The proof and the pudding: What Mathematicians, Cooks, and You Have in Common by Jim Henle
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Jim Henle is a mathematics teacher at Smith College in Massachusetts who specializes in set theory and logic. When I first saw his book, I thought it would be about mathematical aspects of dietetics or nutrition. This impression was quickly dashed as I read the first lines of the preface:

The premise of this book is that if you look at Mathematics and gastronomy the right way, they are amazingly alike. The goal of this book is to explore the two and to reveal their essential similarity.

You could then wonder if the author will use stereotypes like “math is just following recipes” and you would still be wrong. Dr. Henle cooks in a messy, non-recipe-following way. It is more like problem solving: having a goal, being a bit stubborn and having a go at it. This strategy allows him to slowly build up parallels between being a cook and being a mathematician.

The book is structured a bit like a train running on two tracks. On the one side, we have anecdotes of his personal life centered on cooking, eating, partying and creating either new flavours or vegetarian “imitations” of classic meals. On the other, we follow a professor building knowledge on a mathematical problem that has been a pole of his recent research and his side project. You wouldn’t know any of this from the titles of the chapters which are very metaphorical. Here are a few examples taken among the 25 chapters of the book: 1 - The Mad Scientist, 2 - The Arrogant Chef, 7 - Gluttony, 18 - Just to be Weird. Each chapter is like a train station where we explore the mindset of a mathematician and that of a cook. The aim of the book, the end of the train trip so to speak, is to hopefully convince the mathematically minded reader to start cooking. Hmm, not really, but it is less trodden than convincing “lay people” that mathematics is fun and doable by anyone, particularly someone who already cooks since then they can transversely transpose their cooking skills to do math. I really have a problem imagining a math phobic person reading this book and suddenly deciding to do mathematics, but I digress.

The main recurring mathematical problem that is explored throughout most of

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the chapters of the book is the “pool table” problem. In other words, we have a closed form (not necessarily convex or 2D), most often a rectangle, in which we study a path that bounces off the sides, usually with the normal reflection laws. Naturally, to fill up as many as 8 chapters with a single context, one basically has to ask many questions in that setting to nourish the text: “Is the path cyclical?”, “What is the longest path?”, “Does the path end in a corner?”, etc. The tone of the presentation is very laid back and entertaining, even personal. The solutions are built step by step from particular cases, probably to make them more concrete and comprehensible by a wider audience. Interesting results are obtained and interesting parallels are made with other fields of mathematics, such as geometry, number theory and topology. The author definitely found a very rich problem for a popular math book. The book also offers a website and some bibliography to explore the presented problems in more detail thereby encouraging the reader to use the book as a stepping stone to further learning, an approach I endorse fully. On top of being a good read, the book offers a good overall reader experience.

The book is structured with one math problem or factoid per chapter with a corresponding anecdote around a recipe. Other problems which are explored are based on games like flip-out, sudoku, a new kind of game invented by the author and his students called “clueless sudoku”, 1-2-3 takeaway, problems related to unconventional number representations, Cheney’s card trick [1] (not to be confused with Dick Cheney’s Iraq Illusion trick), the lamp problem [2] and other related problems. The factoids generally are not trivial, but make for cute math trivia. The proposed mathematical trip is quite amusing to follow. As an added bonus, the book is full of recipes, most of them experiments by the author. I haven’t tried the recipes, but having read them and knowing a thing or two about cooking, I find that they are full of originality and will become side projects in the future (ex-benedict, blue pizza, loxitaw, etc.). This book will surely please problem solvers, specifically teenage ones, who have never explored the aforementioned problems. The laid back approach may not be enough for the hardcore problem solvers though, but it might make a good gift for a mathematically gifted student who may not want to continue into math. All in all, this book is written from the heart and will please anyone that needs convincing that math is also an emotional pursuit and not a sterile field.

Happy reading!

References
