

Book Review: Math Bytes

by Gonit Sora - Saturday, December 06, 2014

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The question that very often mathematicians are asked in parties or in gatherings of friends is what do they actually study? Why is mathematics useful? Haven't we all read everything about mathematics that we use in our daily lives when we were in high school? These questions seem very innocent and perhaps most of those who ask these believe that mathematics is not only useless but a very difficult thing which if it didn't exist would have made their lives much more pleasant. But, how wrong can they be! Mathematics is not only supremely beautiful but as a famous mathematician once remarked, it is unreasonably effective. This week, I had the pleasure of reading a small book which gathered such tidbits of effective mathematics in one place to give us some ideas on how to answer these questions when we are asked them the next time.

Math Bytes

Math Bytes is a remarkable book on mathematics for the laymen by **Tim Chartier**. The author in this book has done an extremely difficult job seem so easy. He has analysed the various aspects of mathematics that we knowingly or unknowingly use a lot in our day to day lives. Be it the Google search algorithm or the movies that we watch which has exotic pictures of distant lands. Although Chartier doesn't define the set of people he intends this book for specifically, but from looking at the content, surely he wanted this book to be read by students who are studying mathematics and people who would want to know how mathematics is doing such a great job of solving so many different problems in our lives.

The book begins at a leisurely pace with some simple arithmetic which any high school student would be able to follow, but then moves in between to fractals and linear algebra, using these techniques to solve problems from how a viral tweet can affect the outcome of a major blockbuster or how do the game developers create such scenarios in their videos. No part of the book contains advanced mathematics, that would need a professional's help. A decent school education in mathematics is enough to understand all parts of the book. The author in that way has done a tremendous job of putting up mathematics for the wider audience. This refreshing book will teach you how to prove famous theorems using just random doodling or how Homer Simpson got some mathematics wrong in the show. Some chapters contain a few small exercises which will definitely help the reader not familiar with the topics discussed to come to terms with it.

No book can be perfect, and this book is no exception. For the slightly advanced mathematics reader some parts of the book may be a let down as the author doesn't discuss many things in details. The references that he gives are also not very complete, as some important discussions and papers available on some of the things that he mentions are omitted. But be sure that this book will stimulate you enough to urge you to complete the whole on one go. My suggestion would be to take one chapter at a time, and then go and do some digging online and find more materials in the internet which compliments some of the things that the book discusses.

So, if you want to know how facial recognition works, or how approximately do you resemble some given celebrity, then this book is a good place to start your project with. If you wondered how people distort images and then retain the original from such distorted images, then you would want to give this a try. Or in case you wondered what would be optimal shot in an Angry Birds game, then you should definitely read this one; which explains in details using simple physics and mathematics how the game really works. All in all, my verdict would be to go for this book in your leisure time, and then surprise your non-mathematical friends with tit-bits about mathematics that they would never dream had anything to do with mathematics.

Title: Math Bytes: Google Bombs, Chocolate-Covered Pi, and other cool bits in Computing

Author: Tim Chartier

Publisher: Princeton University Press, 2014

Price: \$24.95

Rating: 4 stars

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