COURSE OUTLINE
MATHEMATICS FOUNDATIONS YEAR 11 - 2021
UNIT 1 AND UNIT 2

Term	Week	Topic and Key Teaching Points	Syllabus Content	Assessments
1	1-3	Whole numbers and money	**Numbers** 1.1.1 identify and describe the purpose of whole numbers in various texts and media from everyday life **The numeration system** 1.1.2 use place value to understand the meaning and magnitude of whole numbers into the millions 1.1.3 apply place value to read, write, say and compare whole numbers into the millions 1.1.4 read, write, say and compare amounts of money, recognising that the decimal point in money separates whole dollars from part dollars; for example, $1.50, $3.99 and $1013 1.1.5 recognise and use patterns in the number system 1.1.6 understand and use simple negative numbers on a number line (whole numbers and money) 1.1.7 determine and explain whether the magnitude of a number is reasonable within everyday contexts	Response Item 1 – Week 3 10%
1	4-6	Data, graphs and tables	1.5.1 identify and describe the purpose of simple tables and graphs, involving whole numbers, in everyday contexts 1.5.2 describe the purpose of the key features, conventions and symbols of tables and graphs found in various texts and media from everyday life and work 1.5.3 read and interpret information from a range of simple data displays from real life contexts (involving whole numbers), including lists, one and two-way tables, column/bar and line graphs, venn and arrow/network diagrams 1.5.4 collect and record data in one-way and two-way tables 1.5.5 construct vertical and horizontal column/bar graphs and line graphs (including both measurement and frequency graphs), using simple scales labelled with whole numbers 1.5.6 determine whether interpretations from tables and graphs are reasonable for the context 1.5.7 communicate information and conclusions from graphs and tables consistent with the language of the context	Practical Application 1 – Week 5 15% Response Item 2 – Week 6 10%

Term	Week	Topic and Key Teaching Points	Syllabus Content	Assessments
1	7-9	Time	1.4.1 identify and describe the tools and units commonly used to measure time 1.4.2 determine whether an estimate or an accurate time measurement is needed in everyday situations 1.4.3 choose which tool and/or unit is appropriate for measuring or stating a time in common everyday contexts 1.4.4 develop and use a sense of duration of standard time units: seconds, minutes, hours, days, weeks and months to estimate and compare time 1.4.5 read and use digital and analogue watches, clocks (12-hour time only), and stopwatches 1.4.6 read and use various forms of calendars and timetables 1.4.7 compare units of time to say how long events take, or to order events in time 1.4.8 understand and use the relationship between • seconds and minutes • minutes and hours • hours and days • days, weeks and months 1.4.9 read, write and interpret commonly used expressions of time located in various texts and media 1.4.10 use addition and subtraction to solve simple problems involving elapsed time in situations involving calendars and timetables with one type of time unit 1.4.11 determine whether an answer is reasonable, given the context of the problem 1.4.12 communicate information (oral and written) about time using language and symbols consistent with the context	Response Item 3 – Week 9 10%
2	1-4	Addition and subtraction with whole numbers and money	1.2.1 determine whether an estimation or an accurate answer is needed in everyday situations 1.2.2 choose when it is appropriate to use addition or subtraction to solve a range of everyday problems; for example, combining quantities, comparing the difference 1.2.3 understand and use the inverse relationship between addition and subtraction to assist in calculations 1.2.4 understand, recall, use and extend basic addition and subtraction facts to facilitate mental calculation	Practical Application 2 – Week 1 15% Response Item 4 – Week 4 10%

Term	Week	Topic and Key Teaching Points	Syllabus Content	Assessments
			1.2.5 apply place value, partitioning and basic facts to mentally solve everyday problems involving addition and subtraction, with simple whole numbers, using informal jottings to keep track if required 1.2.6 use a calculator/spreadsheet efficiently and appropriately when more complex (unfriendly) numbers or tasks are involved 1.2.7 use estimation strategies, including rounding, when an accurate answer is not required 1.2.8 determine whether an answer is reasonable by using estimation and the context of the problem 1.2.9 communicate solutions (oral and written), using language and symbols consistent with the context	
2	5-7	Length, mass and capacity	1.3.1 identify and discuss situations which involve using length, mass and capacity measures 1.3.2 determine whether an estimate or an accurate length, mass or capacity measurement is needed in everyday situations 1.3.3 choose appropriate measuring tools to solve everyday problems involving length, mass and capacity 1.3.4 use informal units of length, mass and capacity, (for example, hand span, stride, cups) to estimate, measure and compare the size of everyday things 1.3.5 develop and use a sense of size of commonly used standard length, mass and capacity units; for example, 1 cm, 1 m, 500 mL, 1L, 500 gm, 1 kg to estimate in familiar situations 1.3.6 understand standard units are divided into sub-units and recall commonly used relationships, such as 1cm = 10 mm; 1 m = 100 cm =1000 mm; 1L = 1000 ml; 1 kg = 1000 gm 1.3.7 choose which standard length, mass or capacity unit is appropriate for everyday contexts 1.3.8 use a variety of simple calibrated scales to measure and compare length, mass and capacity to the nearest whole number 1.3.9 add and subtract whole number length (including perimeter), mass and capacity measures, to solve everyday measurement problems	Practical Application 3 – Week 5 20% Response Item 5 – Week 7 10%

