

This is a catalog of open problems that I began in late 2017 to keep tabs on different problems and ideas I had been thinking about.





Each problem consists of an introduction, a figure which illustrates an example, a question, and a list related questions. Some problems also have references which refer to other problems, to the OEIS, or to other web references.

# 1 Rating

Each problem is rated both in terms of how difficult and how interesting I think the problem is.





## 1.1 Difficulty

The difficulty score follows the convention of ski trail difficulty ratings.

	Easiest	The problem should be solvable with a modest amount of effort.
	Moderate	Significant progress should be possible with moderate effort.
	Difficult	Significant progress will be difficult or take substantial insight.
	Most difficult	The problem may be intractable, but special cases may be solvable.

## 1.2 Interest

The interest rating follows a four-point scale. Each roughly describes what quartile I think it belongs in with respect to my interest in it.

	Least interesting	These problems have an interesting idea, but may feel contrived.
	More interesting	Either a somewhat complicated or somewhat superficial question.
	Very interesting	Problems that are particularly natural or simple or cute.
	Most interesting	These are the problems that I care the most about.