

Online Mathematics Resources

Mr Ben Kriszyk & Mr Ryan Redfern

www.mathspace.co/au



Login

Continue



Log in with Clever

Home Screen/Dashboard



Dashboard

Assigned

Skills

Textbook

0min



0



Hey, Ben!



Customise

Your assigned tasks



2025 Yr10C1a 1.3.2 -
Measurement Review

Due in 6 days

[View all](#)

Get Started



Your teacher
assigned a task.
Let's start here.

Your recommended practice

Complete the discovery check-in to get recommended practice tasks to help you grow



[Start check-in](#)

Online Textbook

The screenshot shows the 'Textbook' view of an online learning platform. The navigation bar at the top includes 'Dashboard', 'Assigned', 'Skills', and 'Textbook' (highlighted with a red box and a red arrow). A callout box points to the 'Textbook' tab with the text: 'The default view is the Lesson tab'. Below the navigation bar, there are tabs for 'Lesson' (highlighted with a red box) and 'Practice'. A 'Start adaptive task' button is visible on the right. The main content area is titled 'Multiply terms with indices' and contains the following text and equations:

For the expression $a^5 \times a^3$, since the factors have like bases we can use the **multiplication law**.

$$\begin{aligned} a^5 \times a^3 &= a^{5+3} \\ &= a^8 \end{aligned}$$

We can remind ourselves of the multiplication law by writing out the original expression in expanded form.

$$\underbrace{a \times a \times a \times a \times a}_{a^5} \times \underbrace{a \times a \times a}_{a^3}$$

For any base number a and any indices, also called exponents, m and n the multiplication law is:

$$a^m \times a^n = a^{m+n}$$

When multiplying terms with a common base:

- Keep the same base.
- Find the sum of the indices.

Examples

Example 1

The left sidebar shows the 'Australian Curriculum Year 10 Advanced -v9 2025' and a list of topics under '1. Indices and surds':

- 1.01 Index laws
- 1.02 Negative indices
- 1.03 Optional: Simplify surds
- 1.04 Optional: Add and subtract surds
- 1.05 Optional: Multiply and divide surds
- 1.06 Optional: Binomial expansions with surds
- 1.07 Optional: Rationalise the denominator
- 1.08 Optional: Fractional indices

Online Textbook

The screenshot displays the 'Online Textbook' interface. At the top, there are navigation tabs: 'Dashboard', 'Assigned', 'Skills', and 'Textbook'. The 'Textbook' tab is active. On the right side of the top bar, there are icons for 'Omin', a lightning bolt, a gear with '0', and a user profile. Below the top bar, there are two tabs: 'Lesson' (highlighted with a red box) and 'Practice'. A 'Start adaptive task' button is also visible.

The main content area shows 'Example 1' with the instruction: 'Simplify $6x^2 \times 4x^6$ using index laws.' Below this is a 'Worked Solution' section, which is partially obscured by a video player. A callout box points to the 'Worked Solution' section with the text 'Step by step worked solutions'. A 'Close question walkthrough' button is located below the worked solution.

On the left side, there is a search bar and a section titled 'Australian Curriculum Year 10 Advanced -v9 2025'. Underneath, there is a list of topics under '1. Indices and surds':

- 1.01 Index laws
- 1.02 Negative indices
- 1.03 Optional: Simplify surds
- 1.04 Optional: Add and subtract surds
- 1.05 Optional: Multiply and divide surds
- 1.06 Optional: Binomial expansions with surds
- 1.07 Optional: Rationalise the denominator
- 1.08 Optional: Fractional indices

The video player shows a video titled '2.1.2 Introducing Index Laws Using Variables'. The video content includes the instruction: '1. Simplify the following using the Index Laws: $6x^2 \times 4x^6$ '. Below the instruction is a text input field with an equals sign and a green border. A play button is centered on the video. At the bottom right of the video player, there are buttons for 'Video', 'Hint', and 'Check'.

A callout box points to the video player with the text 'Human guided examples'.

Online Textbook

The practice tab is where you can access addition questions



Dashboard

Assigned

Skills

Textbook

Omin



0



Search

Australian Curriculum Year 10 Advanced -v9 2025

1. Indices and surds

- 1.01 Index laws
- 1.02 Negative indices
- 1.03 Optional: Simplify surds
- 1.04 Optional: Add and subtract surds
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Lesson **Practice**

Start adaptive task

Questions Worksheet

Try question

Fill in the blank to make the equation true.

$$b^4 \times b^{\square} = b^7$$

Try question

Simplify the following, giving your answer in index form:

$$y^3 \times y^2$$

Try question

Simplify the following, giving your answer in index form:

$$x^4 x^{-2}$$

Try question

$2y^2 \times 3y^3 = 6y^6$

a Is the statement true or false?

