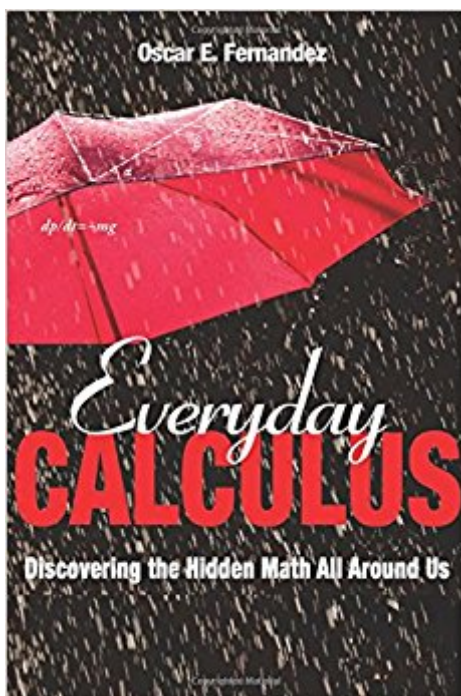The book was found

Everyday Calculus: Discovering The Hidden Math All Around Us

Synopsis

Calculus. For some of us, the word conjures up memories of ten-pound textbooks and visions of tedious abstract equations. And yet, in reality, calculus is fun, accessible, and surrounds us everywhere we go. In Everyday Calculus, Oscar Fernandez shows us how to see the math in our coffee, on the highway, and even in the night sky. Fernandez uses our everyday experiences to skillfully reveal the hidden calculus behind a typical day's events. He guides us through how math naturally emerges from simple observations--how hot coffee cools down, for example--and in discussions of over fifty familiar events and activities. Fernandez demonstrates that calculus can be used to explore practically any aspect of our lives, including the most effective number of hours to sleep and the fastest route to get to work. He also shows that calculus can be both useful--determining which seat at the theater leads to the best viewing experience, for instance--and fascinating--exploring topics such as time travel and the age of the universe. Throughout, Fernandez presents straightforward concepts, and no prior mathematical knowledge is required. For advanced math fans, the mathematical derivations are included in the appendixes.Ã Â Whether you're new to mathematics or already a curious math enthusiast, Everyday Calculus invites you to spend a day discovering the calculus all around you. The book will convince even die-hard skeptics to view this area of math in a whole new way.

Book Information

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Customer Reviews

One of American Association for the Advancement of ScienceÃ¢â¬â„¢s Books for General

Audiences and Young Adults 2014"For every befuddled math student who's ever sat in class and thought, 'When am I ever going to use this?' Fernandez, assistant professor of mathematics at Wellesley College, gleefully reveals the truth: the world really does run on math. . . . Whether describing how biology uses math to design more efficient organs and body structures or the best way to figure out when to overhaul a subway car, Fernandez keeps the tone light, as entertaining as it is informative. The book will speak most strongly to readers with some experience in trigonometry and basic calculus, but it's also accessible to those willing to put in a little extra effort. Either way, Fernandez's witty, delightful approach makes for a winning introduction to the wonderland of math behind the scenes of everyday life."--Publishers Weekly (starred review)"The author earnestly and excitedly seeks to make the principles of calculus near and natural, without the intimidation of a five-pound textbook dense with equations. . . . Fernandez invites the reader along on this work day and telegraphs an enthusiasm for seeing calculus, with hints of differential equations, presented to him. This excitement will communicate itself to the math enthusiast becoming acquainted with calculus through the author's style, which is both lively and confident."--Tom Schulte, MAA Reviews"Written in a bright conversational tone, this book wonderfully integrates calculus into everyday life."--Devorah Bennu, GrrlScientist, The Guardian"Professor Fernandez is a delightfully quirky writer and his book Everyday Calculus is lighthearted and compelling, connecting mathematics to daily life. . . . Everyday Calculus will not only be found to be understandable by non-mathematicians but will also be found to be quite entertaining. Indeed, not everyone considers the calculus going on inside Tandoori ovens, and they should."--Robert Schaefer, New York Journal of Books"Written in a bright conversational tone, this book wonderfully integrates calculus into everyday life."--GrrrlScientist"[T]he book is perfect for a reader who really wants to know what mathematics are governing our lives and who wants to learn and understand or polish up his rusty knowledge of these mathematics."--A. Bultheel, European Mathematical Society"Everyday Calculus is a triumph in the pursuit of the lofty goal of comprehending the world. Fernandez has touched upon a sensitive nerve, not just because mathematics makes most people cringe, but because the subject has allowed the passage of great things from some of the greatest minds ever to wander within the twentieth century. Oscar Fernandez is as bold as Alfred S. Posementier in his quest to deliver mathematical thinking as nature's gift to the thinking person."--D. Wayne Dworsky, San Francisco Book Review"Fernandez is especially effective when linking together seemingly disparate activities for which the underlying mathematical basis is identical. As the subtitle of the book suggests, the thrust is more one of 'discovering the hidden math all around us' rather than showing 'how mathematics is used,' which provides an honest and very pleasurable journey."--Choice"The

book offers in clear and concise fashion much of the material found in a traditional calculus textbook, but presents it beginning with a real world observation and then developing the mathematics needed to understand the observation."--AAAS"The author's style is witty, conversational and comfortable. . . . A very captivating read."--Andrew Jones, Mathematics Today

