

Maths Mate 7, 8, 9 to VELS level 5

VELS Mathematics Standards	Maths Mate Skills	Maths Mate 7 Questions	Maths Mate 8 Questions	Maths Mate 9 Questions
Number Level 5				
At level 5 students: <ul style="list-style-type: none"> Identify complete factor sets for large natural numbers 	<ul style="list-style-type: none"> Find complete factor sets for natural numbers 	#16: T1 - all wks T2 - wks 1,2,3,4	#16: T1 - wks 1,2, 3,4, 5,7 T2 - wks 1,2,3,4	
	<ul style="list-style-type: none"> Find the highest common factor (HCF) for two natural numbers 	#16: T2 - wks 5,6,7,8	#16: T1 - wks 6,8	
	<ul style="list-style-type: none"> Complete factor trees for natural numbers 	#16: T4 - wks 1,2,3,4	#16: T3 - wks 5,6,7,8	
	<ul style="list-style-type: none"> Find prime factors of a natural number 		#16: T3 - wks 1,4 T4 - wk 1	
<ul style="list-style-type: none"> Express natural numbers as products of powers of primes 	<ul style="list-style-type: none"> Express whole numbers as products of powers of prime numbers 		#16: T4 - wks 2,3,4,5, 6,7,8	#6: T4 - wks 1,2,3,4
<ul style="list-style-type: none"> Express natural numbers base 10 in binary form 	N/A	N/A	N/A	N/A
<ul style="list-style-type: none"> Add and multiply natural numbers in binary form 	N/A	N/A	N/A	N/A
<ul style="list-style-type: none"> Express rational numbers as fractions and decimals (finite and recurring) 	<ul style="list-style-type: none"> Write a fraction as a decimal number 		#11: T4 - wks 1,2	#6: T1 - wks 3,4
	<ul style="list-style-type: none"> Write a decimal number as a fraction in its simplest form 		#11: T4 - wks 3,4	#6: T2 - wks 5,6,7,8
<ul style="list-style-type: none"> Order rational numbers expressed in decimal form 	<ul style="list-style-type: none"> Compare and order decimal numbers 	#18: T2 - wks 7,8 T3 - wks 6,7,8 T4 - wks 2,3,4,5,6,7,8	#18: T2 - wks 2,3,4 T3 - all wks	#6: T3 - wks 5,6,7,8
<ul style="list-style-type: none"> Know the decimal equivalents for $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{1}{8}$, $\frac{1}{9}$ and use these to give decimal equivalents for rational numbers such as $\frac{4}{9}$ and 2 and $\frac{3}{8}$ 	<ul style="list-style-type: none"> Express fractions as decimals 		#18: T4 - wks 2,3,4,5,6,7	#6: T3 - wks 2,3,4,7,8
<ul style="list-style-type: none"> Evaluate natural numbers and simple fractions given in base-exponent form 	<ul style="list-style-type: none"> Evaluate powers of natural numbers 	#14: T1 - all wks T2 - all wks T4 - wks 1,4,5,8	#14: T1 - wks 1,3,5,7 T2 - wks 1,3,5,6, 7,8 T3 - wks 5,7 T4 - wks 1,3,5,6,7,8 #15: T4 - all wks	#9: T3 - wks 1,2,3,4 T4 - wks 1,2,3,4 #13: T1 - wks 1,2 T3 - wk 2 T4 - wks 5,7 #15: T2 - wks 1,2,3,4 T3 - all wks T4 - wks 1,2,3,4

VELS Mathematics Standards	Maths Mate Skills	Maths Mate 7 Questions	Maths Mate 8 Questions	Maths Mate 9 Questions
<ul style="list-style-type: none"> Find rational square roots of rational numbers that are perfect squares 	- Find square roots of rational numbers that are perfect squares	#14: T3 - all wks T4 - wks 2,3,6,7	#14: T1 - wks 2,4,6,8 T2 - wks 2,4 T3 - wks 1,2,3,4,6,8 T4 - wks 2,4	#14: T1 - all wks T2 - all wks T3 - wks 1,2,3,4 T4 - all wks
<ul style="list-style-type: none"> Write sequences of equivalent fractions for a fraction given in simplest form 	- Find equivalent fractions for a fraction given in simplest form	#11: T2 - wks 5,6,7,8	#11: T2 - wks 1,2,3,4 T4 - wks 5,7	
