Hands-on Maths in Practice

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Introduction

A Note from the Authors

Welcome to Mathematics in Practice!

Have you ever wondered how much easier students would find mathematics if they could easily read and understand what the questions were asking them to do? How many students think they 'can't do maths' when the real problem is they can't read the maths or understand the specific language involved? How often does this scenario describe a Mathematics in Practice student?

The authors believe mathematics cannot be successfully learned unless teachers take into account the language demands of their subject and the literacy ability of each student. *Hands-on Maths in Practice* is designed to help improve students' reading and general knowledge, while at the same time covering the content and functional numeracy skills of the Western Australian Mathematics in Practice syllabus.

Some students learn best through practical work; others through group work or individually solved problems. The authors have considered and catered for these different learning styles.

- Relevant, low cost, practical activities have been included, as have group work activities.
- Symbols have been used to draw students' attention to important points and hints.
- Each workset contains questions specifically constructed to enable the majority of students to experience success.
- Extension questions are labelled with an asterisk (*).
- A modelling assignment has been included at the end of each appropriate chapter.

Mathematics teachers cannot afford to assume that every senior student is able to 'read'. Literacy can be complex. A student who finds the reading required in mathematics confusing may have no difficulty reading a magazine, newspaper or novel. Maths teachers are experts in the language of mathematics and to be truly effective, teachers of mathematics must familiarise their students with maths language—its terminology and the way it is written.

This book helps teachers encourage reading development.

- Each chapter has a chapter overview. These give students an idea of what they will be learning before they start. Reading something is easier for students if they have some background knowledge.
- Key Words and Terms are noted at the beginning of each chapter. This allows students to read and discuss words which may cause difficulty before they read them in the text. Of course, words other than those noted in the Key Words and Terms section may be difficult for some students. They should be handled similarly.

In the preparation of this book we have been fortunate to have received assistance from many friends, associates and students. To these people we say 'Thanks! We couldn't have done it without you.' We would especially like to express our appreciation to the students in our Maths in Practice classes who tested the material and featured in various activities and questions.