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# Year 7 SyllabusTest

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**Year Level Description**

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### Year Levels

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### Strands

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- Statistics and Probability
- Measurement and Geometry
- Number and Algebra

### General Capabilities

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- Literacy
- Numeracy
- Information and Communication Technology (ICT) capability

# Year 7 Syllabus

## Year Level Descriptions

The proficiency strands of **reasoning** are an important part of the mathematics curriculum. The strands are: number and algebra, measurement and geometry, and statistics and probability. The proficiency strands provide the language for describing mathematics. The strands are the proficiencies.

At this year level:

- **understanding** includes understanding numbers, recognising ratios, plotting points on a transversal cross-section, and understanding numbers to algebra.
- **fluency** includes fluency with decimals in various contexts, tendency and calculation, and fluency with numbers and measurement, symmetry, calculation, chance experiments, and fluency with numbers and measurement.
- **problem-solving** includes problem-solving with numbers and measurement, symmetry, calculation, chance experiments, and fluency with numbers and measurement.
- **reasoning** includes reasoning with geometric facts, triangles, ratio and interpretation.

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

## NUMBER AND PLACE VALUE

Investigate index notation and represent whole numbers as products of powers of prime numbers  
[\(ACMNA149\)](#)

 Numeracy

Investigate and use square roots of perfect square numbers  
[\(ACMNA150\)](#)

 Numeracy

Apply the associative, commutative and distributive laws to mental and written computation  
[\(ACMNA151\)](#)

 Numeracy

Compare, order, and subtract integers  
([ACMNA280](#))

 Numeracy

## REAL NUMBERS

Compare fractions and their equivalence. Locate and represent positive and negative fractions and mixed numbers on a number line ([ACMNA153](#))

 Literacy

 Numeracy

Solve problems involving addition and subtraction of fractions, including those with unrelated denominators  
([ACMNA153](#))

 Literacy

 Numeracy

 Critical and creative thinking

Multiply and divide

fractions and decimals  
using efficient written  
strategies and digital  
technologies

[\(ACMNA154\)](#)

 Numeracy

 Information and  
Communication Techno  
(ICT) capability

Express one quantity  
as a fraction of another  
with and without the  
aid of digital technology

[\(ACMNA155\)](#)

 Numeracy

 Information and  
Communication Techno  
(ICT) capability

Round decimals to  
a specified number of  
decimal places

[\(ACMNA156\)](#)

 Numeracy

Connect fractions,  
decimals and

percentages and ca  
out simple conversi  
[\(ACMNA157\)](#)

 Numeracy

 Information and  
Communication Technr  
(ICT) capability

Find percentages o  
quantities and expr  
one quantity as a  
percentage of anot  
with and without di  
technologies  
[\(ACMNA158\)](#)

 Numeracy

 Information and  
Communication Technr  
(ICT) capability

Recognise and solv  
problems involving  
simple ratios  
[\(ACMNA173\)](#)

 Literacy

 Numeracy

 Critical and creativ

thinking

## MONEY AND FINANCIAL MATHEMATICS

Investigate and calculate 'best buys', with and without digital technologies  
[\(ACMNA174\)](#)

 Literacy

 Numeracy

 Information and Communication Technology (ICT) capability

 Critical and creative thinking

## PATTERNS AND ALGEBRA

Introduce the concept of variables as a way of representing numbers using letters  
[\(ACMNA175\)](#)

 Critical and creative thinking

Create algebraic

expressions and evaluate them by substituting a given value for each variable [\(ACMNA176\)](#)

 Numeracy

 Critical and creative thinking

Extend and apply the laws and properties of arithmetic to algebraic terms and expressions [\(ACMNA177\)](#)

 Literacy

 Numeracy

 Critical and creative thinking

## LINEAR AND NON-LINEAR RELATIONSHIPS

Given coordinates, points on the Cartesian plane, and find coordinates for a given point [\(ACMNA178\)](#)

 Numeracy

 Critical and creative thinking

Solve simple linear equations ([ACMNA1](#))

 Numeracy

 Critical and creative thinking

Investigate, interpret and analyse graphs from authentic data ([ACMNA180](#))

 Literacy

 Numeracy

 Critical and creative thinking

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## Year 7 Achievement

### Number and Algebra

At Standard, students perform subtraction of integers using index notation and Students use fractions to express one quantity

problems involving  
They [compare](#) the c  
numbers using vari  
algebra. Students a  
interpret simple line  
[solve](#) simple linear  
substitution.

### **Measurement and**

Students [describe](#) c  
transformations in t  
involving angles for  
the area and perim  
Students classify tr  
formed by a transve

### **Statistics and Pro**

Students [identify](#) is  
stem-and-leaf plots  
median and mean i  
for data sets. Stude  
equally likely outco

The proficiency strands **understanding, fluency, problem-s**  
content across the three content strands: number and algebra,  
proficiencies reinforce the significance of working mathematica  
or developed. They provide the language to build in the develop

achievement standards reflect the content and encompass the

At this year level:

- **understanding** includes describing patterns in uses of integers, fractions, decimals, percentages and ratios, plotting points on a coordinate plane, identifying the intersection of two lines, and connecting the laws and properties of angles
- **fluency** includes calculating accurately with integers, representing data, finding measures of central tendency and calculating area and volume
- **problem-solving** includes formulating and solving authentic problems, identifying symmetry, calculating angles and conducting experiments
- **reasoning** includes applying the number laws to calculations, identifying congruence in shapes, applying an understanding of ratio and interpreting data

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