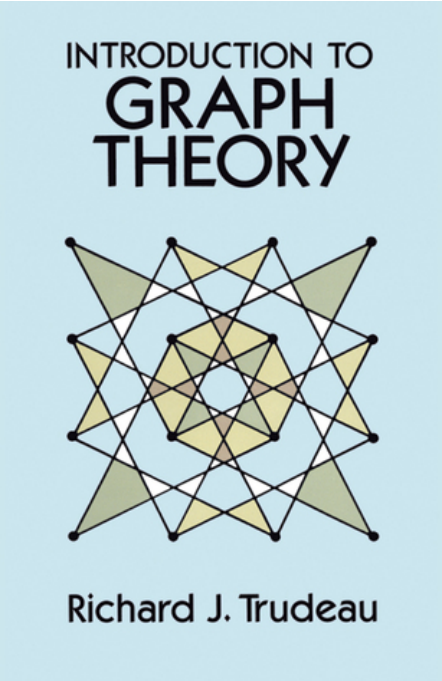

Introduction to Graph Theory

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A stimulating excursion into pure mathematics aimed at "the mathematically traumatized," but great fun for mathematical hobbyists and serious mathematicians as well. This book leads the reader from simple graphs through planar graphs, Euler's formula, Platonic graphs, coloring, the genus of a graph, Euler walks, Hamilton walks, more. Includes exercises. 1976 edition.

Introduction to Graph Theory Details

Date	:	Published February 9th 1994 by Dover Publications
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Author	:	Richard J. Trudeau
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Genre	:	Science, Mathematics, Nonfiction, Computer Science, Technical, Technology, Programming, Textbooks, Computers

From Reader Review Introduction to Graph Theory for online ebook

Ida Momennejad says

A fast read, very introductory. Useful to have around. I'd recommend a more advanced book if you use graph theory for your research.

Volkan says

This book, like most Dover books, is a hidden gem, a forgotten classic. Despite being 40 years old, written just before the 4-color theorem was proven with the aid of computers -- first theorem to be so proven-- it's a solid introduction to the fundamentals of graph theory. In addition, there is some eye opening background material on the roots of geometry, pure mathematics, mathematical proofs, and topology. If you're curious like I am, you will find a lot to mull over in here. A lot. In fact, it can be too dense to read it all at once. I skimmed over most of the proofs and skipped the exercises entirely, focusing instead on the vocabulary and definitions, but I intend to go back for them someday.

Ryan says

Trudeau really wants the reader to understand and enjoy graph theory. His thought process is accessible, and he's interested in finding an intuitive way to get to a result. Sometimes that intuition is wrong, and the author is right there with you expressing his surprise, which reminds you that mistakes are inherent to furthering understanding.

Alex Iadicicco says

Don't let the title fool you, this is *far* from a math textbook. However, it is definitely not a leisurely read either. The topics can be a bit challenging, especially toward the end, but if you're willing to interact with the author and try your hand at some of the problems, you shouldn't have much trouble following along. Nothing is introduced without first being explained.

This book challenges the widely held notion that mathematics is all about crunching numbers, or is so abstract and subtle that it takes years of study to have meaningful conversations about it. On the contrary, the basics of graph theory require almost no mathematical background, and the only numbers in sight are used for counting things. After defining graphs, Trudeau goes on to discuss topics like planar graphs, graph coloring, Euler walks, etc., using the basic framework of definitions and proofs that characterizes pure mathematics.

I highly recommend this book to anybody who has wondered what higher math is *really* like. There's no numbers or challengingly abstract concepts here, just simple definitions and logical proofs.

Ben Gutierrez says

What a delight. I picked this up with the intention of deepening my understanding of graphs and graph algorithms. I did learn about graphs, but I don't think I'll ever apply any of it at work or anywhere else.

And I'm fine with that. I'd had this belief that pure mathematics would be somewhere beyond my abilities, but anyone that can do algebra can enjoy this book. It's math for the sake of math. The problems can be explained to a child, but the solutions require rigor and concentration. It's a wonderful space to occupy. The author even offers some areas where an amateur mathematician could try to break some ground.

It's encouraged me to pick up other math books and explore math in ways I would never have considered.

Michael Cayley says

Graph theory normally receives little if any attention at school but is an interesting subject with a range of practical applications. This is an extremely lucid introduction, requiring very little previous mathematical knowledge - just elementary arithmetic - and is readily comprehensible to non-specialists. Thoroughly recommended.

Murat ?eker says

Brilliant read. Proofs towards the end are a bit cumbersome to follow for lazy but totally manageable.

William Schram says

This slim volume does what it says on the cover, making the introduction to graph theory as painless as possible. Contains problems with solutions to certain questions.

Brett Kistler says

About as comprehensible as a book on Graph Theory could probably be, though dry at times. The author starts out with a great introduction that claims that *this* book will be the first 'pure' mathematics book most readers have read, and promises that it'll be so much more exciting than traditional, boring 'applied' mathematics. However, for me, the more interesting moments in the book were when he veered in the direction of 'applied' territory (the knights tour, traveling salesman problem, highway inspector's problem, etc), because that's where these theorems really start to come to life for me. Without the applications, Trudeau sells the theory as a fun game -- but like many programmers who pick up a math book I remain more interested in "how can I use this theory to do cool stuff with my data."

That said, graph theory definitely has its applications, and this book describes the theorems thoroughly and methodically and with very little fluff, so it gets my 4 stars.

Raphael says

https://www.reddit.com/r/books/commen...

Eric says

This was a great introduction, as the title promised. It had just the right mix of theory, proof, and hand-holding I was looking for. It really piqued my interest in graph theory, which is now nearly on par with my fascination with group theory (and that’s really saying something). The fact that it took my so long to read has nothing to do with the book itself, and everything to do with my free time.

Paolo Simeone says

An interesting ride.

Ira Ko says

Fascinating read. Trudeau balances depth with brevity, mathematical proofs with humorous commentary.

Trudeau avoids confusing technical jargon, preferring a frank, "down to earth" teaching approach.

Having never been previously exposed to graph theory, I was surprised as to how easily I was able to digest this books contents.

Definitely worth a read for those interested in graphs, math, or theoretical ideas. Bring a pencil!

Gustavo Jaime-Muñoz says

enough for a quick introduction to graphs and concepts.

Vilém Zouhar says

I'm not sure whether this book should be called 'popular' or not, but it certainly is briliant. All of the topics covered were easy to understand. Suited for those who aren't going to do professional graph theory, but are still interested in it.