Key	same/refined	removed	new	moved

Note:

- the key applies to the content descriptions only
- v8.4 content descriptions may have been reordered to align with v9.0 content descriptions.

Version 8.4	Version 9.0
Achievement standard	**Achievement standard**
By the end of Year 10, students recognise the connection between simple and compound interest. They solve problems involving linear equations and inequalities. They make the connections between algebraic and graphical representations of relations. Students solve surface area and volume problems relating to composite solids. They recognise the relationships between parallel and perpendicular lines. Students apply deductive reasoning to proofs and numerical exercises involving plane shapes. They compare data sets by referring to the shapes of the various data displays. They describe bivariate data where the independent variable is time. Students describe statistical relationships between two continuous variables. They evaluate statistical reports. Students expand binomial expressions and factorise monic quadratic expressions. They find unknown values after substitution into formulas. They perform the four operations with simple algebraic fractions. Students solve simple quadratic equations and pairs of simultaneous equations. They use triangle and angle properties to prove congruence and similarity. Students use trigonometry to calculate unknown angles in right-angled triangles. Students list outcomes for multi-step chance experiments and assign probabilities for these experiments. They calculate quartiles and inter-quartile ranges	By the end of Year 10, students recognise the effect of approximations of real numbers in repeated calculations. They use mathematical modelling to solve problems involving growth and decay in financial and other applied situations, applying linear, quadratic and exponential functions as appropriate, and solve related equations, numerically and graphically. Students make and test conjectures involving functions and relations using digital tools. They solve problems involving simultaneous linear equations and linear inequalities in 2 variables graphically and justify solutions. Students interpret and use logarithmic scales representing small or large quantities or change in applied contexts. They solve measurement problems involving surface area and volume of composite objects. Students apply Pythagoras' theorem and trigonometry to solve practical problems involving right-angled triangles. They identify the impact of measurement errors on the accuracy of results. Students use mathematical modelling to solve practical problems involving proportion and scaling, evaluating and modifying models, and reporting assumptions, methods and findings. They use deductive reasoning, theorems and algorithms to solve spatial problems. Students interpret networks used to represent practical situations and describe connectedness Students plan and conduct statistical investigations involving bivariate data. Students represent the distribution of data involving 2 variables, using tables and scatter plots, and comment on possible association. They analyse inferences and conclusions in the media, noting potential sources of bias. Students compare the distribution of continuous numerical data using various displays, and discuss distributions in terms of centre, spread, shape and outliers. They apply conditional probability to solve problems involving compound events. Students design and conduct simulations involving conditional probability, using digital tools.

Strands	Content descriptions	Content descriptions	Strands
Number		recognise the effect of using approximations of real numbers in repeated calculations and compare the results when using exact representations AC9M10N01	Number
	connect the compound interest formula to repeated applications of simple interest using appropriate digital technologies ACMNA229		
Algebra	factorise algebraic expressions by taking out a common algebraic factor ACMNA230	expand, factorise and simplify expressions and solve equations algebraically, applying exponent laws involving products, quotients and powers of variables, and the distributive property AC9M10A01	Algebra
	simplify algebraic products and quotients using index laws ACMNA231		
	apply the four operations to simple algebraic fractions with numerical denominators ACMNA232		
	expand binomial products and factorise monic quadratic expressions using a variety of strategies ACMNA233 **Moved to Year 9**		
	solve linear inequalities and graph their solutions on a number line ACMNA236 **Moved to Year 8**	solve linear inequalities and simultaneous linear equations in 2 variables; interpret solutions graphically and communicate solutions in terms of the situation AC9M10A02	
	solve linear simultaneous equations, using algebraic and graphical techniques, including using digital technology ACMNA237		
	explore the connection between algebraic and graphical representations of relations such as simple quadratics, circles and exponentials using digital technology as appropriate ACMNA239	recognise the connection between algebraic and graphical representations of exponential relations and solve related exponential equations, using digital tools where appropriate AC9M10A03 **Moved from Year 10A**	
		use mathematical modelling to solve applied problems involving growth and decay, including financial contexts; formulate problems, choosing to apply linear, quadratic or exponential models; interpret solutions in terms of the situation; evaluate and modify models as necessary and report assumptions, methods and findings AC9M10A04	
		experiment with functions and relations using digital tools, making and testing conjectures and generalising emerging patterns AC9M10A05	
	solve simple quadratic equations using a range of strategies ACMNA241 **Moved to Year 9**		
	solve problems involving linear equations, including those derived from formulas ACMNA235 **Moved to Year 8**		
	substitute values into formulas to determine an unknown ACMNA234 **Moved to Year 7**		

Key	same/refined	removed	new	moved

Note:

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Version 8.4			Version 9.0	
	solve problems involving parallel and perpendicular lines ACMNA238			
Measurement	solve problems involving surface area and volume for a range of prisms, cylinders and composite solids ACMMG242		solve problems involving the surface area and volume of composite objects using appropriate units AC9M10M01	Measurement
			interpret and use logarithmic scales in applied contexts involving small and large quantities and change AC9M10M02	
	solve right-angled triangle problems including those involving direction and angles of elevation and depression ACMMG245		solve practical problems applying Pythagoras' theorem and trigonometry of right-angled triangles, including problems involving direction and angles of elevation and depression AC9M10M03	
			identify the impact of measurement errors on the accuracy of results in practical contexts AC9M10M04	
			use mathematical modelling to solve practical problems involving proportion and scaling of objects; formulate problems and interpret solutions in terms of the situation; evaluate and modify models as necessary, and report assumptions, methods and findings AC9M10M05	
Geometry	formulate proofs involving congruent triangles and angle properties ACMMG243		apply deductive reasoning to proofs involving shapes in the plane and use theorems to solve spatial problems AC9M10SP01	Space
	apply logical reasoning, including the use of congruence and similarity, to proofs and numerical exercises involving plane shapes ACMMG244			
			interpret networks and network diagrams used to represent relationships in practical situations and describe connectedness AC9M10SP02	
			design, test and refine solutions to spatial problems using algorithms and digital tools; communicate and justify solutions AC9M10SP03	
Statistics	evaluate statistical reports in the media and other places by linking claims to displays, statistics and representative data ACMSP253		analyse claims, inferences and conclusions of statistical reports in the media, including ethical considerations and identification of potential sources of bias AC9M10ST01	Statistics
	determine quartiles and interquartile range ACMSP248		compare data distributions for continuous numerical variables using appropriate data displays including boxplots; discuss the shapes of these distributions in terms of centre, spread, shape and outliers in the context of the data AC9M10ST02	
	construct and interpret box plots and use them to compare data sets ACMSP249			
	compare shapes of box plots to corresponding histograms and dot plots ACMSP250			
	use scatter plots to investigate and comment on relationships between two numerical variables ACMSP251		construct scatterplots and comment on the association between the 2 numerical variables in terms of strength, direction and linearity AC9M10ST03	
	investigate and describe bivariate numerical data where the independent variable is time ACMSP252		construct two-way tables and discuss possible relationship between categorical variables AC9M10ST04	
			plan and conduct statistical investigations of situations that involve bivariate data; evaluate and report findings with consideration of limitations of any inferences AC9M10ST05	
Probability	use the language of 'if ... then, 'given', 'of', 'knowing that' to investigate conditional statements and identify common mistakes in interpreting such language ACMSP247		use the language of "if ... then", "given", "of", "knowing that" to describe and interpret situations involving conditional probability AC9M10P01	Probability
	describe the results of two- and three-step chance experiments, both with and without replacements, assign probabilities to outcomes and determine probabilities of events. Investigate the concept of independence ACMSP246		design and conduct repeated chance experiments and simulations using digital tools to model conditional probability and interpret results AC9M10P02	

Considerations for planning for the first year of implementation

In the initial year of implementing the Australian Curriculum: Mathematics v9.0, teachers need to consider the implications of content changes as they transition from v8.4.

The table below:

- identifies changes between v8.4 and v9.0 that may influence the sequence of students' learning
- outlines considerations for planning teaching and learning programs for the first year of implementation.

Year 9 content in v8.4	Year 10 content in v9.0	Considerations
apply the distributive law to the expansion of algebraic expressions, including binomials, and collect like terms where appropriate ACMNA213	expand, factorise and simplify expressions and solve equations algebraically, applying exponent laws involving products, quotients and powers of variables, and the distributive property AC9M10A01	The following Year 10 v8.4 content description has been moved to Year 9 v9.0. Expand binomial products and factorise monic quadratic expressions using a variety of strategies ACMNA233 In the first year of implementation, students will not have engaged in the required prior knowledge of this concept. Consider including the v8.4 content in teaching and learning sequences.

Year 9 content in v8.4	Year 10 content in v9.0	Considerations
No content description.	solve linear inequalities and simultaneous linear equations in 2 variables; interpret solutions graphically and communicate solutions in terms of the situation AC9M10A02	The following Year 10 v8.4 content description has been moved to Year 8 v9.0. Solve linear inequalities and graph their solutions on a number line ACMNA236 For the first **two years** of implementation, students will not have engaged in the required prior knowledge of this concept. Consider including the v8.4 content in teaching and learning sequences.
	use mathematical modelling to solve applied problems involving growth and decay, including financial contexts; formulate problems, choosing to apply linear, quadratic or exponential models; interpret solutions in terms of the situation; evaluate and modify models as necessary and report assumptions, methods and findings AC9M10A04	The following Year 10 v8.4 content descriptions have been moved to other year levels in v9.0. Solve simple quadratic equations using a range of strategies ACMNA241 **Moved to Year 9** Solve problems involving linear equations, including those derived from formulas ACMNA235 **Moved to Year 8** Substitute values into formulas to determine an unknown ACMNA234 **Moved to Year 7** In the first year of implementation, students will not have engaged in the required prior knowledge of these concepts. Consider including all three v8.4 content descriptions into teaching and learning sequences.
solve problems involving simple interest ACMNA211	use mathematical modelling to solve applied problems involving growth and decay, including financial contexts; formulate problems, choosing to apply linear, quadratic or exponential models; interpret solutions in terms of the situation; evaluate and modify models as necessary and report assumptions, methods and findings AC9M10A04	In v9.0 financial contexts need to be provided for mathematical modelling. Students need to understand the language, processes, concepts and relationships relevant to that context. For example, calculating the appreciation and/or depreciation requires an understanding of terms such as appreciation, depreciation, asset, base value, cost, price, days held, rate, diminishing value, compound, effective life and per annum.