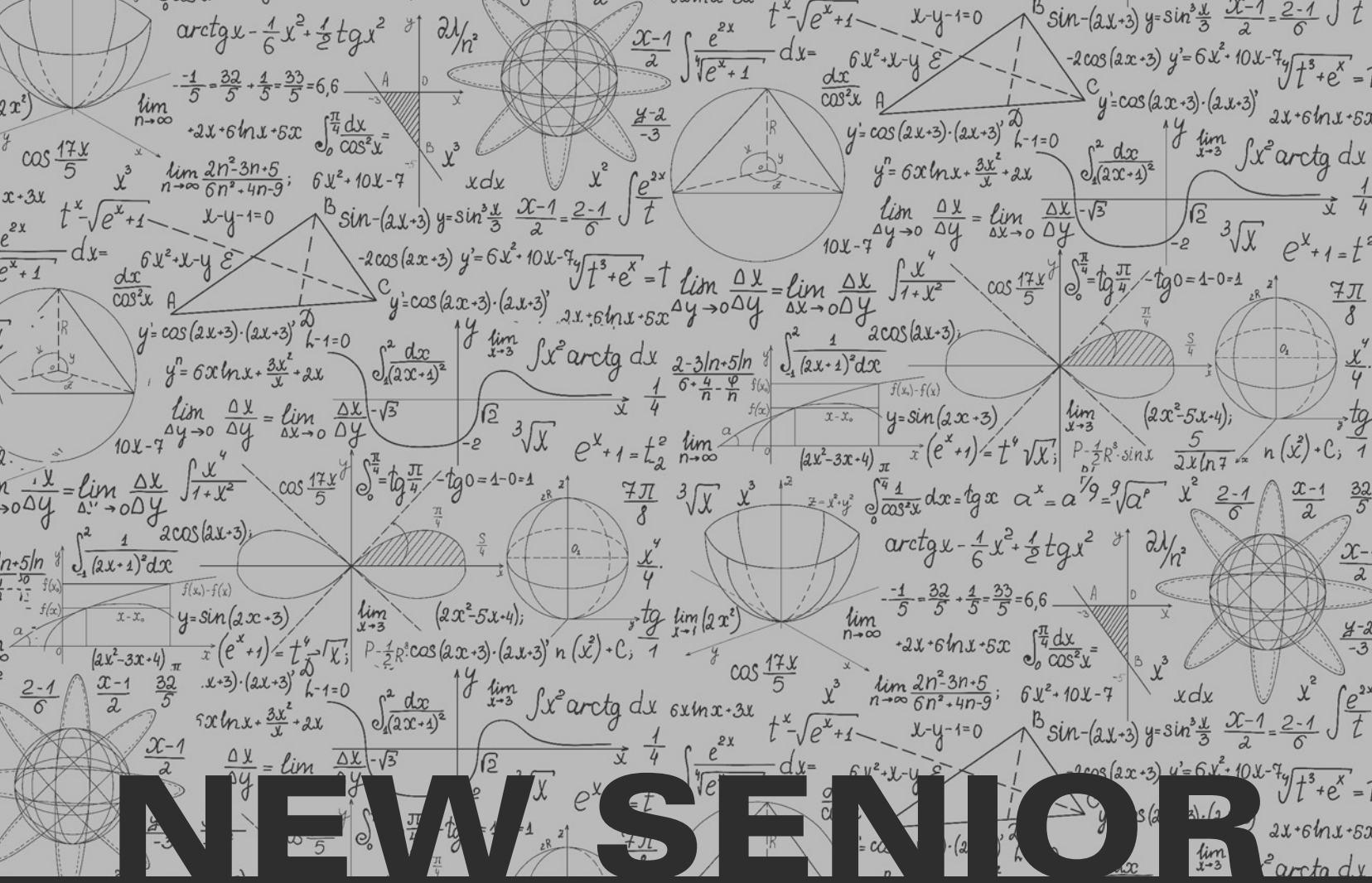


NEW SENIOR MATHEMATICS

ADVANCED

FOR YEARS 11 & 12

THIRD EDITION

J.B. FITZPATRICK
BOB AUS

NSW
STAGE 6

INTRODUCTION AND DEDICATION

J.B. Fitzpatrick

It is interesting to wonder whether J. B. Fitzpatrick ('Bernie') realised in 1983 just how popular his book *New Senior Mathematics* would be. That first edition of *New Senior Mathematics* was to remain in print for almost 30 years. It has stood the test of time thanks to the quality, rigour and variety of its questions, its accuracy and its high mathematical standards.

As Fitzpatrick wrote in 1983: 'Mathematics, like many other things, is best learnt by doing. A student begins to appreciate the power of mathematics when he or she has achieved a mastery of basic techniques, not after reading lengthy explanations … The emphasis throughout the book is on the understanding of mathematical concepts'. (Introduction, *New Senior Mathematics* 1984.)

