Year 10 curriculum planning — Mathematics

ACiQ | v9.0

Mapping Australian Curriculum v9.0: Year 10 Mathematics to QCAA senior Mathematics syllabuses

This resource outlines connections between achievement standards and content descriptions in the Australian Curriculum v9.0: Year 10 Mathematics and mathematical knowledge and skills in QCAA senior Mathematics syllabuses.

Schools can use this resource to inform curriculum planning and professional discussion about their Year 10 Mathematics program. It does not prescribe a particular Year 10 program or sequence of learning. Rather, it is intended to support conversations about:

- the knowledge and skills students may need to consolidate before starting a specific senior Mathematics subject
- the role of Year 10 curriculum planning in supporting students to access a range of senior Mathematics pathways
- opportunities to engage with the Optional content for post-Year 10 Mathematics pathways.[1]

Mapping Year 10 to senior Mathematics

Australian Curriculum v9.0: Year 10 Mathematics		Senior Mathematics syllabuses			
Achievement standard aspect	**Content description**	**Essential Mathematics**	**General Mathematics**	**Mathematical Methods**	**Specialist Mathematics**
Students recognise the effect of approximations of real numbers in repeated calculations	recognise the effect of using approximations of real numbers in repeated calculations and compare the results when using exact representations AC9M10N01	☒	☒	☒	☒
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	expand, factorise and simplify expressions and solve equations algebraically, applying exponent laws involving products, quotients and powers of variables, and the distributive property AC9M10A01	☐	☐	☒	☒
	recognise the connection between algebraic and graphical representations of exponential relations and solve related exponential equations, using digital tools where appropriate AC9M10A03	☐	☐	☒	☒
	use mathematical modelling to solve applied problems involving growth and decay, including financial contexts;	☐	☒	☒	☒

[1] The Optional content is not an Australian Curriculum requirement but may support student understanding and preparation for senior Mathematics pathways.

CC BY

261155

Australian Curriculum v9.0: Year 10 Mathematics		Senior Mathematics syllabuses			
Achievement standard aspect	**Content description**	**Essential Mathematics**	**General Mathematics**	**Mathematical Methods**	**Specialist Mathematics**
	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				
They make and test conjectures involving functions and relations using digital tools	experiment with functions and relations using digital tools, making and testing conjectures and generalising emerging patterns AC9M10A05	☐	☐	☒	☒
They solve problems involving simultaneous linear equations and linear inequalities in 2 variables graphically and justify solutions	solve linear inequalities and simultaneous linear equations in 2 variables; interpret solutions graphically and communicate solutions in terms of the situation AC9M10A02	☐	☒	☒	☒
They interpret and use logarithmic scales representing small or large quantities or change in applied contexts	interpret and use logarithmic scales in applied contexts involving small and large quantities and change AC9M10M02	☐	☐	☒	☒
They solve measurement problems involving surface area and volume of composite objects	solve problems involving the surface area and volume of composite objects using appropriate units AC9M10M01	☒	☒	☒	☒
They apply Pythagoras' theorem and trigonometry to solve practical problems involving right-angled triangles	solve practical problems applying Pythagoras' theorem and trigonometry of right-angled triangles, including problems involving direction and angles of elevation and depression AC9M10M03	☒	☒	☒	☒
They identify the impact of measurement errors on the accuracy of results	identify the impact of measurement errors on the accuracy of results in practical contexts AC9M10M04	☒	☒	☐	☒

