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School Curriculum
and Standards
Authority

The Authority

Kindergarten to Year 10

Years 11 and 12

Student

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Year 8 SyllabusTest

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Year Level Description

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- ☒ Year level descriptors
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Year Levels

- ☒ Select All

Strands

- ☒ Select All
- ☒ Statistics and Probability
- ☒ Measurement and Geometry
- ☒ Number and Algebra

General Capabilities

- ☒ Select All
- ☒ Literacy
- ☒ Numeracy
- ☒ Information and Communication Technology (ICT) capability

Year 8 Syllabus

Year Level Descriptors

The proficiency strands of **number and algebra**, **measurement and geometry**, **statistics and probability** and **reasoning** are an integral part of the mathematics curriculum. The proficiency strands provide the language and context for the content and the mathematical proficiencies. The proficiency strands provide the language and context for the content and the mathematical proficiencies.

At this year level:

- **understanding** includes understanding of the relationships between decimals, identifying patterns in arithmetic, connecting the purpose of statistics to the real world area
- **fluency** includes fluency with integers; recognising and using recurring decimal notation; evaluating perimeter and area of two-dimensional objects
- **problem-solving** includes problem-solving involving ratios, percentages and using two-way tables
- **reasoning** includes reasoning about the reasonableness of results, deriving and using formulas

- ✔ Critical and creative thinking
- ✔ Personal and social capability
- ✔ Ethical understanding
- ✔ Intercultural understanding

deduce properties of populations.

Number and Algebra


NUMBER AND PLACE VALUE

Use index notation for powers of numbers to establish index laws with positive integral indices and zero index [\(ACMNA183\)](#)

Numeracy

Carry out the four operations with rational numbers and integers using efficient mental and written strategies and appropriate digital technologies [\(ACMNA183\)](#)

Numeracy

 Information and Communication Technology (ICT) capability

REAL NUMBERS

Investigate terminating and recurring decimals
([ACMNA184](#))

 Numeracy


Investigate the concept of irrational numbers including π ([ACMNA](#)


 Numeracy

Solve problems involving the use of percentages including percentage increases and decreases with and without digital technologies
([ACMNA187](#))

 Literacy

 Numeracy

 Information and Communication Technology (ICT) capability


 Critical and creative thinking


Solve a range of

problems involving
and ratios, with and
without digital
technologies
[\(ACMNA188\)](#)

 Literacy

 Numeracy

 Information and
Communication Techno
(ICT) capability


 Critical and creativ
thinking


MONEY AND FINANCIAL MATHEMATICS

Solve problems involv
profit and loss, with
without digital
technologies
[\(ACMNA189\)](#)

 Literacy

 Numeracy

 Information and
Communication Techno
(ICT) capability

 Critical and creativ
thinking

PATTERNS AND ALGEBRA

Extend and apply the distributive law to the expansion of algebraic expressions [\(ACMNA190\)](#)

 Numeracy

Factorise algebraic expressions by identifying numeric factors [\(ACMNA191\)](#)

 Numeracy


Simplify algebraic expressions involving four operations [\(ACMNA192\)](#)

 Numeracy

LINEAR AND NON-LINEAR RELATIONSHIPS


Plot linear relations on the Cartesian plane with and without the aid of digital technology [\(ACMNA193\)](#)

 Numeracy

 Information and
Communication Techn
(ICT) capability

Solve linear equations
using algebraic and
graphical techniques
Verify solutions by
substitution ([ACMNA](#)

 Numeracy

 Critical and creative
thinking

Year 8 Achievement

Number and Algebra

At Standard, students
percentages. They
describe rational ar
loss. Students make
expressions. They u
operations with inte
solve linear equations

Measurement and

Students solve problems involving perimeter and area of triangles and deduce the area of circles and calculate the perimeter and area of circles and calculate the area of circles and calculate the area of circles

Statistics and Probability

Students model real-world situations and choose appropriate statistical measures to represent the data and calculate the standard deviation and calculate the standard deviation

The proficiency strands **understanding, fluency, problem-solving** are developed across the three content strands: number and algebra, measurement and geometry, and statistics and probability. The proficiency strands reinforce the significance of working mathematically and provide the language to build in the development of mathematical proficiency. The achievement standards reflect the content and encompass the proficiency strands.

At this year level:

- **understanding** includes describing patterns involving indices and powers, operations with algebra and arithmetic, connecting rules for operations, statistical measures and explaining measurements of perimeter and area
- **fluency** includes calculating accurately with simple decimals and fractions including recurring decimals; factorising numbers and areas of common shapes and volumes of three-dimensional figures

- **problem-solving** includes formulating and modelling practical problems, calculating the perimeters of common shapes and using two-way tables and
- **reasoning** includes justifying the result of a calculation or estimation, using congruence to deduce properties of triangles

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