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MATHEMATICS
APPLICATIONS

UNIT
2



Mathematics Applications Unit 2
1st Edition
A. J. Sadler

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Preface.

This text targets Unit Two of the West Australian course *Mathematics Applications* a course that is organised into four units altogether, the first two for year eleven and the last two for year twelve.

UNIT
ONE

UNIT
TWO

UNIT
THREE

UNIT
FOUR

The West Australian course, *Mathematics Applications*, is based on the Australian National Curriculum Senior Secondary course *General Mathematics*. The main difference between unit two of these two courses is the inclusion of some work on the Normal Distribution in the West Australian course, covered in the final chapter of this text. Hence, by excluding the final chapter this text is also suitable for anyone following Unit Two of the National Curriculum course, *General Mathematics*.

The book contains text, examples and exercises containing many carefully graded questions. A student who studies the appropriate text and relevant examples should make good progress with the exercise that follows.

The book commences with a section entitled *Preliminary work*. This section briefly outlines work of particular relevance to this unit that students should either already have some familiarity with from the mathematics studied in earlier years, or for which the brief outline included in the section may be sufficient to bring the understanding of the concept up to the necessary level.

As students progress through the book they will encounter questions involving this preliminary work in the *Miscellaneous Exercises* that feature at the end of each chapter. These miscellaneous exercises also include questions involving work from preceding chapters to encourage the continual revision needed throughout the unit.

Some chapters commence with a "Situation" or two for students to consider, either individually or as a group. In this way students are encouraged to think and discuss a situation, which they are able to tackle using their existing knowledge, but which acts as a fore-runner and stimulus for the ideas that follow. Students should be encouraged to discuss their solutions and answers to these situations and perhaps to present their method of solution to others. For this reason answers to these situations are generally not included in the book.

At times in this series of books I have found it appropriate to go a little outside the confines of the syllabus for the unit involved. In this regard readers will find in this text I have included some consideration of pie charts as a method of data display. Similarly, with Linear Relationships, whilst the syllabus concentrates on determining the slope and intercept from the equation or plot, I also include tables of values and include determining the equation knowing the gradient and one other point on the line or knowing two points on the line. When using the sine rule to determine the size of an unknown angle in non right triangles I do not confine consideration to acute angles. However, when an obtuse angle is involved, the reader is told this fact so that ambiguous situations are still avoided.

Alan Sadler

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Important note.

This series of texts has been written based on my interpretation of the appropriate *General Mathematics* syllabus documents (National Curriculum) and *Mathematics Applications* syllabus documents (Western Australia) as they stand at the time of writing. It is likely that as time progresses some points of interpretation will become clarified and perhaps even some changes could be made to the original syllabus. I urge teachers of these courses, and students following the courses, to check with the appropriate curriculum authority to make themselves aware of the latest version of the syllabus current at the time they are studying the course.

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