



Guesstimation: Solving the World's Problems on the Back of a Cocktail Napkin

By Lawrence Weinstein, John A. Adam

Download now

Read Online 

Guesstimation: Solving the World's Problems on the Back of a Cocktail Napkin By Lawrence Weinstein, John A. Adam

Guesstimation is a book that unlocks the power of approximation--it's popular mathematics rounded to the nearest power of ten! The ability to estimate is an important skill in daily life. More and more leading businesses today use estimation questions in interviews to test applicants' abilities to think on their feet. *Guesstimation* enables anyone with basic math and science skills to estimate virtually anything--quickly--using plausible assumptions and elementary arithmetic.

Lawrence Weinstein and John Adam present an eclectic array of estimation problems that range from devilishly simple to quite sophisticated and from serious real-world concerns to downright silly ones. How long would it take a running faucet to fill the inverted dome of the Capitol? What is the total length of all the pickles consumed in the US in one year? What are the relative merits of internal-combustion and electric cars, of coal and nuclear energy? The problems are marvelously diverse, yet the skills to solve them are the same. The authors show how easy it is to derive useful ballpark estimates by breaking complex problems into simpler, more manageable ones--and how there can be many paths to the right answer. The book is written in a question-and-answer format with lots of hints along the way. It includes a handy appendix summarizing the few formulas and basic science concepts needed, and its small size and French-fold design make it conveniently portable. Illustrated with humorous pen-and-ink sketches, *Guesstimation* will delight popular-math enthusiasts and is ideal for the classroom.

 [Download Guesstimation: Solving the World's Problems o ...pdf](#)

 [Read Online Guesstimation: Solving the World's Problems ...pdf](#)

Guesstimation: Solving the World's Problems on the Back of a Cocktail Napkin

By Lawrence Weinstein, John A. Adam

Guesstimation: Solving the World's Problems on the Back of a Cocktail Napkin By Lawrence Weinstein, John A. Adam

Guesstimation is a book that unlocks the power of approximation--it's popular mathematics rounded to the nearest power of ten! The ability to estimate is an important skill in daily life. More and more leading businesses today use estimation questions in interviews to test applicants' abilities to think on their feet. *Guesstimation* enables anyone with basic math and science skills to estimate virtually anything--quickly--using plausible assumptions and elementary arithmetic.

Lawrence Weinstein and John Adam present an eclectic array of estimation problems that range from devilishly simple to quite sophisticated and from serious real-world concerns to downright silly ones. How long would it take a running faucet to fill the inverted dome of the Capitol? What is the total length of all the pickles consumed in the US in one year? What are the relative merits of internal-combustion and electric cars, of coal and nuclear energy? The problems are marvelously diverse, yet the skills to solve them are the same. The authors show how easy it is to derive useful ballpark estimates by breaking complex problems into simpler, more manageable ones--and how there can be many paths to the right answer. The book is written in a question-and-answer format with lots of hints along the way. It includes a handy appendix summarizing the few formulas and basic science concepts needed, and its small size and French-fold design make it conveniently portable. Illustrated with humorous pen-and-ink sketches, *Guesstimation* will delight popular-math enthusiasts and is ideal for the classroom.

Guesstimation: Solving the World's Problems on the Back of a Cocktail Napkin By Lawrence Weinstein, John A. Adam **Bibliography**

- Sales Rank: #269046 in Books
- Brand: Weinstein, Lawrence/ Adam, John A.
- Published on: 2008-04-21
- Original language: English
- Number of items: 1
- Dimensions: 7.25" h x 4.25" w x .75" l, .79 pounds
- Binding: Paperback
- 320 pages

 [Download Guesstimation: Solving the World's Problems o ...pdf](#)

 [Read Online Guesstimation: Solving the World's Problems ...pdf](#)

Download and Read Free Online Guesstimation: Solving the World's Problems on the Back of a Cocktail Napkin By Lawrence Weinstein, John A. Adam

Editorial Review

Review

"Dr. Adam and his colleague Lawrence Weinstein, a professor of physics, offer a wide and often amusing assortment of Fermi flexes in a book that just caught my eye, *Guesstimation: Solving the World's Problems on the Back of a Cocktail Napkin*."--**Natalie Angier, *New York Times***

"An important skill of great use . . . is the ability to derive an approximate result from insufficient data. *Guesstimation* is a collection of [problems] gathered from everyday life and various fields. Working out questions . . . is both entertaining and enlightening. It may also help foster your career . . . because making correct guesses quickly establishes your reputation as an expert."--**Stephan Mertens, *Science***

"This book is a stimulating collection that will help the reader to reach informed judgments and will be a useful source of inspiration for mathematics and physics teachers: my only concern is that if my students have read it before they arrive at university, I may have to find a new approach to my first day's teaching."--**Tony Mann, *Times Higher Education***

