wealth of references where an interested reader can probe further. The historical details on some influential researchers of game theory and mechanism design will be a source of inspiration to the readers. This reviewer hopes that the book will play the role of a catalyst in bringing game theorists, mechanism designers, computer scientists, and engineers closer to each other. The author is overly modest in stating that the primary objective of the book is to present the essentials of game theory and mechanism design to an engineering audience. Economists, sociologists, and others interested in the theory of games will benefit equally from an understanding of the computational questions and related applications described in *Game Theory and Mechanism Design*.

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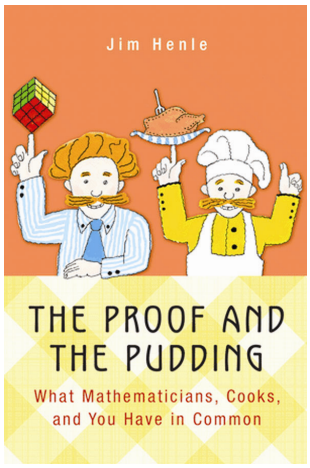

The Proof and the Pudding: What Mathematicians, Cooks, and You Have in Common. Jim Henle. Princeton University Press, UK. 2015. 176 pages. Price: US$ 26.95/£19.95.

Could there be any similarity between mathematics and cookery? Neither do cooks deal in numbers nor do mathematicians indulge in recipes. Why search for similarity when there is none, one might wonder. After all, no one eats numbers and neither can anyone order the square root of a muffin. Is it as linear as that or are we missing out on something more vital? Jim Henle, a Professor of Mathematics at Smith College, thinks we often miss tantalizing similarities between the two – both intimidate novices, both pose difficulties, and both celebrate champions. Further, mathematicians and cooks have similar dreams, similar fears, and similar guilty secrets.

It may be hard for someone who is average in mathematics and rarely ventures into the kitchen to concur with such similarities. Yet, it can hardly be denied that both mathematicians and chefs solve 'problems'. While Chefs create new and wonderful dishes, mathematicians create new and fascinating formulae. Called fusion, both of them bring together two or more old things to create something that's new. Cuisines are anything but fusion of the old and new – flavours, ingredients, techniques. So, is mathematics! Come to think of it, algebra was borne out of calculus. The original problems of calculus – calculating areas, constructing tangents – were considered geometric till algebra was applied to get out of them. That could easily be a mathematical cuisine.

Every cuisine is a work of mathematics, though. Sample this: a puff pastry is but a single layer of butter surrounded by dough to begin with. The combination is then rolled out, and folded in three, creating three layers of butter within four layers of dough. This is quite obvious! The unobvious is once it gets folded further, say three more times. Each time the number of layers of butter is tripled: 9 layers, 27 layers, 81 layers. As a consequence, it creates 10, 28 and 82 layers of dough. For the chef, the numbers of layers are significant as these reflect in ultimate appearance and taste of the puff pastry, for a mathematician it is the fun of creating 82 layers of dough in just four operations with implications beyond sheer numbers.

The self-taught cook-cum-gourmet mathematician makes it clear that cooking can be as much fun as mathematics, and vice versa. The bottom line is that if you are an avid cook, you can do math. And, if you are a successful mathematician, you can cook. What if you are neither of these two? It is so because neither does our education inculcate mathematical preparedness in us nor do our mothers coax us to try our hands at the frying pan. To be able to engage in either of the two subjects, argues Henle, one ought to be playful and fun-loving in life. Simply put, if you have fun doing something you will keep doing it. And, if you keep doing something you will get better at it. That, ladies and gentlemen, is the crux of both mathematics and cooking.

The Proof and the Pudding is a non serious book on a serious subject; half of the book is filled with recipes while the other half is devoted to mathematics. The author finds perfect escape in pursuing his culinary skills to recreate the magic of mathematics in loafs of breads and layers of cheese. The lessons he draws are cross-cutting, and may not relate directly to either math or cooking. Enjoyment in failure holds the key to get good at any creative endeavour. Both math and cooking can help in being bad at something and yet be able to cross the dead ends.

Exploring the two subjects from diverse perspectives, viz. vanity, sloth, parsimony, lust, and gluttony, Henle finds amazing similarities in both math and cooking. But it does not stop him from drawing mathematical parallels on aesthetic features like elegance, simplicity, complexity and usefulness common to both. If a recipe could be elegant, so could be a mathematical formula. From sticky buns to fennel pizza, and from cheese sandwich to vegetarian cassoulet, there is one for every taste that the self-taught cook could dish out with its associated mathematical proof using games, doodles, puzzles or card tricks. After all, the proof of the pudding lies in its taste.

Cooking and math may have begun as simple and useful crafts but these have evolved into complex and pleasurable arts today. Ironically, while chefs have attained higher social recognition, mathematicians are still languishing in obscurity. No wonder, Henle makes a case for mathematicians to be chefs. Else, the glaring dissimilarity will continue to linger with Chicken *tikka* persisting over Euclidian *geometry*. Is it because mathematics exists in our minds and does not deliver anything on the plate?

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