

Out of Field Support Days for junior maths teachers

Includes "how to" instructions
and videos for use afterwards

Proficiency strands

Setting out working

Test question design

Explore fractions, algebra, probability, geometry

Differentiation, mindset and diagnostics



Designed for teachers working outside their area, this course develops conceptual understanding of the trickiest areas of junior maths, as well as addressing common problem-areas identified by Heads of Department across Australia.

with *Tierney Kennedy*

Date: Wednesday, September 4th and Thursday, September 5th, 2025

Where: **Concordia Lutheran College**
Noack Room, 154 Stephan Street, Toowoomba QLD 4350

When: 7.45am registration, then 8.00am – *4.00pm
*leave at 2.30pm if you don't need the last session

Cost: \$285 [single day], or \$500 [both days]

Tickets: backtofrontmaths.com.au/event/oof-qld-sep-0405

Teaching maths to junior high school students is tricky at the best of times, let alone when you have limited experience or training in that area.

Feeling frustrated or overwhelmed is very common.

This course has been designed in consultation with Heads-of-Department across Australia to support you.

This course will help you to:

- develop confidence in your understanding and teaching of the connections between: integers, fraction operations, exponents, algebra, multiplicative and proportional reasoning, probability and relative frequency, area/volume formulas, Pythagoras and deductive geometry
- know what to look for in student answers, including common misconceptions, and how to help
- differentiate for students without driving yourself crazy and re-engage those who hate maths
- unpack assessment requirements (including both test design and the proficiency strands)

Come along to either day, or both, depending on your own needs.

*Leave at 2:30 if you don't need the afternoon session.

See over for session outline



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Day 1: Year 7 content focus + differentiation, mindset and working mathematically, diagnostics

REGISTRATION: 7:45-8:00

Session 1: 8:00-10:00

- Setting out working and steps for building clear communication
- Integers, including addition and subtraction - (**Note:** this is [essential content](#) for Day 2)
- Rounding and estimating (including with fractions and decimals)
- Converting between fractions, decimals and percent
- Converting between units of measure
- Introducing variables and substitution for algebra using post-it-notes (**Note:** this is [essential content](#) for Day 2)

Session 2: 10:30-12:30

- Mastering multiplication and division facts (including practice tasks and games)
- Associative, commutative and distributive laws - (**Note:** this is [essential content](#) for Day 2)
- Reviewing order of operations
- Solving simple linear equations and plotting graphs
- Indices and square roots (**Note:** this is [essential content](#) for Day 2)
- Area of parallelograms and triangles

Session 3: 1:00-2:30

- All four operations with fractions building from an array model - (**Note:** this is [essential content](#) for Day 2)
- Probability and statistics with fractions
- Deductive geometry with parallel lines and triangles

*You may leave now if you don't wish to stay for Session 4

Session 4: 2:50-4:00

- Simple ideas for differentiation and building fluency
- What to do when students hate maths: mindset and working mathematically
- Time to go through your class diagnostics (**Note:** you will be sent a test to try with kids beforehand if you have time, otherwise you can examine samples from others)

Day 2: Year 8 content focus + where concepts go to in senior, proficiency strands and test design

REGISTRATION: 7:45-8:00

Session 1: 8:00-10:00

- Application of Fraction Operations with Arrays to two-event probability (and/or, two-way tables, complementary events) **Note:** this session builds on fraction operations with arrays [from Day 1](#) – addition and multiplication of fractions using an array model is essential knowledge for this session
- Application of Arrays and the Cartesian plane to multiplication and division of integers **Note:** this session builds on the knowledge of integers and operations [from Day 1](#)
- Rates and Ratios

Session 2: 10:30-12:30

- Revising algebra when it didn't work (like terms, substitution ...)
- Distributive law, factorising and simplifying in algebra. **Note:** this session builds on knowledge [from Day 1](#) on using post-it notes for algebra as well as the same topics for number
- Linear equations and the Cartesian plane
- Irrational numbers **Note:** this session builds on knowledge [from Day 1](#) on indices and square roots

Session 3: 1:00-2:30

- Area of quadrilaterals (trapeziums, kites) and circles, Volume of prisms
- Congruence of triangles and properties of quadrilaterals
- Pythagoras
- *If time: trigonometry of right-angled triangles*

*You may leave now if you don't wish to stay for Session 4

Session 4: 2:50-4:00

- Where concepts go to in senior so you know what is most important
- Unpacking and assessing the proficiency strands
- Test design and designing good questions

