

The Australian Curriculum Mathematics

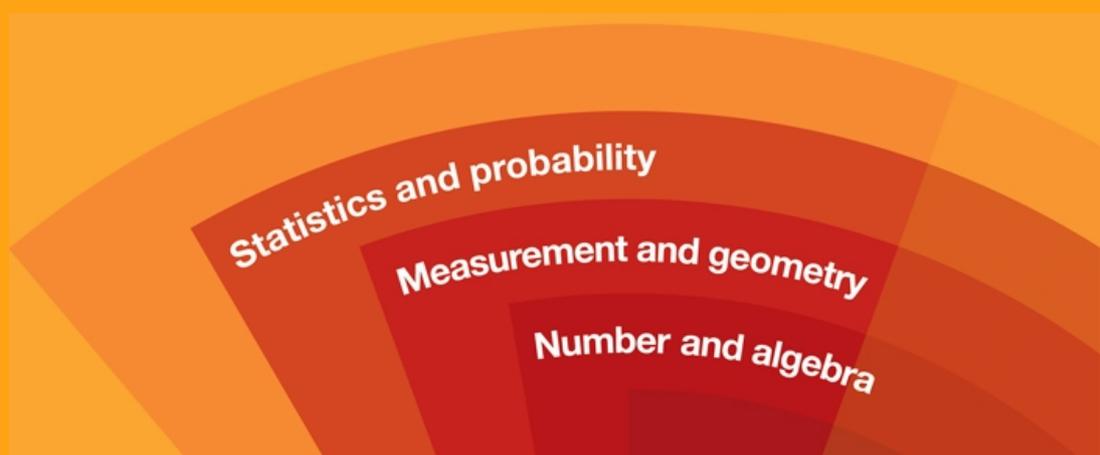




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Year 4

The proficiency strands **Understanding, Fluency, Problem Solving and Reasoning** are an integral part of mathematics content across the three content strands: **Number and Algebra, Measurement and Geometry, and Statistics and Probability**. The proficiencies reinforce the significance of working mathematically within the content and describe how the content is explored or developed. They provide the language to build in the developmental aspects of the learning of mathematics.

At this year level:

Understanding includes making connections between representations of numbers, partitioning and combining numbers flexibly, extending place value to decimals, using appropriate language to communicate times, and describing properties of symmetrical shapes

Fluency includes recalling multiplication tables, communicating sequences of simple fractions, using instruments to measure accurately, creating patterns with shapes and their transformations, and collecting and recording data

Problem Solving includes formulating, modelling and recording authentic situations involving operations, comparing large numbers with each other, comparing time durations, and using properties of numbers to continue patterns

Reasoning includes using generalising from number properties and results of calculations, deriving strategies for unfamiliar multiplication and division tasks, comparing angles, communicating information using graphical displays and evaluating the appropriateness of different displays

Number and Algebra	Measurement and Geometry	Statistics and Probability
Number and place value	Using units of measurement	Chance
Investigate and use the properties of odd and even numbers (ACMNA071) 	Use scaled instruments to measure and compare lengths, masses, capacities and temperatures (ACMMG084) 	Describe possible everyday events and order their chances of occurring (ACMSP092) 
Recognise, represent and order numbers to at least tens of thousands (ACMNA072) 	Compare objects using familiar metric units of area and volume (ACMMG290) 	Identify everyday events where one cannot happen if the other happens (ACMSP093) 
Apply place value to partition, rearrange and regroup numbers to at least tens of thousands to assist calculations and solve problems (ACMNA073) 	Convert between units of time (ACMMG085) 	Identify events where the chance of one will not be affected by the occurrence of the other (ACMSP094) 

<p>Investigate number sequences involving multiples of 3, 4, 6, 7, 8, and 9 (ACMNA074)</p> 	<p>Use am and pm notation and solve simple time problems (ACMMG086)</p> 	<p>Data representation and interpretation</p> <p>Select and trial methods for data collection, including survey questions and recording sheets (ACMSP095)</p> 
<p>Recall multiplication facts up to 10×10 and related division facts (ACMNA075)</p>	<p>Shape</p> <p>Compare the areas of regular and irregular shapes by informal means (ACMMG087)</p> 	<p>Construct suitable data displays, with and without the use of digital technologies, from given or collected data. Include tables, column graphs and picture graphs where one picture can represent many data values (ACMSP096)</p> 
<p>Develop efficient mental and written strategies and use appropriate digital technologies for multiplication and for division where there is no remainder (ACMNA076)</p> 	<p>Compare and describe two dimensional shapes that result from combining and splitting common shapes, with and without the use of digital technologies (ACMMG088)</p> 	<p>Evaluate the effectiveness of different displays in illustrating data features including variability (ACMSP097)</p> 
<p>Fractions and decimals</p>	<p>Location and transformation</p>	
<p>Investigate equivalent fractions used in contexts (ACMNA077)</p> 	<p>Use simple scales, legends and directions to interpret information contained in basic maps (ACMMG090)</p> 	
<p>Count by quarters halves and thirds, including with mixed numerals. Locate and represent these fractions on a number line (ACMNA078)</p> 	<p>Create symmetrical patterns, pictures and shapes with and without digital technologies (ACMMG091)</p> 	

Recognise that the place value system can be extended to tenths and hundredths. Make connections between fractions and decimal notation (ACMNA079)



Geometric reasoning

Compare angles and classify them as equal to, greater than or less than a right angle (ACMMG089)



Money and financial mathematics

Solve problems involving purchases and the calculation of change to the nearest five cents with and without digital technologies (ACMNA080)



Patterns and algebra

Explore and describe number patterns resulting from performing multiplication (ACMNA081)



Solve word problems by using number sentences involving multiplication or division where there is no remainder (ACMNA082)



Use equivalent number sentences involving addition and subtraction to find unknown quantities (ACMNA083)