<ul style="list-style-type: none"> Understand ratio as set:set comparison (for example, the number of boys in a class:the number of boys in a class) 	- Find the ratio of two quantities	#13: T3 - wks 5,6,7,8 T4 - wks 5,6,7,8	#13: T2 - wks 5,6,7 T4 - wks 1,2,4	#12: T2 - wks 1,2,3,4 T3 - wks 1,2,3,4 T4 - wks 5,6,7,8
<ul style="list-style-type: none"> Understand ratio as subset:set comparison (for example, the number of girls in a class:the number of students in the class) and find integer proportions of these 	- Find one or more quantities when a ratio is given		#13: T2 - wk 8 T4 - wk 3	#12: T4 - wks 1,2,3,4
<ul style="list-style-type: none"> Determine proportions as percentages where these can be obtained directly as equivalent fraction with denominator 100 	- Express a number out of 100 as a percentage	#12: T1 - wks 1,2,3,4		#5: T3 - wks 1,2,3,4
	- Express a number out of another number as a percentage	#12: T4 - wks 5,6,7,8	#12: T1 - wks 5,6,7,8	
<ul style="list-style-type: none"> Carry out arithmetic computations involving natural numbers using mental and/or written algorithms with one- or two-digit divisors in case of division 	- Use order of operations involving natural numbers and basic operations	#15: all terms	#15: all terms	#9: all terms
	- Multiply and divide natural numbers	#6: all terms #7: all terms	#6: all terms #7: all terms	#10: all terms
<ul style="list-style-type: none"> Carry out arithmetic computations involving integers using mental and/or written algorithms with one- or two-digit divisors in case of division 	- Add and subtract integers	#19: T1 - wks 5,6,8 T4 - wks 5,6,7,8	#19: T1 - wks 1,2,3,4 T3 - wks 1,2,3,4 T4 - wks 1,3,6,	#7: all terms
	- Multiply and divide integers		#19: T3 - wks 5,6,7,8 T4 - wks 2,4,5,7	#8: all terms
<ul style="list-style-type: none"> Carry out arithmetic computations involving finite decimals using mental and/or written algorithms with one- or two-digit divisors in case of division 	- Add and subtract decimals	#8: all terms	#8: all terms	#1: all terms
	- Multiply and divide decimals	#9: all terms	#9: all terms	#2: all terms
<ul style="list-style-type: none"> Use calculators for arithmetic computations involving several operations on natural or rational numbers of any size 	N/A	N/A	N/A	N/A

VELS Mathematics Standards	Maths Mate Skills	Maths Mate 7 Questions	Maths Mate 8 Questions	Maths Mate 9 Questions
<ul style="list-style-type: none"> Carry out exact arithmetic computations involving common fractions 	- Add and subtract fractions	#10: all terms	#10: all terms	#3: all terms
	- Multiply and divide fractions	#11: T3 - wks 5,6,7,8 T4 - all wks	#11: T2 - wks 5,6,7,8 T3 - all wks	#4: all terms
<ul style="list-style-type: none"> Use knowledge of perfect squares when calculating and estimating squares of numbers 	- Calculate squares of numbers	#14: T1 - all wks T2 - all wks T4 - wks 1,4,5,8	#14: T1 - wks 1,3,5,7 T2 - wks 1,3,5,6,7,8 T3 - wks 5,7 T4 - wks 1,3 #15: T4 - all wks	#9: T3 - wks 1,3,4 T4 - wks 2,3,4 #13 T1 - wks 3,8
<ul style="list-style-type: none"> Use knowledge of perfect squares when calculating and estimating square roots of numbers 	- Calculate square roots of numbers	#14: T3 - all wks T4 - wks 2,3,6,7	#14: T1 - wks 2,4,6,8 T2 - wks 2,4 T3 - wks 1,2,3,4,6,8 T4 - wks 2,4	#14: all terms
