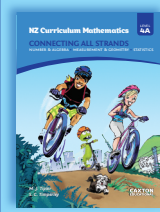


Mapping

National Standards Year 7

In contexts that require them to solve problems or model situations, students will be able to:

Note: The year 7 National Standards are fully covered by NZ Mathematics Curriculum – Connecting all strands book 4A.



NZ Curriculum Mathematics – Connecting all strands Level 4A

Number and Algebra

Apply additive and multiplicative strategies flexibly to whole numbers, ratios, and equivalent fractions (including percentages).

1 Working with whole numbers

- Multiples and factors
- Multiplication strategies
- Division strategies
- Choosing a strategy for multiplication and division
- Using all four operations

3 Fractions

- Fraction greater than 1
- Equivalent fractions
- Adding and subtracting fractions with the same or similar denominators
- Ordering fractions using number lines and benchmarks
- Fraction of whole numbers

5 Percentages, fractions and decimals

- Understanding percentages as fractions
- Percentages, fractions and decimals
- Finding percentages of quantities

6 Introducing ratios

- Understanding ratios
- Equivalent ratios
- Using ratios

Balance positive and negative amounts.

2 Integers

- Using negative numbers
- Reading integers on scales
- Putting integers in order
- Adding and subtracting integers

Apply additive strategies to decimals.

4 Decimals

- Decimal place value
- Decimals on the number line
- Ordering decimals using place value
- Adding and subtracting decimals
- Choosing a strategy to add and subtract decimals

Find and represent relationships in spatial and number patterns, using:

- tables and graphs
- general rules for linear relationships.

8 Relationships and patterns

- Applying general rules to find unknown numbers
- Using tables graphs and rules to describe linear relationships
- Number patterns

Mapping

New Zealand Curriculum Level 4

NZ Curriculum Mathematics –
Connecting all strands Level 4A

Measurement and Geometry

Measure time and the attributes of objects, using metric and other standard measures.

9 Time, Timetables and charts

- am/pm time and 24-hour time
- Time calculations
- Timetables and charts

10 Using measures

- Choosing units and devices
- Estimating measurements
- Reading scales
- Estimating and measuring

14 Angles

- Angles
- What is the angle?
- Measuring angles
- Drawing angles
- Naming angles
- Angle problems

Make simple conversions between units, using whole numbers.

11 Converting between units

- Metric conversions
 - Converting larger to smaller units
 - Converting smaller to larger units
 - Mixed conversions

Use side or edge lengths to find the perimeters and areas of rectangles and parallelograms and the volumes of cuboids.

12 Perimeter and area

- Perimeter
- Area
- Area by counting squares
- Area of rectangles, squares and parallelograms
- Areas of shapes made from rectangles and squares

13 Volume

- Volume, mass and capacity

Identify and describe the transformations that have produced given shapes or patterns.

15 Symmetry and transformations

- Line symmetry
- Rotational symmetry
- Rotation, translation and reflection
- Enlargement
- Recognising transformations in patterns
- Tessellations

Mapping

New Zealand Curriculum Level 4	NZ Curriculum Mathematics – Connecting all strands Level 4A
<p>Given whole-number dimensions sort two - and three-dimensional shapes into classes, defining properties and justifying the decisions made.</p> <p>Create or identify nets for rectangular prisms and other simple solids.</p> <p>Draw plan, front, side, and perspective views of objects.</p>	<p>16 Shape</p> <ul style="list-style-type: none"> • Properties of triangles • Properties of quadrilaterals and polygons • Sorting shapes • Cross-sections • 3-D shapes <p>17 Nets and 3-D drawings</p> <ul style="list-style-type: none"> • Nets • Isometric drawing • Views
<p>Describe locations and give directions, using grid references, simple scales, turns, and points of the compass.</p>	<p>18 Location</p> <ul style="list-style-type: none"> • Grid and coordinate references • Compass directions • Reading maps and plans using scales and compass directions
<h2>Statistics</h2>	
<p>Interpret results in context, accepting that samples vary and have no effect on one another.</p>	<p>19 Analysing data</p> <ul style="list-style-type: none"> • Mode and range • Mean and median • Using mean, median, mode and range • Analysing data displays
<p>Gather or access multivariate category and measurement data.</p> <p>Sort data and display it in multiple ways, identifying patterns and variations.</p>	<p>20 Displaying data</p> <ul style="list-style-type: none"> • Displaying data and analysing the displays • Time-series graphs
<p>Investigate summary, comparison, and relationship questions by using the statistical enquiry cycle.</p>	<p>21 Statistical investigation</p> <ul style="list-style-type: none"> • Designing a data collection sheet • Grouped data • Designing scales for qualitative data • The Enquiry Cycle
<p>Order the likelihoods of outcomes for situations involving chance, checking for consistency between experimental results and models of all possible outcomes.</p>	<p>22 Probability</p> <ul style="list-style-type: none"> • Understanding probability • The probability scale • Outcomes • Probability from experiments • Calculating theoretical probability