"While few can hope to emulate the brilliance of a Nobel Prize winner like [Enrico] Fermi, coming up with pretty good guesstimates is a skill that can be taught. And that's the aim of *Guesstimation*. After a quick tutorial, the authors get down to business with a host of wide-ranging worked examples, from estimating the numbers of piano tuners in Los Angeles to figuring out the impact of deforestation on greenhouse gas levels. The results are sometimes surprising."--**Robert Matthews, *BBC Focus Magazine***

"[*Guesstimation* is] a left-brain book that helps you approximate answers to the types of questions actually asked in some job interviews today."--**Peter Coy, *Business Week***

"[A] delightful account of mathematical approximation, which instills the beauty and power of the back-of-the-envelope calculation. The puzzles make addictive confidence builders by breaking down tricky questions into manageable parts. Never again will you take a newspaper figure at face value without feeling the need, and confidence, to guesstimate your own figure."--**Matthew Killeya, *New Scientist***

"*Guesstimation* is both enlightening and entertaining. I recommend it to my fellow journalists both as a tool of our trade and as a mind stretcher."--**Rony V. Diaz, *Manila Times***

"Any idea what fraction of land in the US is covered by either a roof or pavement? Known as a Fermi problem, this type of question requires the use of reasonable estimation, which is the focus of the book at hand. In the initial chapters, Weinstein and Adam briefly review good 'guesstimation' techniques involving numbers and explain why the use of the geometric mean is preferred over the arithmetic mean."--**J. Johnson, *Choice***

"How many people in the world are picking their nose right now? Weinstein and Adam 'guesstimate' the answer to this problem and 79 others, covering chemistry, physics, biology and history. The book is a step-by-step guide to problem-solving using rough-and-ready maths, the kind done on the back of a cocktail napkin. And the authors have kindly left additional questions at the end to get readers started on their own problem-solving expedition."--**Cosmos**

"Physics educators can use this book as a guide to including the important skill of estimation in their courses. Students may find the power of estimation to be a valuable skill and will want to work their way through this book."--**Arthur Eisenkrafr, *American Journal of Physics***

"A source of imaginative problems, this book would make a nice addition to a mathematics department library."--**Diane Resek, *Mathematics Teacher***

"[I]t's quite obvious that the authors intend their book to be fun, nonthreatening, and user-friendly. There's very little not to like. . . . [T]he book can be for everybody, 'higher-up professionals' who might know math but not physics, as well as students wrestling with 'word problems.' Teachers could very well recommend it to math majors and nonmajors alike, or even use it in the classroom, in some cases as supplementary reading for the course."--**Marion Deutsche Cohen, *Mathematical Intelligencer***

"The cumulative effect of fairly simple paths to estimating solutions to a dizzying array of difficult problems is fascinating."--**Ray Bert, *Civil Engineering***

"This book will be enjoyed by anyone with an interest in estimation, but is also targeted at those applying for jobs at companies like Google, where the kind of questions considered in the book are often used in the interview process."--**Paul Taylor, *Mathematics Today***

From the Back Cover

"*Guesstimation* is a delightful book that, page after page, gleams with insight into the measure of all things--from house pets to lottery tickets and from the kitchen to the cosmos. Meanwhile, the authors cleverly teach you some fundamental chemistry, physics, and biology, leaving you enlightened and curiously comfortable with all that once seemed intractable in the world."--**Neil deGrasse Tyson, astrophysicist at the American Museum of Natural History, author of *Death by Black Hole: And Other Cosmic Quandaries***

"Wow, I suddenly grasped concepts that have eluded me for a lifetime. If you work anywhere in the professional world and are aiming for the corner office, this little book could have significant impact on both your analytical abilities and the way you are perceived by others. An absolute eye-opener!"--**Martin Yate, New York Times best-selling author of the *Knock 'Em Dead* job-search and career-management books**

"In a world where we are constantly bombarded with quantitative information (and disinformation) and where implausible factoids become established truths by repetition, acquiring a sound grounding in 'numeric literacy' has almost become a civic duty. Weinstein and Adam show to us that it can also be fun! An extremely useful book--not just for the intelligent layperson, but for virtually everyone: politicians, students, policymakers and, yes, sometimes even physicists."--**Riccardo Rebonato, Royal Bank of Scotland, author of *Plight of the Fortune Tellers***

"As well as giving insight into how scientists think, this book packs in more amazing facts than you could shake a stick at. Learn the technique of 'guesstimation' and you will be able to astound your friends at parties, as well as avoid getting ripped off by misleading advertising claims. You may even be able to work out how many facts you can shake a stick at."--**John Gribbin, author of *Deep Simplicity: Bringing Order to Chaos and Complexity***