<ul style="list-style-type: none"> Use scale multiples of π, π, in measurement formulas related to circles 	- Calculate the circumference of a circle		#29 T4 - wks 1,2,3,4	#27: T3 - wks 1,2,3,4 T4 - wks 7,8
	- Calculate the area of a circle		#30 T4 - wks 5,6,7,8	#28 T3 - wks 5,6,7,8
	- Calculate the volume of a cylinder			#29: T3 - wks 1,2,3,4
	- Calculate the surface area of a cylinder, cone and sphere			#30 T3 - wks 5,6,7,8 T4 - wks 5,6,7,8
<ul style="list-style-type: none"> Use a range of strategies for approximating the results of computations, such as front-end estimation, clustering around a common value, rounding, and seeking nearby numbers which are multiples of the divisor when doing division 	- Round whole numbers to a given place value	#18 T1 - wks 7,8	#15 T1 - wks 5,6	#15 T1 - wks 5,6,7,8 T2 - wks 5,6,7,8
	- Round decimal numbers to the nearest whole number	#18 T1 - wks 5,6 T3 - wks 1,2,3,4	#15 T1 - wks 7,8	#15 T1 - wks 1,2,3,4

VELS Mathematics Standards	Maths Mate Skills	Maths Mate 7 Questions	Maths Mate 8 Questions	Maths Mate 9 Questions
Space Level 5				
At level 5 students:				
<ul style="list-style-type: none"> Construct exactly two-dimensional and simple three-dimensional shapes according to specifications in terms of length, angle and adjacency 	<ul style="list-style-type: none"> Draw lines Draw two-dimensional and three-dimensional shapes according to specifications in terms of length and angle 	#26 T1 - wks 5,6,7	#26 T1 - wks 2,4	#24 T1 - wks 5,6,7,8
<ul style="list-style-type: none"> Relate similarity and congruence in the case of single transformations to enlargement from a common fixed point and the superimposition of geometric objects respectively 	<ul style="list-style-type: none"> Describe transformations of shapes 	#24 T3 - wks 5,6,7,8	#24 T4 - wks 1,2,3,4	
<ul style="list-style-type: none"> Form patterns of shapes including simple tessellations of a single shape, demonstrating an understanding of similarity and congruence 	<ul style="list-style-type: none"> Identify tessellating shapes 	#26 T3 - wks 5,6,7,8	#26 T3 - wks 5,6	
<ul style="list-style-type: none"> Use single-point perspective to make a two-dimensional representation of a simple three-dimensional object 	<ul style="list-style-type: none"> Draw a two-dimensional view of a solid 			#24: T2 - wks 5,6,7,8
<ul style="list-style-type: none"> Use two-dimensional nets to construct a simple three-dimensional object such as a prism or a platonic solid 	<ul style="list-style-type: none"> Identify nets of three-dimensional shapes 	#26 T3 - wk 3	#26 T4 - wks 5,6,7,8	#24: T2 - wks 1,2,3,4
<ul style="list-style-type: none"> Use the properties of lines, parallel lines and transversals of these lines to calculate angles that are supplementary, corresponding, allied and alternate 	<ul style="list-style-type: none"> Calculate angles that are supplementary, complementary, corresponding, allied and alternate 	#25 T3 - all wks T4 - all wks	#25 T1 - wks 5,6,7,8 T2 - wks 5,6,7,8 T3 - all wks T4 - all wks	#25: all terms
<ul style="list-style-type: none"> Describe and apply the properties of regular and irregular polygons, in particular triangles and quadrilaterals 	<ul style="list-style-type: none"> Recognise and draw polygons 	#26 T2 - wks 5,6,7,8	#26 T2 - wks 1,2,4,8	#24: T1 - all wks
	<ul style="list-style-type: none"> Describe properties of three-dimensional shapes 	#26 T3 - wks 1,2,3,4	#26 T1 - wks 1,3,5,6,7,8 T2 - wks 5,6,7,	#24: T3 - wks 5,6,7,8