J. B. Fitzpatrick passed away in 2008. Fitzpatrick was a respected author, teacher and figurehead of mathematics education.

Bob Aus

Bob Aus taught in New South Wales high schools for 40 years, retiring in 2007. During that time Bob taught all courses from years 7 to 12 up to Level 1 / 4-unit / Extension 2. He has marked HSC examination papers and has been involved in the Standards Setting Process as Judge and Chief Judge for the three calculus-based courses over four years. He has also completed review work for the NSW Board of Studies and represented NSW at a week-long review and standards setting of the upper level course from each state prior to the development of the Australian National Curriculum for senior students.

Bob spent time as Regional Vocational Education Consultant in the North Coast Region and Mathematics Consultant in the Hunter Region. When he retired he was Head Teacher Mathematics at Merewether High School and enjoyed teaching an Extension 2 class with 24 students.

Bob's first publication was in 1983 and he has been involved with writing a range of textbooks and study guides since then, including revising and updating the *New Senior Mathematics* series 2nd Edition in 2013.

Bob has presented talks on the three calculus-based courses throughout the state. He has co-written the Years 6–9 Mathematics Syllabus for the Abu Dhabi Education Authority, as well as managing the writing project for support material for this course. He also wrote the years 10–12 syllabus for their calculus-based course.

This third edition of *New Senior Mathematics* updates the series for the new Stage 6 courses in New South Wales to be implemented in Year 11, 2019.

NEW SENIOR MATHEMATICS

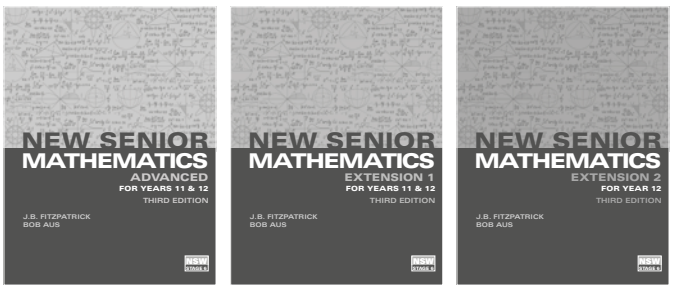
THIRD EDITION

New Senior Mathematics Advanced for Years 11 & 12 is part of a new edition of the well-known mathematics series for New South Wales. The series has been updated to address all requirements of the new Stage 6 syllabus. We have maintained our focus on mathematical rigour and challenging student questions, while providing new opportunities for students to consolidate their understanding of concepts and ideas with the aid of digital resources and activities.

Student Book

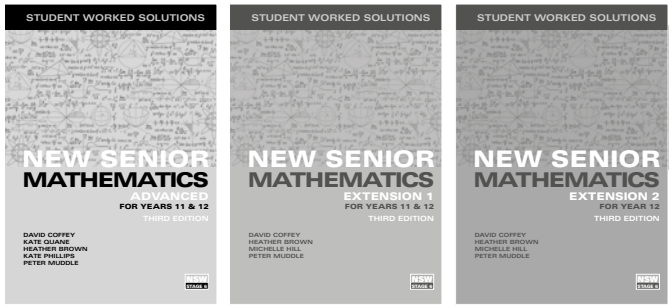
The first three chapters of the student book contain revision material that provides the necessary foundation for the development of senior mathematics concepts. In the new edition you'll also find:

- Content built on a rigorous, academic approach that promotes excellence and prepares students for higher education
- A simple convenient approach with Year 11 and 12 content in one book for Advanced and Extension
- Digital technology activities that promote deeper understanding allowing students to make connections, and visualise and manipulate data in real time.



Student Worked Solutions

The *New Senior Mathematics for Years 11 & 12 Student Worked Solutions* contain the fully worked solutions for every second question in *New Senior Mathematics for Years 11 & 12*.



Reader+

Reader+, our next generation eBook, features content and digital activities, with technology such as graphing software and spreadsheets, to help students engage on their devices.

Teacher Support includes materials such as practice exams, question banks, investigation assignments, and fully worked solutions to cover all internal and external assessment items to save you time.

Pearson Places

FEATURES OF THE THIRD EDITION STUDENT BOOK/READER+

YEAR LEVELS

Year levels are indicated on each page for easy identification of Year 11 & 12 content.

MAKING CONNECTIONS

This eBook feature provides teachers and students with a visual interactive of specific mathematics concepts or ideas to aid students in their conceptual understanding.

EXPLORE FURTHER

This eBook feature provides an opportunity for students to consolidate their understanding of concepts and ideas with the aid of technology, and answer a small number of questions to deepen their understanding and broaden their skill base. These activities should take approximately 5–15 minutes to complete.

CHAPTER REVIEW

Each chapter contains a comprehensive review of chapter content.

SUMMARY PAGES

A comprehensive course summary is provided at the end of the book.

CONTENTS