Australian Curriculum v9.0: Year 10 Mathematics		Senior Mathematics syllabuses			
Achievement standard aspect	**Content description**	**Essential Mathematics**	**General Mathematics**	**Mathematical Methods**	**Specialist Mathematics**
They use mathematical modelling to solve practical problems involving proportion and scaling, evaluating and modifying models, and reporting assumptions, methods and findings	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	☒	☒	☒	☒
They use deductive reasoning, theorems and algorithms to solve spatial problems	apply deductive reasoning to proofs involving shapes in the plane and use theorems to solve spatial problems AC9M10SP01	☐	☐	☐	☒
	design, test and refine solutions to spatial problems using algorithms and digital tools; communicate and justify solutions AC9M10SP03	☐	☒	☐	☐
They interpret networks used to represent practical situations and describe connectedness	interpret networks and network diagrams used to represent relationships in practical situations and describe connectedness AC9M10SP02	☐	☒	☐	☐
They plan and conduct statistical investigations involving bivariate data	plan and conduct statistical investigations of situations that involve bivariate data; evaluate and report findings with consideration of limitations of any inferences AC9M10ST05	☐	☒	☒	☒
They represent the distribution of data involving 2 variables, using tables and scatter plots, and comment on possible association	construct scatterplots and comment on the association between the 2 numerical variables in terms of strength, direction and linearity AC9M10ST03	☒	☒	☒	☐
	construct two-way tables and discuss possible relationship between categorical variables AC9M10ST04	☐	☒	☐	☐
They analyse inferences and conclusions in the media, noting potential sources of bias	analyse claims, inferences and conclusions of statistical reports in the media, including ethical considerations and identification of potential sources of bias AC9M10ST01	☒	☒	☒	☒

Australian Curriculum v9.0: Year 10 Mathematics		Senior Mathematics syllabuses			
Achievement standard aspect	**Content description**	**Essential Mathematics**	**General Mathematics**	**Mathematical Methods**	**Specialist Mathematics**
They compare the distribution of continuous numerical data using various displays, and discuss distributions in terms of centre, spread, shape and outliers	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	☒	☒	☒	☒
They apply conditional probability to solve problems involving compound events	use the language of "if … then", "given", "of", "knowing that" to describe and interpret situations involving conditional probability AC9M10P01	☐	☐	☒	☒
They design and conduct simulations involving conditional probability, using digital tools	design and conduct repeated chance experiments and simulations using digital tools to model conditional probability and interpret results AC9M10P02	☒	☐	☒	☒

Mapping Optional content for post-Year 10 Mathematics pathways to senior Mathematics

Optional content for post-Year 10 Mathematics pathways	Senior Mathematics syllabuses			
Suggested Optional content	**Essential Mathematics**	**General Mathematics**	**Mathematical Methods**	**Specialist Mathematics**
operations on numbers involving fractional exponents and surds	☐	☐	☒	☒
simplification of combinations of linear expressions with rational coefficients and the solution of related equations	☐	☒	☒	☒
algebraic representations of quadratic functions of the form $f(x) = ax^2 + bx + c$ where a, b and c are non-zero integers, and their transformation to the form $f(x) = a(x + h)^2 + k$ where h and k are non-zero rational numbers, and the solution of related equations	☐	☐	☒	☒
the graphs of $y = \sin(x)$ and $y = \cos(x)$ as functions of a real variable and the solution of related equations	☐	☐	☒	☒
the inverse relationship between exponential functions and logarithmic functions and the solution of related equations	☐	☐	☒	☒
the effect of increasingly small changes in the value of variables on the average rate of change and in relation to limiting values	☐	☒	☒	☒
relationships between angles and various lines associated with circles (radii, diameters, chords, tangents)	☐	☐	☐	☒
measures of spread, their interpretation and usefulness with respect to different data distributions	☒	☒	☒	☒
counting principles, and factorial notation as a representation that provides efficient counting in multiplicative contexts, including calculations of probabilities	☐	☐	☒	☒

© State of Queensland (QCAA) 2026

Licence: https://creativecommons.org/licenses/by/4.0 | **Copyright notice:** www.qcaa.qld.edu.au/copyright — lists the full terms and conditions, which specify certain exceptions to the licence. | **Attribution:** © State of Queensland (QCAA) 2026 www.qcaa.qld.edu.au/copyright.

Unless otherwise indicated, material from Australian Curriculum is © ACARA 2010–present, licensed under CC BY 4.0. For the latest information and additional terms of use, please check the Australian Curriculum website and its copyright notice.