	<ul style="list-style-type: none"> Describe properties of two-dimensional shapes 	#26 T1 - wks 1,2,3,4,8 T2 - wks 1,2,3,4 T4 - wks 1,2,3,4	#26 T2 - wk 3 T3 - wks 1,2,3,4	#24: T4 - wks 1,2,3,4
	<ul style="list-style-type: none"> Identify and draw lines of symmetry for two-dimensional shapes 	#26 T4 - wks 5,6,7,8	#26 T3 - wks 7,8 T4 - wks 1,2,3,4	#24: T4 - wks 5,6,7,8

VELS Mathematics Standards	Maths Mate Skills	Maths Mate 7 Questions	Maths Mate 8 Questions	Maths Mate 9 Questions
<ul style="list-style-type: none"> Use coordinates and quadrants to identify positions and directions in the plane 	- Use grid references and coordinates to describe location on a coordinate plane	#24 T1 - wks 5,6,7,8 T2 - wks 1,2,3,4 T4 - all wks	#24 T1 - all wks T2 - wks 1,2,3,4 T3 - wks 1,2,3,4 T4 - wks 5,6,7,8	#24: T3 - wks 1,2,3
<ul style="list-style-type: none"> Interpret and use lines, grids, contours, isobars, scales and bearings to specify location and direction on plans and maps 	- Specify location and direction on a map using scales and bearings	#24 T1 - wks 1,2,3,4 T2 - wks 5,6,7,8 T3 - wks 1,2,3,4	#24 T2 - wks 5,6,7,8 T3 - wks 5,6,7,8	#24: T3 - wk 4
<ul style="list-style-type: none"> Use networks, including tree diagrams, to specify relationships, including consideration of traversability of a network, such as the possible point-to-point flow of traffic through a set of one-way streets 	N/A	N/A	N/A	N/A
Measurement, chance and data Level 5				
At level 5 students:				
<ul style="list-style-type: none"> Accurately measure, using rational numbers in fractional and decimal form, the characteristics of length, perimeter, area, surface area, volume, capacity and angle in shapes and solids; and time and temperature 	- Read and use length and temperature scales			#26: T1 - wks 1,2,3,4
	- Select appropriate units of measurement			#26: T2 - wks 1,2,3,4
	- Measure angles using a protractor	#25 T1 - wks 1,2,3,4 T2 - wks 1,2,3,4	#25 T1 - wks 1,2,3,4	
	- Measure the side lengths of polygons	#29 T1 - wks 1,2,3,4,6 T3 - wks 1,3	#29 T1 - wks 1,2	
	- Read and interpret time zones		#24 T1 - wks 3,4	
	- Read and interpret timetables			#26: T3 - wks 5,6,7,8
<ul style="list-style-type: none"> Calculate, using rational and real numbers, formulas for relationships between measurement variables 	- Convert units of measurement for length	#28 T1 - wks 1,2,3,4 T2 - wks 5,6,7,8 T4 - wks 1,2,3,4,7	#28 T1 - wks 5,6,7,8 T3 - wks 5,6,7,8 T4 - wks 1,7,8	#26: T1 - wks 7,8 T2 - wks 5,6 T4 - wks 3,4
	- Convert units of measurement for mass	#28 T2 - wks 1,2,3,4 T4 - wk 8	#28 T2 - wks 5,6,7,8 T4 - wk 2	#26: T1 - wks 5,6 T4 - wks 1,2
	- Convert units of measurement for capacity	#28 T3 - wks 1,2,3,4 T4 - wk 5	#28 T2 - wks 1,2,3,4 T4 - wk 3	#26: T2 - wks 7,8
	- Converting units of measurement for time	#28 T1 - wks 5,6,7,8 T3 - wks 5,6,7,8 T4 - wk 6	#28 T1 - wks 1,2,3,4 T3 - wks 1,2,3,4 T4 - wks 4,5,6	#26: T3 - wks 1,2,3,4
	- Convert units of measurement for area			#26: T4 - wks 5,6,7,8

VELS Mathematics Standards	Maths Mate Skills	Maths Mate 7 Questions	Maths Mate 8 Questions	Maths Mate 9 Questions
<ul style="list-style-type: none"> Calculate, using rational and real numbers, formulas for area and circumference of circles 	- Calculate, using rational numbers and the formula, the circumference of a circle		#29 T4 - wks 1,2,3,4	#27: T3 - wks 1,2,3,4 T4 - wks 7,8
