



Curriculum Insights and Progress Study

Mathematics Achievement at Years 3, 6, and 8, 2024

Results from the national mathematics assessment for the Curriculum Insights and Progress Study.

This dashboard provides an overview of achievement on the 2024 national mathematics assessment undertaken at Years 3, 6, and 8 by the Curriculum Insights and Progress Study. The assessment was administered during a period of curriculum transition and reports achievement against the 2023 draft of the New Zealand Curriculum.

What is the national mathematics assessment?

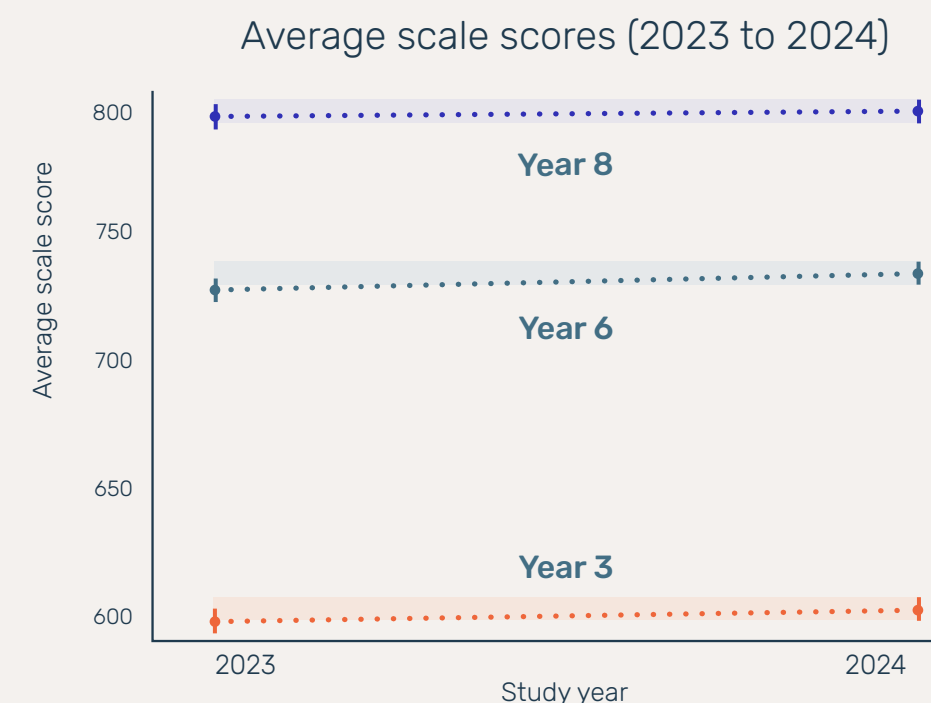
Conducted annually, the national mathematics assessment was introduced in 2023 to provide regular and reliable information about mathematics achievement in Aotearoa New Zealand. It was administered for the second time at the beginning of Term 4, 2024.

The assessment targets a nationally representative sample of students in English-medium, state and state-integrated schools. It focuses on Years 3, 6 and 8 – years that mark the end of the first three phases of the New Zealand Curriculum.

The assessment is delivered as an online, adaptive test. It draws from a bank of selected-response and short-answer questions covering number, algebra, geometry, measurement, statistics, and probability. Each student completes about 30 questions.

Results for Years 3, 6, and 8 are reported using a common scale.

Has achievement changed from 2023 to 2024?



Although the sample for 2024 showed small positive shifts in the average score at each year level compared with 2023, none of these were statistically significant.

Key messages

1. There was no statistically significant change in average student achievement scores at Years 3, 6, and 8, between 2023 and 2024.
2. To support consistent comparison, the 2023 provisional benchmarks used to report when scores meet curriculum expectations have also been applied to 2024 results.
3. Between 22 and 30 percent of students at each year level reached the provisional benchmark scores.
4. Average achievement scores varied across socioeconomic context, ethnicity, and gender.
5. Overall, students in Year 3 were more positive about learning mathematics and their own mathematical ability than students in later year levels.

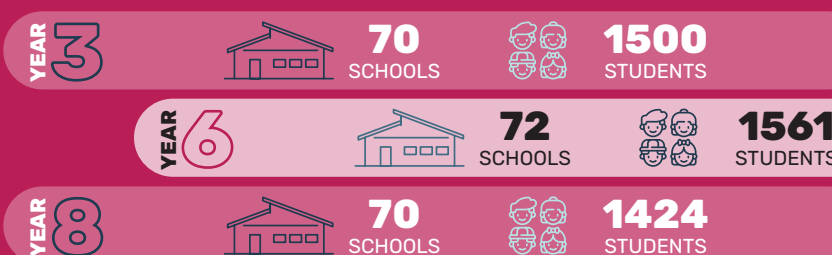
How is achievement reported in relation to the curriculum?

To report 2023 results, a provisional benchmarking process was used to identify scale scores that indicate when students are meeting curriculum expectations at the end of each phase. This process was based on the draft 2023 version of the New Zealand Curriculum.