False A True B

Homework Help

The screenshot shows a math problem-solving interface. At the top left, there is a back arrow. Below it, the instruction reads: "Simplify the following, giving your answer in index form: $y^3 \times y^2$ ". Below the instruction is an input field containing $y^3 \times y^2 =$ followed by a text box that says "Enter your next step here". Below the input field is a toolbar with mathematical symbols: $\frac{+}{-}$, $\frac{\pi}{\infty}$, $\sqrt{\quad}$, a^b , and $\frac{a}{b}$. At the bottom left, there are two buttons: "Submit step" and "View next step" with a red refresh icon and a dropdown arrow. On the right side, there is a vertical sidebar with five icons: a speech bubble, an open book, a calculator, a toolbox, and a grid of dots. Each icon has a callout box pointing to it with explanatory text.

Assistant Help (limited to 5 qs per day)

Go to the lesson related to this particular question

Tools related to solving the problem e.g. Glossary

Last resort: Skip step button

Submit step

View next step

Help

Lesson

Calculator

Toolbox

More

Stay Informed

Dashboard Assigned Skills Textbook




Omin - 0 



Hey, Ben!



Ben Kriszyk

 Trinity College (WA)
 2025 Yr 10 Course 1a KRISZYK
 Year 10

 Toolbox

Activity

Class leaderboard

Enable accessibility mode

Join a class


Settings

Exit Student Experience

Interested in keeping up to date with how your son is progressing with his Homework or how his mathematical skills are developing?

Your assigned tasks


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 **Get Started** ✕
Your teacher assigned a task. Let's start here.

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Save personal details

SKILLS MAP

Your grade level

Your grade level will determine what skills are shown in your skills map and your check-ins.

Year 10

MATH CONTENT SETTINGS

Textbook focus

The content you will see throughout Mathspace is based on this setting

Australian Curriculum Year 10 Advanced -v9 2025

PARENTS & GUARDIANS

People following your progress

Parents and guardians following your progress will receive a weekly email with details about the tasks you've worked on and points you've earned.

You do not have anyone following your progress.

+ Add a parent/guardian(s)

Cambridge GO

My course
Essential Maths for the AC Yr 7 3rd Ed

See topics <

- Dashboard
- Last section
- Messages
- Reports
- Task manager
- Competitions
- Assessments
- Dictionary
- Games
- Offline textbook
- Teacher resources
- More HOTmaths
- Manage classes
- My classes
- Manage bookmarks

Text list

Essential Maths for the AC 3rd Ed

Texts

Essential Maths for the AC Yr 7 3rd Ed

- Chapter 1: Whole numbers >
 - Chapter 2: Geometry >
 - Chapter 3: Number properties and patterns >
 - Chapter 4: Fractions and percentages >
 - Chapter 5: Algebra >
 - Chapter 6: Decimals >
 - Semester review 1 >
 - Chapter 7: Negative numbers >**
 - Chapter 8: Statistics and probability >
 - Chapter 9: Polygons, solids and transformations >
 - Chapter 10: Equations >
 - Chapter 11: Measurement >
 - Semester review 2 >
- Introduction
 - Prior knowledge pre-test
 - Diagnostic pre-test
 - 7A Integers (Consolidating)**
 - 7B Adding and subtracting positive integers
 - 7C Adding and subtracting negative integers
 - 7D Multiplication and division of integers (Extending)
 - Progress quiz
 - 7E Order of operations with integers (Extending)
 - Applications and problem-solving
 - 7F Substituting integers (Extending)
 - 7G Introducing the number plane
 - Modelling
 - Investigation
 - Problems and challenges
 - Chapter summary
 - Chapter checklist
 - Chapter review

Sub Chapter

Chapter

Cambridge GO

Chapter 7: Negative numbers

< 7A Integers (Consolidating) >

Section

Exercise

Walkthroughs & quizzes

Resources

Scorcher



Learning intentions

- To understand that integers can be negative, positive or zero
- To be able to represent integers on a number line
- To be able to compare two integers and decide which is greater

The numbers 1, 2, 3, ... are considered to be positive because they are greater than zero (0). Negative numbers extend the number system to include numbers less than zero. All the whole numbers less than zero, zero itself and the whole numbers greater than zero are called integers.