	- Calculate, using rational numbers and the formula, the area of a circle		#30 T4 - wks 5,6,7,8	#28 T3 - wks 5,6,7,8
<ul style="list-style-type: none"> Calculate, using rational and real numbers, formulas for area and perimeter of parallelograms and regular polygons 	- Calculate, using rational numbers and the formula, the perimeter of parallelograms (parallelogram, square, rectangle, rhombus)	#29 T3 - wk 7 T4 - wks 1,3,4	#29 T1 - wks 6,7 T2 - wks 1,7 T3 - wks 1,3	#27: T1 - wks 3,4,5,6,7,8 T2 - wks 1,5,6 T3 - wks 6,7 T4 - wks 1,2,3,4,5,6
	- Calculate, using rational numbers and the formula, the perimeter of other polygons (triangle, regular polygon, trapezium)	#29 T1 - wks 5,8 T2 - all wks T3 - wks 2,4,5,6,8 T4 - wks 2,5,6,7,8	#29 T1 - wks 3,4,5,8 T2 - wks 2,3,4,5,6,8 T3 - wks 2,4,5,6,7,8 T4 - wks 5,6,7,8	#27: T1 - wks 1,2 T2 - wks 2,3,4,7,8 T3 - wks 5,8
	- Calculate, using rational numbers and the formula, the area of parallelograms (parallelogram, square, rectangle, rhombus)	#30 T1 - wks 1,2,3,4 T2 - wks 1,2,3,4 T4 - wks 1,2,3,4	#30 T1 - wks 1,2,3,4 T3 - wks 1,2,3,4 T4 - wks 1,2,3,4	#28: T1 - all wks T2 - wks 5,6,7,8 T3 - wks 1,2 T4 - wks 2,5,7
	- Calculate, using rational numbers and the formula, the area of other polygons (triangle, regular polygon, trapezium)	#30 T1 - wks 5,6,7,8 T2 - wks 5,6,7,8 T3 - wks 1,2,3,4 T4 - wks 5,6,7,8	#30 T1 - wks 5,6,7,8 T2 - wks 1,3,5,6,7,8 T3 - wks 2,4,5,6,7,8	#28: T2 - wks 1,2,3,4 T3 - wks 3,4 T4 - wks 1,3,4,6,7,8
<ul style="list-style-type: none"> Calculate, using rational and real numbers, formulas for the surface area and volume (as cross-sectional area \times length dimension) of prisms 	- Calculate, using rational numbers and the formula, the surface area of prisms			#30: T1 - all wks T2 - wks 1,2,3,4 T3 - wks 1,2,3,4 T4 - wks 1,2,3,4
	- Calculate, using rational numbers and the formula, the volume of prisms			#29: T1 - all wks T2 - all wks T3 - wks 5,6,7,8 T4 - wks 5,6,7,8

VELS Mathematics Standards	Maths Mate Skills	Maths Mate 7 Questions	Maths Mate 8 Questions	Maths Mate 9 Questions
<ul style="list-style-type: none"> Evaluate the reasonableness of the accuracy of measurements and give lower and upper bounds for measurement values 	<ul style="list-style-type: none"> Estimate the area of a shape on a grid Estimate the size of an angle Draw a two-dimensional shape to scale and evaluate the reasonableness of the accuracy of measurements 	#30 T3 - wks 5,6,7,8 #25 T1 - wks 5,6,7,8 T2 - wks 5,6,7,8	#30 T1 - wks 2,4 #25 T2 - wks 1,2,3,4	#27 T1 - wks 7,8
<ul style="list-style-type: none"> Calculate absolute percentage error using the formula $\frac{\text{estimated value} - \text{actual value}}{\text{actual value}} \times 100$ and interpret this in measurement contexts 	N/A	N/A	N/A	N/A
<ul style="list-style-type: none"> Demonstrate comprehension of empirical probability as long-run experimental relative frequency 	<ul style="list-style-type: none"> Recognise the likelihood of an event 	#27 T1 - wks 5,6,7,8 T2 - wks 5,6,7,8	#27 T1 - wks 5,6	#23: T1 - wks 1,2,3,4 T4 - wks 3,4
<ul style="list-style-type: none"> Calculate theoretical probabilities of collections of outcomes in an event space for a random experiment 	<ul style="list-style-type: none"> Calculate the probability of an event 		#27 T1 - wks 7,8 T2 - wks 5,6,7,8	#23: T2 - all wks T3 - wks 1,2,3,4 T4 - wks 1,2
