepts are Addition and Subtraction 29 and Place Value 32.
	33	Estimate and add and subtract fractions and mixed numerals with related denominators.	Essential related concept is Addition and Subtraction 30.
34	Number patterns with whole numbers, fractions and decimals in a table, describing the rule using the relationship between the term and the number.	Essential related concepts are Patterns and Algebra 28, Place Value 31, Addition and Subtract 31.	