Term	Week	Topic and Key Teaching Points	Syllabus Content	Assessments
			1.3.10 determine whether an answer is reasonable by using estimation and the context of the problem 1.3.11 communicate solutions (oral and written) consistent with the language of the context	
2	8 - 9		**Exam period**	
2 3	10-11 1-2	Understanding fractions and decimals	2.1.1 identify and describe the purpose of fractions in various texts and media from everyday life and work 2.1.2 identify and describe the purpose of decimals in various texts and media from everyday life and work 2.1.3 read, write and count with fractions, including unit and common non-unit 2.1.4 understand the meaning and magnitude of commonly used fractions, and compare and order them 2.1.5 understand the link between unit fractions and division; for example, finding 1/4 of a quantity is the same as dividing by 4 2.1.6 use readily visualised equivalent fractions to compare and order the size of fractions 2.1.7 extend whole number place value to the right of the units place to understand decimal numbers as between consecutive whole numbers 2.1.8 use place value to understand the meaning and magnitude of commonly used decimal numbers 2.1.9 use patterns in the number system to read, write, count with and order familiar decimals numbers in everyday contexts involving money and measurements 2.1.10 recognise that fractions and decimals are used to name the same quantity in different ways 2.1.11 make connections between commonly used fractions and decimals to name the same quantity in different ways 2.1.12 determine and explain whether the magnitude of a fraction or decimal is reasonable within everyday contexts	Response Item 6 – Week 2 10%
3	3-6	Multiplication and division with whole numbers and money	2.2.1 determine whether an estimation or an exact answer is needed in everyday situations	Practical Application 4 – Week 4 15%

Term	Week	Topic and Key Teaching Points	Syllabus Content	Assessments
			2.2.2 choose when it is appropriate to use multiplication or division to solve a range of everyday problems; for example, repeated equal groups, arrays, area, volume and simple rates 2.2.3 understand and use the inverse relationship between multiplication and division to assist in mental calculation 2.2.4 understand, recall, use and extend basic multiplication and division facts to facilitate mental calculation 2.2.5 use mental calculation strategies, with informal jottings to keep track if required, to solve everyday problems involving multiplication and division, with simple whole numbers 2.2.6 use a calculator/spreadsheet efficiently and appropriately when more complex (unfriendly) numbers or tasks are involved 2.2.7 use estimation strategies, including rounding, when an exact answer is not required 2.2.8 interpret remainders resulting from division in relation to the context 2.2.9 determine whether an answer is reasonable by using estimation and the context of the problem 2.2.10 communicate solutions (oral and written) using language and symbols consistent with the context	Response Item 7 – Week 6 10%
3	7-8	Metric relationships	2.3.1 identify and describe the purpose of commonly used metric units within various everyday contexts 2.3.2 use prefix names of measurement units to work out the relationship with the base units: metre, gram and litre. For example: milli means a thousandth, kilo means times by a thousand 2.3.3 link decimal place value and the prefix names of metric units to read, write, compare and order length, mass and capacity measurement 2.3.4 use place value understanding to convert from one unit to another; that is, 250 mm = 25 cm 2.3.5 use relationships between decimals and fractions to convert from one unit to another; for example, 1500 mm is 1.5 m because 1000 = 1 metre and 500 is half a metre. (Note: perimeter, area and volume all use length measures 2.3.6 communicate measurements using units appropriate to the context	Response Item 8 – Week 8 10%

Term	Week	Topic and Key Teaching Points	Syllabus Content	Assessments
3 4	9-10 1	Perimeter, area and volume	2.4.1 identify and describe the purpose of perimeter, area and volume measures in everyday life and 2.4.2 determine whether an estimate or an accurate perimeter, area and volume measurement is needed in everyday situations 2.4.3 calculate perimeter by adding length measurements and connect this to the 2.4.4 measure area (including irregular shapes) by counting squares, and volume by counting cubes 2.4.5 connect the idea of counting squares for area with the formula of $A = l \times w$ 2.4.6 connect the idea of counting cubes for volume with the formula of $V = h \times l \times w$ 2.4.7 use perimeter and area formula for shapes based on rectangles, and volume formula for shapes based on rectangular 2.4.8 develop and use a sense of size of commonly used standard area and volume units; for example 2.4.9 estimate perimeter, area and volume in practical situations using familiar standard units and rounding 2.4.10 choose which standard perimeter, area or volume unit is appropriate for the context 2.4.11 determine whether an answer is reasonable for the context of the problem 2.4.12 communicate solutions (oral and written), using language and symbols consistent with the context	Practical Application 5 – Week 9 15% Response Item 9 – Week 1 10%
4	2-5	The probability of everyday events	2.5.1 identify and describe situations which involve the element of chance in everyday life and work 2.5.2 describe the likelihood of everyday chance events using terms such as certain, likely, equally likely, fifty/fifty, impossible 2.5.3 compare and order chance events from least likely to most likely, providing reasoning from personal experience or based on data 2.5.4 recognise and use the element of chance to make decisions in everyday life and work 2.5.5 explain decisions (oral and written) based on likelihood of events	Practical Application 6 – Week 4 20% Response Item 10 – Week 5 10%
4	6-7		**Exam period**	