	<ul style="list-style-type: none"> Calculate the probability of an event using Venn diagrams and Karnaugh maps 		#27 T4 - wks 5,6,7,8	#23 T3 - wks 5,6,7,8
<ul style="list-style-type: none"> Are able to use symmetry and counting the outcomes in the collections and comparing them to the total number of possible outcomes in the event space 	<ul style="list-style-type: none"> Recognise and calculate the probability of complementary events 			#23: T1 - wks 5,6,7,8
	<ul style="list-style-type: none"> Calculate the probability of compound events using tree diagrams 			#23: T4 - wks 5,6,7,8
<ul style="list-style-type: none"> Use appropriate technology to generate random numbers for simple simulations 	N/A	N/A	N/A	N/A
<ul style="list-style-type: none"> Organise and present discrete (grouped and ungrouped) and continuous data, using by-hand approaches for small data sets and technology for larger data sets, to represent uni-variate data in dot plots, stem and leaf plots, bar charts and histograms as applicable 	<ul style="list-style-type: none"> Recognise discrete and continuous data 			#22: T3 - wks 5,6,7,8
	<ul style="list-style-type: none"> Interpret tables, bar graphs, line graphs, stem-and-leaf plots, dot plots and pie charts 	#27: T1 - wks 1,2,3,4 T2 - wks 1,2,3,4 T3 - all wks T4 - all wks	#27: T1 - wks 1,2,3,4 T2 - wks 1,2,3,4 T3 - all wks T4 - wks 1,2,3,4	#22: T1 - wks 5,6,7,8 T2 - wks 5,6,7,8 T4 - wks 1,2,3,4
<ul style="list-style-type: none"> Calculate summary statistics that describe measures of centre (mean, median, mode) and spread (range and mean absolute difference) and make simple inferences based on this data 	<ul style="list-style-type: none"> Calculate measures of centre (mean, median and mode) and measures of spread 			#22: T1 - wks 1,2,3,4 T2 - wks 1,2,3,4 T3 - wks 1,2,3,4 T4 - wks 5,6,7,8

VELS Mathematics Standards	Maths Mate Skills	Maths Mate 7 Questions	Maths Mate 8 Questions	Maths Mate 9 Questions
Structure Level 5				
At level 5 students: <ul style="list-style-type: none"> Identify collections of numbers as subsets of natural numbers, integers, rational numbers and real numbers 	N/A	N/A	N/A	N/A
<ul style="list-style-type: none"> Specify the relationships between these sets, and subsets of these sets, in terms of set complement, intersection, union and inclusion using Venn diagrams and tree diagrams as appropriate 	N/A	N/A	N/A	N/A
<ul style="list-style-type: none"> List the elements of the power set (the set of all subsets) of a given finite set and comprehend the partial-order relationship between these subsets with respect to inclusion 	N/A	N/A	N/A	N/A
<ul style="list-style-type: none"> Specify truth functions for the connectives <i>and</i>, <i>or</i>, <i>not</i>, <i>implication</i> and <i>equivalence</i> 	N/A	N/A	N/A	N/A
<ul style="list-style-type: none"> Specify the test of the quantifiers <i>none</i>, <i>some</i> and <i>all</i> in application to statements about elements of a given set 	N/A	N/A	N/A	N/A
<ul style="list-style-type: none"> Apply these to the specification of sets defined in terms of one or two attributes and to Boolean searches using simple combinations of the connectives <i>not</i>, <i>and</i>, <i>or</i>, <i>if ... then ...</i> in databases 	N/A	N/A	N/A	N/A
<ul style="list-style-type: none"> Use <i>ordered</i> pairs to specify coordinates on graphs and to describe relations between sets 	- Use ordered pairs to specify coordinates on Cartesian axes (graphs)			#21: T1 - wks 1,2,3,4 T2 - wks 1,2,3,4

