The Green-Eyed Dragons and Other Mathematical Monsters is a collection of 57 very challenging math problems with detailed solutions. It is written for anyone who enjoys pondering difficult problems for great lengths of time. The problems are mostly classics that have been around for ages. They are divided into four categories: General, Geometry, Probability, and Foundational, with the Probability section constituting roughly half the book. Many of the solutions contain extensions/variations of the given problems. In addition to the full solution, each problem comes with a hint.

Are you eager to tackle the Birthday Problem, Simpson’s Paradox, the Game-Show Problem, the Boy/Girl Problem, the Hotel Problem, and of course the Green-Eyed Dragons?

Do the following problems make you want to drop whatever you’re doing, pick up a pencil, and start thinking? If so, this book is for you!

- How many cards do you need to deal from a standard deck, on average, to get your first ace?
- Construct the center of a given circle, using only a compass.
- Two players alternately roll an $N$-sided die. The player who fails to improve upon the previous roll loses. What is the probability that the first player wins?
- With a few hints, derive Stirling’s formula (shown in part on the front cover).

David Morin is a Lecturer and the Associate Director of Undergraduate Studies in the Physics Department at Harvard University. He received his Ph.D. in theoretical particle physics from Harvard in 1996. He is the author of Introduction to Classical Mechanics (Cambridge University Press, 2008), Probability: For the Enthusiastic Beginner (2016), and co-author of Electricity and Magnetism (Cambridge University Press, 2013).