"Everyday Calculus tracks a day in the life of mathematician Oscar Fernandez, from his morning cup of joe to his night out at the theater, and lets us see the world the way he does: written in equations, the language of nature. He gently guides the reader through the basics of derivatives and integrals, revealing the hidden connections lurking just beneath the surface of our daily lives."--Jennifer Ouellette, author of The Calculus Diaries"Calculus has played an essential role in the development of engineering, medicine, physics, chemistry, geology, statistics, and a variety of other areas. But where is it in our everyday lives? In this beautiful book, Oscar Fernandez answers that question by noting all of the ways that calculus appears in the world around us, from the coffee cooling on the counter to the rain drops hitting an umbrella. You will never look at daily life in quite the same way again."--Colin Adams, coauthor of How to Ace Calculus"With a clear style and refreshing approach, this book shows how elementary calculus is relevant to practical day-to-day events familiar to us all."--John Adam, author of X and the City: Modeling Aspects of Urban Life"A fun and delightful read."--Thomas Garrity, Williams College

From getting up in the morning to going to bed at night, the author describes a typical day in his life, all the while concentrating on ÃƒÂ¢Ã â ¬Ã Å"mathematizingÃƒÂ¢Ã â ¬Ã Â• various things/events/processes that he sees around him. From functions to differentiation to integration, the reader is gently guided through the nature of calculus and how it can be used to solve various problems in the real world. This is all done in a most painless way; the more in-depth calculational details are relegated to appendices. Although, as pointed out by the author, the mathematical models that are developed here are crude approximations to reality, the approaches that are used are important and serve to illustrate the power of calculus.On the down side, I did find a few errors, e.g., Galileo did not invent the telescope (as stated on p.17), the speed of light is not 11,176,920 miles per second (as given on p. 47), etc. However, I did not find many such mistakes and they do not detract from the essence of the book.I found the writing style to be very friendly, lively, authoritative, highly accessible and quite captivating. Although any interested reader could enjoy this little book (117 pages of main text), it would likely be most appreciated by math/science enthusiasts. The book could also be used as an enjoyable complement to an introductory course in

calculus.

very good book and service

Unique in that the book runs like a story and makes us see Calculus in every aspect of our daily life. Style is relaxed and easy.In Calculus books, a problem is posed and Calculus is used to solve it. But in this book, you are amazed to bump into Calculus at every turn in life. You understand and fall in love with Calculus in a totally new fashion. The complex formulae are in the appendicesin order to avoid stumbling blocks that would detract from the train of thought.I loved the author's dedication of his book to his mother, wife, and daughter, in Spanish.Pierre Ghassibi, MD

Finally an enjoyable calculus book! Real life examples of calculus applicationsdistances itself from other more boring approaches.A great read

Raindrops.After a interesting discussion with the author I like to comment on the subject of raindrops. I presume equation(13) is the equation for the terminal velocity of the raindrop. A sort of umbrella manufacturer estimate. What confuses me is the wording. Using drag I would consider form drag and/or viscous drag. The differential equation in the Appendix 3 is about the change of momentum. I presume again this equation to be correct. It describes the influence of the change in momentum and gravity on the raindrop, no form or viscous drag. No problem the book is about calculus and not about physics. By the way viscous drag for low Reynolds numbers works in the same way as the change of momentum.(When dm/dt is positive!) However, it is not an alternative description! For completeness the viscous drag should have been involved in the differential equation. Again, the book is about calculus and not about physics.I do appreciate the calculus of the book. The book concludes with a nice example of present day physics: the age of the universe. The author descibes the formal steps for obtaining equation (93). However, I can imagine that for a layperson learning quite a few things about calculus with help of this book these steps are not of a great help to find (93). Some wording that a detailed description of the integration and taking the limit is beyond the scope of "ÃƒÆ'Ã â veryday Calculus" would have been of some help. A layperson will not read the references.Dr.l.noordzij@leennoordzij.nl

Excellent book and easy to understand for a non-math person.

excellent book

I use it for quick reference when doing analysis. It makes a good source for details. My last formal calculus course was in the late 1950's.

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