

NSW Maths K-10 Syllabus for the Australian Curriculum

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Unit	Focus	Topic	Content	Outcomes
Number and Algebra				
1	Whole Number	Roman Numerals	<ul style="list-style-type: none"> Read and write roman numbers Identify difference between Hindu-Arabic and Roman number systems. Solve basic operation questions using Roman numbers Solve word problems involving roman number system 	<p>(MA3-5NA) selects and applies appropriate strategies for addition and subtraction with counting numbers of any size</p> <p>(MA3-6NA) selects and applies appropriate strategies for multiplication and division, and applies the order of operations to calculations involving more than one operation</p>
2	Addition	Adding 2-digit numbers	<ul style="list-style-type: none"> Select and apply efficient mental strategies to add 2-digit numbers Identify and use terms other than addition Solve addition word problems involving whole numbers 	(MA3-5NA) selects and applies appropriate strategies for addition and subtraction with counting numbers of any size
3	Addition	Adding powers of 10	<ul style="list-style-type: none"> Select and apply efficient mental strategies to add numbers up to 4-digits Identify and use terms other than addition Solve addition word problems involving whole numbers 	(MA3-5NA) selects and applies appropriate strategies for addition and subtraction with counting numbers of any size
4	Subtraction	Subtracting 2-digit numbers	<ul style="list-style-type: none"> Select and apply efficient mental strategies to subtract using 2 and 3-digit numbers Identify and use terms other than subtraction Solve subtraction word problems involving whole numbers 	(MA3-5NA) selects and applies appropriate strategies for addition and subtraction with counting numbers of any size
5	Subtraction	Subtracting powers of 10	<ul style="list-style-type: none"> Select and apply efficient mental strategies to subtract using 2, 3 and 4-digit numbers Identify and use terms other than subtraction Solve subtraction word problems involving whole numbers 	(MA3-5NA) selects and applies appropriate strategies for addition and subtraction with counting numbers of any size

6	Multiplication and Division	Multiplying and Dividing using Times Tables	<ul style="list-style-type: none"> Select and use efficient mental and written strategies, and digital technologies, to multiply and divide whole numbers of up to 3 digits by 1- and 2-digit numbers Identify and use terms other than multiply and divide Solve word problems involving multiplication and division 	(MA3-6NA) selects and applies appropriate strategies for multiplication and division, and applies the order of operations to calculations involving more than one operation
7	Multiplication	Multiplying by powers of 10	<ul style="list-style-type: none"> Use mental strategies to multiply numbers by 10, 100, 1000 and their multiples Multiply numbers by powers of 10 Identify and use terms other than multiply Solve word problems involving multiplication and division 	(MA3-6NA) selects and applies appropriate strategies for multiplication and division, and applies the order of operations to calculations involving more than one operation
8	Multiplication	Rounding and estimating	<ul style="list-style-type: none"> Estimate solutions to problems by rounding and check to justify solutions Round 2 and 3-digit numbers Solve word problems involving multiplication 	(MA3-6NA) selects and applies appropriate strategies for multiplication and division, and applies the order of operations to calculations involving more than one operation
9	Division	Dividing with remainders	<ul style="list-style-type: none"> Select and use efficient mental and written strategies to divide whole numbers of up to two digits by a one-digit divisor, including where there is a remainder Express remainders as fractions (simplest form) Express remainders as decimals Solve word problems involving division 	(MA3-6NA) selects and applies appropriate strategies for multiplication and division, and applies the order of operations to calculations involving more than one operation
10	Division	Dividing by powers of 10	<ul style="list-style-type: none"> Use mental strategies to divide numbers by 10, 100, 1000 and their multiples, including where there is a remainder Divide decimal numbers by powers of 10 Solve word problems involving division 	(MA3-6NA) selects and applies appropriate strategies for multiplication and division, and applies the order of operations to calculations involving more than one operation
11	Multiplication	Multiples	<ul style="list-style-type: none"> Identify and describe multiples of whole numbers and use them to solve problems Find the 8th and 20th multiple in a sequence Calculate the lowest common multiple Solve word problems using knowledge of multiples 	(MA3-6NA) selects and applies appropriate strategies for multiplication and division, and applies the order of operations to calculations involving more than one operation
12	Division	Factors and Common factors	<ul style="list-style-type: none"> Identify and describe factors of whole numbers and use them to solve problems Identify the highest common factor Solve word problems involving factors 	(MA3-6NA) selects and applies appropriate strategies for multiplication and division, and applies the order of operations to calculations involving more than one operation
13	Whole Numbers	Prime and composites	<ul style="list-style-type: none"> Determine whether a number is prime, composite or neither Calculate the number of prime numbers between two whole numbers Explain whether a whole number is prime, composite or neither 	(MA3-4NA) orders, reads and represents integers of any size and describes properties of whole numbers
14	Whole Numbers	Perfect squares and square roots	<ul style="list-style-type: none"> Model square numbers and square roots Calculate the square root of a whole number Solve word problems involving squares and 	(MA3-4NA) orders, reads and represents integers of any size and describes properties of whole numbers