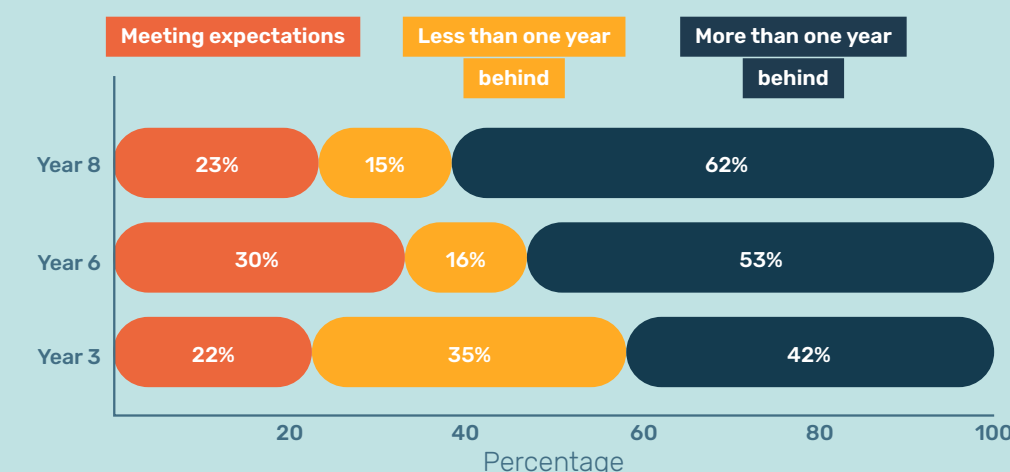
Benchmarking enables the study to report the proportion of students who have sufficiently demonstrated the knowledge and skills described by the Phase 1 to Phase 3 progress outcomes. For consistency, reporting for 2024 is also based on the provisional benchmarks.

Who took part in 2024?

Schools and students participating, by year level

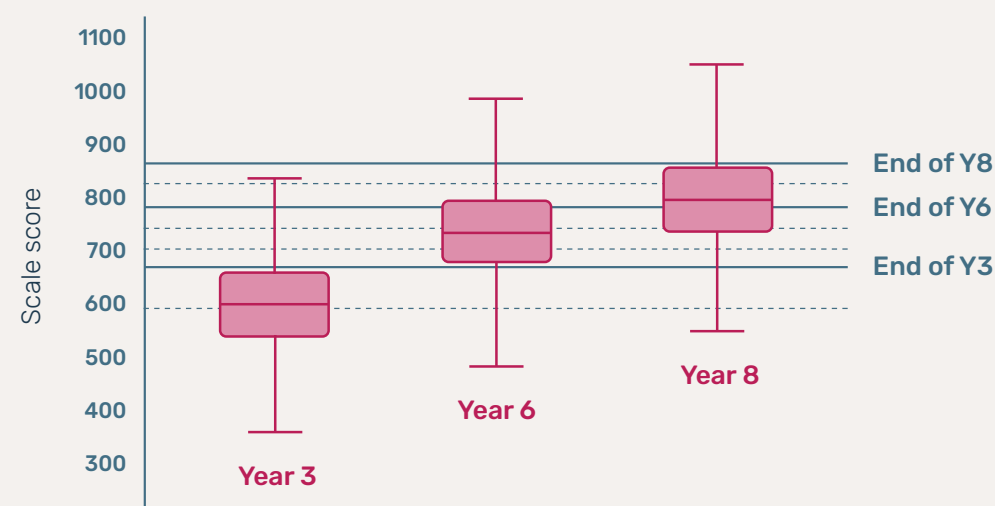


How many students achieved the provisional curriculum benchmarks?



Note, that each proportion shown in the figure has a 95 percent confidence interval of approximately plus or minus 3 percentage points. Percentages are rounded to whole numbers. Due to rounding, the totals may not equal 100%.

What did progress and achievement look like?



The box plots show the spread of student scores at each year level. The box represents the middle 50% of scores, with the line inside showing the median (middle score).

The whiskers on either side show the range of scores outside this middle band. When interpreting the proportion of students reaching the provisional benchmark scores, it is important to remember that these are based on a new curriculum and schools are in the early phase of implementation.

Note: The solid lines show the provisional benchmark scores. The dashed lines, from bottom to top, indicate expected achievement at the beginning of Year 3, and end of Years 4, 5, and 7, respectively. They are estimated using the provisional benchmarks for Years 3, 6 and 8.

How did achievement vary across groups?

Socio-economic context

- Students at schools with fewer socio-economic barriers scored higher, on average, at all year levels.

Ākonga Māori and Pacific

- On average, ākonga Māori and Pacific students scored lower than their non-Māori and non-Pacific peers at all year levels. These students were also more likely to attend schools identified as facing greater socio-economic barriers.

Gender

- On average, boys scored higher than girls at all year levels.

What do students know and what needs more focus?

The following panels offer a snapshot of what students typically demonstrated they could do well (What most can do), the areas where they are still developing (What some can do), and the challenges that lie ahead (What many find challenging). These insights are based on average patterns of achievement across the cohort and are intended to highlight current strengths as well as areas for future learning focus.

