OUTLINE FOR MTH1022 PRESENTATION ON *The Tantalizing Four Cubes*

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1. Introduction
2. Summary of the problem:
3. Number of possibilities
4. The difficulty of solving by hand
5. An example and how to solve
6. Overview of graph theory:

(introducing some basic terminology: vertex, degree, loop, edge, etc.)

1. Our own examples:

* A case that does not work & why
* A case that works & why, how to solve it

1. Applications of this problem:

e.g. travelling sales man, quantum computing

1. A computer program:

* A program that takes as input the pattern of colors on a set of four colored cubes and finds all solutions (if there are any).
* Number of possibilities: some materials say 89,944 ways, some say 41,472. Let stick with the way our package (assumes and) explains - that is, 41,472 total number of positionings?
* Some materials say there are only 2 ways that satisfy the condition, some say 1 way only.???? I guess it depends on each set of cubes?