VELS Mathematics Standards	Maths Mate Skills	Maths Mate 7 Questions	Maths Mate 8 Questions	Maths Mate 9 Questions
<ul style="list-style-type: none"> Apply commutative, associative, and distributive properties in rational and real-number arithmetic and, with respect to subtraction and division, give counter-examples where these properties do not apply 	N/A	N/A	N/A	N/A
<ul style="list-style-type: none"> Identify the identity element and inverse of an arbitrary number for the integers and rational numbers for their respective operations of addition and multiplication 	N/A	N/A	N/A	N/A
<ul style="list-style-type: none"> Apply these to the re-arrangement of simple mensuration formulas, and the demonstration of the equivalence between simple algebraic expressions, including equivalences of number expressed in base-exponent form 	N/A	N/A	N/A	N/A
<ul style="list-style-type: none"> Recognise and apply simple inverse geometric transformations of the plane such as translation, reflection, rotation and dilation 	- Describe transformation of geometric objects (translation, reflection, rotation, dilation)	#24: T3 - wks 5,6,7,8	#24: T4 - wks 1,2,3,4	
<ul style="list-style-type: none"> Identify a function as a one-to-one correspondence or a many-to-one correspondence between two sets 	N/A	N/A	N/A	N/A
<ul style="list-style-type: none"> Represent functions by lists of ordered pairs (tables of values), by plots of points on a set of Cartesian axes (graph), and through rules applied to a set of values 	- Represent functions by lists of ordered pairs in tables of values			#21: T1 - wks 5,6,7,8 T2 - wks 5,6,7,8
	- Represent functions by plots of points on a set of Cartesian axes			#21: T3 - wks 1,2,3,4 T2 - wks 1,2,3,4
<ul style="list-style-type: none"> Describe and specify the independent and dependent variable of a function and its domain and range 	- Find the X- and Y-intercepts of a linear graph			#21: T4 - all wks
<ul style="list-style-type: none"> Construct tables of values and draw graphs for functions specified by rules constructed from arithmetic operations, for example, $f(x) = 2x - 4$, $xy = 24$, $y = 2x$ and $y = x^2 - 3$ 	- Draw graphs for functions specified by rules constructed from arithmetic operations			#21: T3 - wks 5,6,7,8 T4 - wks 5,6,7,8

VELS Mathematics Standards	Maths Mate Skills	Maths Mate 7 Questions	Maths Mate 8 Questions	Maths Mate 9 Questions
<ul style="list-style-type: none"> Identify rules for such functions from tables of values and use these functions as models for practical situations, in particular, the use of linear functions to model situations where there is a constant rate of change 	N/A	N/A	N/A	N/A
<ul style="list-style-type: none"> They solve simple equations, such as $5x + 7 = 23$ and $4x^2 - 3 = 13$, that are amenable to solution by a sequence of inverse operations 	- Solve simple linear equations	#23: all terms	#23: all terms	#20: T1 - all wks T2 - all wks T3 - wks 1,2,3,4,6,8
	- Solve simple quadratic equations			#20: T3 - wks 5,7 T4 - wks 5,6,7,8
<ul style="list-style-type: none"> Determine the truth values for mathematical expressions, including simple inequalities such as whether the ordered pair (3.5,6) satisfies the inequality $x^2 > 2y$ 	- Solve simple linear inequalities			#20: T4 - wks 1,2,3,4