

Study & Master

Study Guide 10

Mathematical Literacy

Trudi Turner



Cambridge University Press
978-0-521-70880-7 - Study and Master Study Guide 10 Mathematical Literacy
Trudi Turner
Frontmatter
[More information](#)

CAMBRIDGE UNIVERSITY PRESS
Cambridge, New York, Melbourne, Madrid, Cape Town, Singapore, São Paulo, Delhi

Cambridge University Press
The Water Club, Beach Road, Granger Bay, Cape Town 8005, South Africa

www.cambridge.org
Information on this title: www.cambridge.org/9780521708807

© Cambridge University Press 2007

This book is copyright. Subject to statutory exception
and to the provisions of relevant collective licensing agreements,
no reproduction of any part may take place without the written
permission of Cambridge University Press.

First published 2007

Printed in South Africa by Paarl Print

ISBN 978-0-521-70880-7 paperback

Editor: Penny Adnams
Designer: Graham Arbuckle
Typesetter: A1 Graphics
Illustrators: Bennie Krüger, Robin McBride, Anne Westoby and James Whitelaw
.....

Cambridge University Press has no responsibility for the persistence or accuracy
of URLs for external or third-party Internet websites referred to in this book, and
does not guarantee that any content on such websites is, or will remain, accurate
or appropriate.

If you want to know more about this book or any other Cambridge University Press
publication, phone us at (021) 412-7800, fax us at (021) 419-8418 or send an e-mail
to capetown@cambridge.org

Contents

Learning Outcome 1: Number and operations in context	1
Unit 1 Numbers	2
Unit 2 Percentages	9
Unit 3 Percentages: VAT	10
Unit 4 Percentages: General use	14
Unit 5 Percentages: Simple and compound interest	18
Unit 6 Percentages: Appreciation/depreciation	21
Unit 7 Percentages: Increase/decrease	23
Unit 8 Percentages: Profit and loss	24
Unit 9 Personal finances	26
Unit 10 Ratio	32
Unit 11 Rate	37
Unit 12 Scientific notation	43
Learning Outcome 2: Functional relationships	45
Unit 1 Number patterns	46
Unit 2 Graphs	48
Unit 3 Linear number patterns	52
Unit 4 Rate of change	56
Unit 5 Interpret graphs and describe trends	63
Unit 6 Distance–time graphs	70
Learning Outcome 3: Space, shape and measurement	73
Unit 1 Lengths, distances and estimations	74
Unit 2 Conversions	76
Unit 3 Volume, area and perimeter	80
Unit 4 Scale drawings of plans	90
Unit 5 Different views	97
Unit 6 Maps and direction	100
Unit 7 Using grids and maps	102
Unit 8 Transformations	104
Learning Outcome 4: Data handling	111
Unit 1 Collecting data	113
Unit 2 Tally tables and frequency tables	115
Unit 3 Mean, median, mode and range	117
Unit 4 Graphs: Bar graphs	120
Unit 5 Graphs: Histograms	124
Unit 6 Graphs: Pie graphs	128
Unit 7 Graphs: Line graphs	130
Unit 8 Interpreting data	132
Unit 9 Misleading graphs	142
Unit 10 Probability	145
Integrating Learning Outcomes	150
Answers	163
June Examination: Questions	200
November Examination: Questions	207
Answers: June Examination	214
Answers: November Examination	217

How to use this study guide

Study & Master Mathematical Literacy Grade 10 Study Guide is your ladder to success. It builds on work done in Grade 8 and Grade 9 Mathematics and prepares you for Grade 11 and Grade 12 Mathematical Literacy.

Mathematical Literacy requires practice and new work builds on previous work – this is called scaffolding. It is important that there are no gaps in your scaffolding so that you do not experience difficulties later. To help make sure that you do not have gaps in your knowledge, you should use this guide as a constant friend throughout the year, and not simply when you have to prepare for exams or tests. You can use the sample examination papers to practise for tests and exams and, for maximum benefit, tackle these questions in test-like conditions and work at a rate of about one mark per minute.

This book summarises the most important aspects of each topic in the syllabus and gives many examples for you to work through, and then gives you questions to answer so that you can check how well you understand the work.

Features of this study guide

- The guide is divided into five sections, one for each learning outcome and a final section that provides exercises where the four learning outcomes are integrated.
- The opener page for each section lists the specific assessment standards covered in that section.
- Sections are divided into units, which divide the work into manageable parts.
- Examples, which cover the possible problems you may face in examinations, are given in each unit. These examples are relevant and up to date and are often set in a realistic South African context.
- Practice questions provide a variety of questions types for the topic. Working through these questions will give you more than enough practice and help you tackle other problems with confidence.
- Answers are given for each example, practice question and sample exam paper. These solutions provide more than just answers as they include all workings and often show added explanations.

We sincerely hope that you will enjoy working through this book and pass Mathematical Literacy Grade 10 with flying colours!