

Some notes on writing the reports

Each report is 2,500 words

Report to client:

- Referenced and grounded in mathematical theory but written for a business not mathematical audience
- Use appropriate language and level of mathematics
- Show the process to solve the problem for each museum
- Appropriate original diagrams
- Clear about assumptions and limitations in the real world of your solution
- Bear in mind the following quote:

"In our experience, professional mathematicians in industry will probably be working on problems that require their specialized knowledge and skills, and they will be working with others who have different specialities, or who are managing the project, or have commissioned it. They must converse lucidly with others, who are ignorant of mathematics, and they must know what can, and what cannot, be solved mathematically. They must simplify problems through modelling, and find or create suitable methods of solution. They must then convey their findings persuasively to a wide range of others, in discussion, in writing and through a presentation: with many audiences, a persuasive argument is more convincing than a rigorous proof!" (Challis, et al, 2002; p. 81).

Report to a mathematical audience

- Should not refer specifically to the museums of the client
- Referenced and grounded in mathematical theory but should not include proofs of theorems - reference proven theorems and their results
- General guide to the types of problem
- To be used by other mathematicians to solve similar problems
- Appropriate to a mathematically literate audience
- Includes a critical analysis of the limitations of the model used and consider: How realistic are the assumptions made?
- Outline some possible extensions to this problem in other areas (this will also be your presentation topic)

CHALLIS, N., GRETTON, H., HOUSTON, K., and NEILL, N., 2002. Developing transferable skills: preparation for employment. In: P. KAHN, ed. and J. KYLE, ed., *Effective Teaching and Learning in Mathematics & its Applications*. London: Kogan Page, 2002, pp. 79-91.

Notes from report writing session:

- Write in third person (at least for the mathematical report)
- Concise
- Headings and sub headings
- Graphics for impact
- Use a lot of white space
- Page numbering
- Enumeration - the modified decimal system - 3, 3.1, 3.1.1 - don't need to subdivide more than that!
- Referencing
- Start new main top level sections on a new page
- Figure numbers sequentially with title and refer to in text

Reports that attract full marks will include content on all areas outlined in the assignment specification and include all features of a well written report that were mentioned in the report writing session.

Marks will be awarded for the accuracy of the solution, its justification and discussion as outlined on the previous page.