

Conceptual progression to Algebra

Early Childhood		Primary	Bridging Period	Junior Cycle				
	Represent and solve problems involving addition and subtraction		Represent and solve problems involving multiplication and division Section 3.1		Understand the place value system Section 3.1	Apply and extend previous understandings of multiplication and division to divide fractions by fractions Section 3.1	Apply and extend previous understandings of operations with fractions to add, subtract, multiply and divide rational numbers Section 3.1	Work with radical and integer exponents Sections 2.3, 3.2
Know number names and the count sequence			Understand properties of operations and the relationship between multiplication and division Section 3.1	Generalise place value understanding for multidigit whole numbers	Perform operations with multi-digit whole numbers and decimals to hundredths Section 3.1	Apply and extend previous understandings to the system of rational numbers Section 3.1		Understand the connections between proportional relationships, lines and linear equations Sections 2.2, 3.1, 4.4
Count to tell the number of objects	Understand and apply properties of operations and the relationship between addition and subtraction		Multiply and divide within 100 Section 3.1	Use place value understanding and properties of operations to perform multi-digit arithmetic Section 3.1	Use equivalent fractions as a strategy to add and subtract fractions Section 3.1	Understand ratio concepts and use ratio reasoning to solve problems Sections 3.1, 4.4	Analyse proportional relationships and use them to solve real-world and mathematical problems Sections 2.2, 3.1, 4.4, 4.7	
Compare numbers	Add and subtract within 20		Solve problems involving the four operations, and identify and explain patterns in arithmetic Section 3.1	Extend understanding of fraction equivalence and ordering Section 3.1	Apply and extend previous understandings of multiplication and division to multiply and divide fractions Section 3.1	Apply and extend previous understandings of arithmetic to algebraic expressions Section 3.1, 4.3, 4.6	Use properties of operations to generate equivalent expressions Section 3.1	Analyse and solve linear equations and pairs of simultaneous linear equations Sections 2.2, 3.1, 4.4, 4.7,
Understand addition as <i>putting together</i> and <i>adding to</i> and understand subtraction as <i>taking apart</i> and <i>taking from</i>	Work with addition and subtraction equations. Extend the counting sequence	Use place value understanding and properties of operations to add and subtract measure and estimate lengths in standard units	Develop an understanding of fractions as numbers Section 3.1	Build fractions from unit fractions by applying and extending previous understandings of operations Section 3.1	Geometric measurement: understand concepts of volume and relate volume to multiplication and addition Section 3.4	Reason about and solve one variable equations and inequalities Section 4.4, 4.7		Define evaluate and compare functions Sections 5.1, 5.2
Work with numbers 11-19 to gain foundations for place value	Understand place value Use place value understanding and properties of operations to add and subtract measure lengths indirectly and by iterating length units	Relate addition and subtraction to length	Solve problems involving measurement and estimation of intervals of time, liquid volumes and masses of objects Section 3.4	Understand decimal notation for fractions, and compare decimal fractions Section 3.1	Graph points on the coordinate plane to solve real world and mathematical problems Sections 2.2,	Represent and analyse quantitative relationships between dependent and independent variables Section 4.1	Solve real world and mathematical problems using numerical and algebraic expressions and equations Sections 4.2, 4.3, 4.6, 4.7	Use functions to model relationships between quantities Section 4.4
			understand concepts of area and relate area to multiplication and addition Section 3.4					

Conceptual progression to Algebra