			square roots	
15	Place Value	Place value and rounding off	<ul style="list-style-type: none"> Apply an understanding of place value and the role of zero to read and write numbers of any size Identify decimal place value Calculate the size difference according to place value Rounding numbers to nearest 10, 100, 1 000 and 10 000 	(MA3-4NA) orders, reads and represents integers of any size and describes properties of whole numbers
16	Fractions	Equality, simplest form and mixed numbers	<ul style="list-style-type: none"> Compare and order simple fractions with related denominators Convert fractions into their simplest form Convert an improper fraction to a mixed numeral Convert a mixed numeral to an improper fraction Select and apply efficient mental strategies to find a multiple fraction of a whole number Solve word problems involving fractions 	(MA3-7NA) compares, orders and calculates with fractions, decimals and percentages
17	Fractions	Addition and subtraction	<ul style="list-style-type: none"> Calculate the number of fractions within whole numbers Add and subtract fractions, including mixed numerals, where one denominator is the same Subtract fractions from a whole number Solve word problems involving fractions 	(MA3-7NA) compares, orders and calculates with fractions, decimals and percentages
18	Fractions	Finding fractions of an amount	<ul style="list-style-type: none"> Find a fraction of a quantity where the result is a whole number Solve word problems involving fractions 	(MA3-7NA) compares, orders and calculates with fractions, decimals and percentages
19	Decimals	Place value and rounding off	<ul style="list-style-type: none"> Round numbers to the nearest whole number, one and two decimal places. Identify decimal place value Calculate the size difference according to place value Round a number of up to three decimal places to the nearest whole number 	(MA3-7NA) compares, orders and calculates with fractions, decimals and percentages
20	Decimals	Addition and subtraction	<ul style="list-style-type: none"> Add and subtract decimals up to three decimal places Subtract decimal from one Solve word problems involving decimals 	(MA3-7NA) compares, orders and calculates with fractions, decimals and percentages
21	Fractions and Decimals	Fractions, decimals and percentages	<ul style="list-style-type: none"> Make connections between equivalent fractions, decimals and percentages Convert fraction to percentage Convert decimal to fraction (simplest form) Convert decimal into percentage Convert percentage into decimal Solve word problems involving decimals, fractions and percentages 	(MA3-7NA) compares, orders and calculates with fractions, decimals and percentages
22	Percentages	Percentages of an amount	<ul style="list-style-type: none"> Find a simple percentage of a quantity where the result is a whole number (1%, 5%, 10%, 20% and 90%) 	(MA3-7NA) compares, orders and calculates with fractions, decimals and percentages

