

Overview of M1 Maths

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The M1 Maths materials cover school maths from whole numbers to calculus. They should be useful for students from Year 5 or 6 to the end of high school.

The core materials consist of about 130 Knowledge modules, each dealing with one mathematical topic and 4 Skills modules (all accessible through the *Main Menu*). There are also various other materials that could be useful for students and teachers (accessible through the *Extras* buttons).

Knowledge Modules

The Knowledge modules are divided into 6 levels with Level 1 corresponding to maths from about Year 5 to Year 7 and Level 6 corresponding to about Years 11 to 12 for students who do calculus.

The assignment of topics to levels won't necessarily correspond exactly to any particular curriculum, but modules to cover all aspects of most curricula should be easy to find at about the expected level with a short search of the module list for the relevant strand.

Each Knowledge module has 5 sections:

Summary: This is a statement of the main ideas. It is suitable for reference or revision after the module has been studied.

Learn: This section is a fuller explanation of the ideas along with practice exercises. The exercises could be used after classroom teaching or self-guided students may be able to use the explanations and exercises to learn independently.

Solve: This section consists of a number of problems which require students to apply the knowledge gained from the module as well as to use some original thinking.

Revise: This section consists of a number of Revision Sets, each with a few questions designed to maintain knowledge of that module after the work on it has been completed. There is at least one set for each module; the plan is to eventually have three or four sets for each. Cycling through the revision sets for the modules that have been covered so that each module is revisited every few weeks might be helpful. This could be a regular homework task.

Answers: This section contains the answers to the questions in the Learn, Solve and Revise sections.

Some modules also have a **Lead-In** which contains an activity to prepare for the learning.

Skills Modules

The Skills modules cover Mental Arithmetic, Problem Solving, Investigating and Communication. Each has sections corresponding to the same levels as the knowledge modules. They contain explanations of the skills and how to acquire them, and sets of practice questions with answers. Use of the skills modules would allow students to pay explicit attention to developing these aspects of mathematical prowess.

Other Materials

The Extras buttons lead to other materials which could be useful for students and teachers. Clicking any of the links leads to an explanation of what the material is about (where this isn't obvious from the name of the link).

Uses for the Modules

The M1 Maths modules could be used as an extra resource to support student learning. They could be used:

- for students who did not fully grasp concepts when taught or who would like a different explanation of a concept
- for students who wish to go back and revisit material which has been forgotten, particularly if it's from an earlier year level and not in the current textbook
- for students who miss lessons
- for students who wish to go ahead of what their class is doing or who wish to familiarise themselves with a topic before learning it formally
- to develop students' independent learning skills
- for people who do not have the benefit of formal teaching, e.g. adults upgrading their maths knowledge
- for non-maths teachers who are required to teach a maths class
- to supplement what is contained in a textbook or other resource
- as an alternative to a textbook.

Using the M1 Maths modules rather than a textbook would free up a lot of money which could then be spent on other resources and activities.