"A very interesting and informative work, showing both how important and how easy it can be to estimate magnitudes. This book will amuse you while it instructs."--**Gino Segrè, author of *A Matter of Degrees***

"This is definitely my kind of book. The authors show, using numerous examples, how readers can make

numerical estimates of quantities--some absurd and some fascinating--in a wide variety of areas. This is a very useful talent--be it in everyday life, in one's career, or in job interviews."--**Robert Ehrlich, author of *Eight Preposterous Propositions***

"This book will benefit teachers and students in science and engineering, from grade school to college. The problems are well chosen to illustrate increasingly complex themes, culminating in energy conservation, risk assessment, and environmental problems. The solutions are careful, complete, and illuminating. General readers with a taste for mathematical puzzles will enjoy it."--**Hans Christian von Baeyer, author of *The Fermi Solution***

About the Author

Lawrence Weinstein is professor of physics at Old Dominion University. John A. Adam is professor of mathematics at Old Dominion University. He is the author of "Mathematics in Nature: Modeling Patterns in the Natural World" (Princeton) and the coeditor of "A Survey of Models for Tumor-Immune System Dynamics".

Users Review

From reader reviews:

Alonzo Stark:

Book is actually written, printed, or outlined for everything. You can know everything you want by a book. Book has a different type. To be sure that book is important point to bring us around the world. Beside that you can your reading expertise was fluently. A e-book Guesstimation: Solving the World's Problems on the Back of a Cocktail Napkin will make you to possibly be smarter. You can feel more confidence if you can know about almost everything. But some of you think in which open or reading the book make you bored. It's not make you fun. Why they might be thought like that? Have you seeking best book or ideal book with you?

Evelyn Nielson:

Information is provisions for those to get better life, information today can get by anyone on everywhere. The information can be a expertise or any news even a problem. What people must be consider any time those information which is in the former life are challenging to be find than now is taking seriously which one works to believe or which one often the resource are convinced. If you have the unstable resource then you get it as your main information you will have huge disadvantage for you. All of those possibilities will not happen throughout you if you take Guesstimation: Solving the World's Problems on the Back of a Cocktail Napkin as your daily resource information.

Caleb Jones:

This Guesstimation: Solving the World's Problems on the Back of a Cocktail Napkin is great reserve for you because the content which is full of information for you who always deal with world and have to make decision every minute. This particular book reveal it information accurately using great coordinate word or we can declare no rambling sentences inside. So if you are read it hurriedly you can have whole details in it.

Doesn't mean it only provides you with straight forward sentences but hard core information with beautiful delivering sentences. Having Guesstimation: Solving the World's Problems on the Back of a Cocktail Napkin in your hand like keeping the world in your arm, facts in it is not ridiculous 1. We can say that no publication that offer you world within ten or fifteen small right but this e-book already do that. So , this is certainly good reading book. Heya Mr. and Mrs. hectic do you still doubt that will?

Linda Harris:

Reading a book being new life style in this season; every people loves to read a book. When you learn a book you can get a lots of benefit. When you read ebooks, you can improve your knowledge, since book has a lot of information on it. The information that you will get depend on what kinds of book that you have read. In order to get information about your analysis, you can read education books, but if you want to entertain yourself you are able to a fiction books, these kinds of us novel, comics, as well as soon. The Guesstimation: Solving the World's Problems on the Back of a Cocktail Napkin provide you with new experience in looking at a book.

Download and Read Online Guesstimation: Solving the World's Problems on the Back of a Cocktail Napkin By Lawrence Weinstein, John A. Adam #1FW7NMVOADC

Read Guesstimation: Solving the World's Problems on the Back of a Cocktail Napkin By Lawrence Weinstein, John A. Adam for online ebook

Guesstimation: Solving the World's Problems on the Back of a Cocktail Napkin By Lawrence Weinstein, John A. Adam Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Guesstimation: Solving the World's Problems on the Back of a Cocktail Napkin By Lawrence Weinstein, John A. Adam books to read online.

Online Guesstimation: Solving the World's Problems on the Back of a Cocktail Napkin By Lawrence Weinstein, John A. Adam ebook PDF download

Guesstimation: Solving the World's Problems on the Back of a Cocktail Napkin By Lawrence Weinstein, John A. Adam Doc

Guesstimation: Solving the World's Problems on the Back of a Cocktail Napkin By Lawrence Weinstein, John A. Adam Mobipocket

Guesstimation: Solving the World's Problems on the Back of a Cocktail Napkin By Lawrence Weinstein, John A. Adam EPub

1FW7NMVOADC: Guesstimation: Solving the World's Problems on the Back of a Cocktail Napkin By Lawrence Weinstein, John A. Adam