			<ul style="list-style-type: none"> Solve word problems involving finding the simple percentage of a quantity 	
23	Equations	Number strings	<ul style="list-style-type: none"> Investigate and establish the order of operations Apply the order of operations to perform calculations involving mixed operations Calculate percentage of a whole number Calculate the square of a whole number Solve problems involving four basic operations of one- or two-digit numbers using efficient mental and written strategies 	<p>(MA3-5NA) selects and applies appropriate strategies for addition and subtraction with counting numbers of any size</p> <p>(MA3-6NA) selects and applies appropriate strategies for multiplication and division, and applies the order of operations to calculations involving more than one operation</p>
29	Money	Amounts and the four operations	<ul style="list-style-type: none"> Select and apply efficient mental strategies to add, subtract, multiply and divide amounts of money Solve addition word problems involving money 	<p>(MA3-5NA) selects and applies appropriate strategies for addition and subtraction with counting numbers of any size</p> <p>(MA3-6NA) selects and applies appropriate strategies for multiplication and division, and applies the order of operations to calculations involving more than one operation</p>
Measurement and Geometry				
24	Length and Perimeter	Conversions and missing sides	<ul style="list-style-type: none"> Convert between metres in decimal form and centimetres Convert centimetres to metres Convert millimetres to metres Convert metres to kilometres Calculate missing length, width or perimeter of rectangles from provided values Solve word problems involving length 	<p>(MA3-9MG) selects and uses the appropriate unit and device to measure lengths and distances, calculates perimeters, and converts between units of length</p>
25	Area	Concept and application	<ul style="list-style-type: none"> Calculate the areas of rectangles using familiar metric units Find missing dimension or area of rectangles Calculate the areas of triangles using familiar metric units Find missing dimension or area of triangles Identify true or false statement regarding area Solve word problems involving area 	<p>(MA3-10MG) selects and uses the appropriate unit to calculate areas, including areas of squares, rectangles and triangles</p>
26	Mass	Units and conversions	<ul style="list-style-type: none"> Convert decimal forms of mass into other forms Convert tonnes into grams Convert kilograms into grams Convert grams into kilograms Combine masses Solve word problems involving different units of mass 	<p>(MA3-12MG) selects and uses the appropriate unit and device to measure the masses of objects, and converts between units of mass</p>
27	Capacity and volume	Units and conversions	<ul style="list-style-type: none"> Convert millilitres and litres Convert litres (with fractions) to millilitres Convert decimals litres into millilitres Calculate the volumes of rectangular prisms in cubic centimetres and cubic metres Place capacities in order of size Solve word problems involving different units of 	<p>(MA3-11MG) selects and uses the appropriate unit to estimate, measure and calculate volumes and capacities, and converts between units of capacity</p>

			capacity	
28	Time	Digital/ analogue conversions and 24-hour time	<ul style="list-style-type: none"> Convert analogue to digital time Convert digital to analogue time Determine the duration of events Compare the local times in various time zones in Australia, including during daylight saving Convert between 24-hour time and time given using am or pm notation 	(MA3-13MG) uses 24-hour time and am and pm notation in real-life situations, and constructs timelines
30	Angles	Directions and angles	<ul style="list-style-type: none"> Identify and describe angle size in degrees for each of the classifications acute, obtuse and reflex Identify and name angle types formed by the intersection of straight lines, including right angles Calculating fractions of a full turn based on compass bearings 	(MA3-16MG) measures and constructs angles, and applies angle relationships to find unknown angles
Statistics and Probability				
31	Chance	Concepts of likelihood	<ul style="list-style-type: none"> Describe probabilities using fractions, decimals and percentages Describe the likelihood of a variety of events as being certain, likely, 50/50, unlikely or impossible. Express likelihood of an event as a fraction Express likelihood of an event as a decimal Solve word problems based on chance 	(MA3-19SP) conducts chance experiments and assigns probabilities as values between 0 and 1 to describe their outcomes
32	Revision			



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