YEAR 3

What most can do

- Following directions on a simple map
- Identifying one-third of a shape
- Ordering whole numbers

What some can do

- Adding numbers up to 100
- Solving simple division problems
- Knowing how many 10s are in a three-digit number

What many find challenging

- Solving a simple equation
- Identifying the unit of repeat in a pattern
- Adding unit fractions with the same denominator

EXAMPLES:

Put these numbers in order from **smallest to largest**.

183 14 243 43 127



There are 24 paddlers at a waka ama. There are 6 people in each waka. How many waka are there?



Which set of shapes repeat to make the pattern?

YEAR 6

What most can do

- Identifying the best estimate for 2-digit multiplication
- Recognising a 2D view of a 3D shape
- Ordering unit fractions

What some can do

- Adding simple decimals with renaming
- Finding 25% of a 2-digit number
- Calculating elapsed time

What many find challenging

- Dividing a 3-digit number by a 1-digit number
- Fractions like $\frac{1}{4}$ of a 2-digit number
- Adding and subtracting fractions with mixed numbers

EXAMPLES:



There are 18 trays of kiwifruit. Each tray has about 24 kiwifruit in it. **About** how many kiwifruit are there?



Max rode 5.8km on Friday and 6.5km on Saturday. How many km did he ride in total?

YEAR 8

What most can do

- Solving simple problems involving negative numbers
- Working with basic ratios
- Identifying the largest decimal number

What some can do

- Rotating a shape by a specific angle
- Formulating a simple linear equation
- Calculating the perimeter of a composite shape

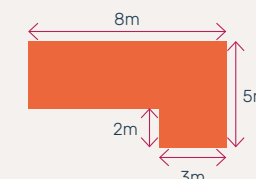
What many find challenging

- Using the order of operations to solve an arithmetic problem
- Adding fractions with unrelated denominators
- Finding a functional rule for a spatial or number pattern

EXAMPLES:



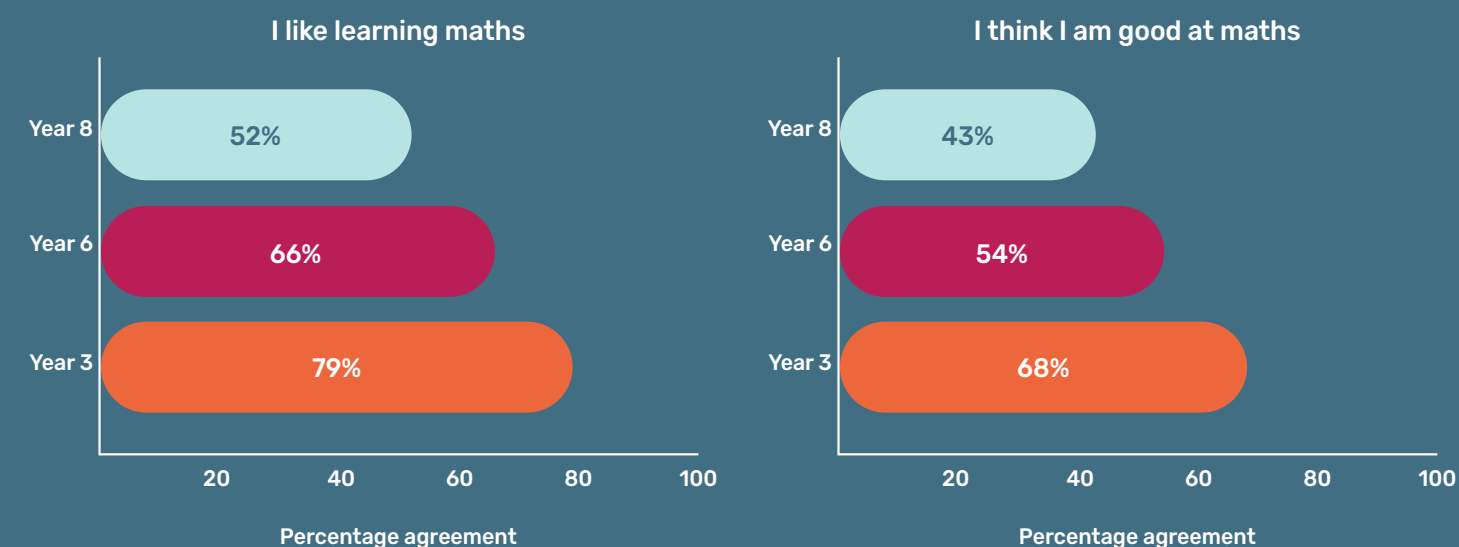
Mere is planning a hāngi for 40 people. She needs 8 kūmara for every 10 people. How many kūmara does she need in total?



What is the **perimeter** of this shape?

What is $4 \times 8 - 6 \div 3$?

How did students feel about mathematics?



Students in Year 3 were more positive about mathematics than students in later year levels.

Where can I find out more?



A data window with detailed results by year level



The study's website with information about this and previous studies