The use of negative numbers dates back to 100 BCE when the Chinese used black rods for positive numbers and red rods for negative numbers in their rod number system. These coloured rods were used for commercial and tax calculations. Later, a great Indian mathematician named Brahmagupta (598–670) set out the rules for the use of negative numbers, using the word *fortune* for positive and *debt* for negative. Negative numbers were used to represent loss in a financial situation.

An English mathematician named John Wallis (1616–1703) invented the number line and the idea that numbers have a direction. This helped define our number system as an infinite set of numbers extending in both the positive and negative directions. Today negative numbers are used in all sorts of mathematical calculations and are considered to be an essential element of our number system.

-7	3	4	4	4	3	3	4	3	4	3	2	4	5	4	2	4	4	4	2	4	8	3	6	5
PAR	4	4	4	3	3	4	5	4	5	3	6	4	4	4	3	4	5	4	5	3	3	6	7	2
-4	5	4	4	4	3	3	4	3	3	3	4	4	4	4	4	4	3	4	3	5	6	8		
+9	4	5	4	5	3	4	5	3	8	4	1	5	7	4	3	5	5	4	3	4	4	0	8	1
+4	3	6	4	4	3	5	5	3	5	3	3	3	5	4	3	4	6	4	5	4	3	8	7	6

The winning golf score above is -7 , shown in the left column. Golf scores are positive and negative integers giving the number of strokes above or below the par, the total strokes of an expert golfer.

Cambridge GO

The screenshot displays the Cambridge GO user interface. At the top, the course is identified as 'Essential Maths for the AC Yr 7 3rd Ed'. The current chapter is 'Chapter 1: Whole numbers', and the specific lesson is '11 Order of operations with whole numbers'. The user is logged in as 'Ryan'. The main navigation bar includes 'Section', 'Exercise' (highlighted with a red box), 'Walkthroughs & quizzes', 'Resources', and 'Scorcher'. On the right side of this bar are icons for various tools like a calculator and a workspace. Below the navigation bar, there are tabs for 'Questions' and 'History', along with filters for 'Show all questions', 'Show answers', and 'Show workspace'. A 'Working program' dropdown is set to 'All'. Two prominent buttons, 'Worked Solutions' and 'Submit All', are visible. A progress bar at the top of the exercise section shows 13 steps, with step 1 selected. The exercise content includes 'Question 1' which asks to use the order of operations. The first question is 'a. i. $2 + 25 \div 5$ '. Below this is a workspace area with a toolbar containing 'Type', 'Draw', and 'Upload' buttons. At the bottom of the workspace are icons for erasing, undo, redo, drawing, and a grid. A '+ Check answer' button is located below the workspace. The second question is 'ii. $20 - 7 \times 2$ ', followed by its own '+ Workspace' and '+ Check answer' buttons. On the right side of the page, there is a sidebar titled 'In this lesson' which lists 'Examples 2', 'Widgets 2', 'Worksheets 5', and 'Videos 2', each with an expand/collapse arrow. A left-hand sidebar contains navigation options such as 'Dashboard', 'Last section', 'Messages', 'Reports', 'Task manager', 'Competitions', 'Assessments', 'Dictionary', 'Games', 'Offline textbook', 'Teacher resources', 'More HOTmaths', 'Manage classes', 'My classes', and 'Manage bookmarks'. A red chat icon is located in the bottom right corner of the page.

Cambridge GO

My course
Essential Maths for the AC Yr 7 3rd Ed
See topics >

Chapter 1: Whole numbers
11 Order of operations with whole numbers

Section Exercise Walkthroughs & quizzes **Resources** Scorcher

Click here to access resources to help your son grasp a concept

Example 15
Using order of operations
Play

Example 16
Using order of operations in worded problems
Play

Broken calculator
Disable some buttons on a calculator and try to create number sentences that reach your set target.
Play

Expression calculator with brackets
Create expressions and explore how the answer changes as you rearrange tiles.
Play

11
Worked solutions for exercises
Open

Broken calculator
Use these guided activities with the *Broken Calculator* widget.

In this lesson

- Examples 2
- Widgets 2
- Worksheets 5
- Videos 2

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HOTmaths is an additional textbook included in Cambridge GO



Thank you

IN NOMINE