

This resource outlines extension opportunities that are available for teachers using Ministry-funded maths resources from Oxford University Press. This resource is designed to support teachers to focus on deepening the maths knowledge of confident learners within their year level.

Visit Tāhūrangi for more information about ordering Ministry-funded maths resources.

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Guidance for teaching to the year level

Extending students is not about accelerating confident learners beyond their year level.

Extension is about stretching and growing confident learners by offering more depth at their year level. Deep learning builds flexible, creative, and independent mathematical thinkers – traits that last well beyond the current year level.

When confident maths learners are extended, they develop the ability to transfer knowledge to new and unfamiliar contexts, tackle problems in multiple ways, communicate reasoning clearly and make meaningful mathematical connections.

Differentiating learning to enable all learners

The Oxford Mathematics and Statistics for Aotearoa New Zealand teaching and learning programme accounts for significant differences among students' prior learning, rate of learning, language proficiency, literacy and numeracy skills. The programme also supports educators to use this knowledge to adapt the way the curriculum and learning is delivered. This differentiated approach allows individualised learning to happen, enabling all students to practise and reinforce their new knowledge and skills learned. It also provides a range of resources to extend learning, and within a year level.



Explicit teaching as a teaching tool to enable learning

When explicit teaching is skilfully implemented, almost all students can understand the concepts, information and skills being taught, enabling them to confidently practise and reinforce new knowledge and skills learned.

To enable students to access and apply new learning:

- Before teaching a topic, teachers are equipped to understand what the student can already do and is ready to learn using the (diagnostic) pre-tests.
- Teachers also identify learning needs using their own knowledge and expertise and adapt their teaching in response as they introduce a new topic, including explicit whole-class teaching, and are supported with advice and activities for students at different stages of learning.
- As they teach, teachers check how students are progressing and provide tailored feedback and support to address any obstacles or misconceptions and help individual students stay on the right track. The lesson plans provide excellent support, including success criteria and how to address potential difficulties.
- Individual students are directed to the right level of practice and reinforcement of new learning, including guided and independent practice.

Extending Confident Learners


For each year level, there are many resources available to extend more confident learners by applying their knowledge and skills to a range of real-world situations.

Extension activities

Extension activities accessed via the Teacher Dashboard:

Extended practice

If the price ends in 1, 2, 3 or 4 you round down. If the price ends in 5, 6, 7, 8 or 9 you round up. 35c rounds up to 40c.



1 Money amounts not ending in 0 are rounded. Round these amounts to the nearest 10c.


a 21c _____ b 68c _____ c 44c _____


d \$1.03 _____ e \$1.78 _____ f \$2.99 _____



2 Round the amounts to the nearest dollar, then calculate to get an estimated total.

Lunch and drink costs	Rounded amounts	Estimated total
a \$9.99 + \$4.81	\$10 + \$5	\$15
b \$11.90 + \$4.20	\$12 + _____	_____
c \$20.05 + \$2.95	_____	_____

3 Calculate the actual costs and change for the problems in question 1.

a $\$9.99 + \$4.81 =$ _____ Change from  _____

b $\$11.90 + \$4.20 =$ _____ Change from  _____

c $\$20.05 + \$2.95 =$ _____ Change from   _____

4 If you paid \$20 for an item that costs \$19.94 would you receive any change? Explain.

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Extended practice activities


Extended practice activities in the Student Book:

Unit 3 Topic 1 Money
Activity sheet 14

mathematics and statistics 4
for Aotearoa New Zealand

Money around the world

In New Zealand, we have dollars and cents. There are 100 cents in a dollar. Today, almost every country in the world has the same sort of system. But around 50 years ago, the main unit of money in New Zealand was pounds. Five pounds was written like this: £5.



Pounds were divided into shillings and pence (or pennies). There were 20 shillings in a pound and 12 pennies in a shilling.

1

- How many pounds did you have if you had 40 shillings?
- If you changed three shillings for pence, how many pennies would you get?
- How many pennies were in a pound?

Real-world investigations

Real-world investigations accessed via the Teacher Dashboard:

Mastery tasks

Mastery tasks, which are low-floor-high-ceiling tasks that all students can engage with and are accessed by the Teacher Dashboard:

Mastery task 6

3 All six types of football are played on different fields. They all have different rules, too. One difference is the number of players that are allowed on the field during the game. There are also players who wait at the side. They can change places with someone on the field.

Type of football	Number of players per team	Number of players per team allowed on the field at one time	Shape of field	Approximate playing area (length x width)
Rugby Union	19	15	rectangle	100 m x 70 m
Soccer	14	11	rectangle	110 m x 70 m
Australian Rules football	22	18	oval	165 m x 135 m
American football	53	11	rectangle	91 m x 48 m
Gaelic football	20	15	rectangle	140 m x 90 m
Rugby League	17	13	rectangle	100 m x 68 m

a In which type of football does a team have the highest number of players on the field at one time?

Extending students is not about accelerating confident learners beyond their year level; the purpose of extension is to apply and embed learning to a range of real-world situations and to facilitate good memory and recall, thereby increase their confidence and reducing their anxiety to apply learning to different situations, attempt new learning, and make steady progress.