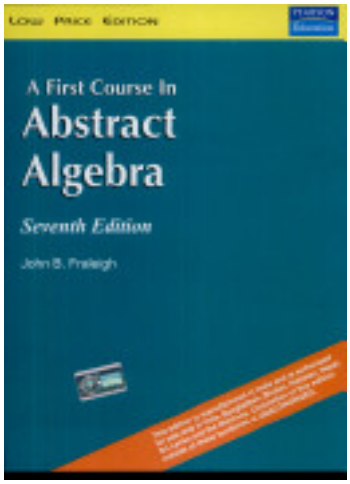

A First Course in Abstract Algebra, John B. Fraleigh, Pearson Education, 2003, 8177589008, 9788177589009, . .

Linear algebra , John B. Fraleigh, Raymond A. Beauregard, Victor J. Katz, 1990, , 518 pages. Fraleigh and Beauregard's text is known for its clear presentation and writing style, mathematical appropriateness, and overall usability. Its inclusion of calculus-related ....

Abstract algebra , David Steven Dummit, Richard M. Foote, Jan 15, 1999, , 898 pages. The book carefully develops the theory of different algebraic structures, beginning from basic definitions to some in-depth results, using numerous examples and exercises ....

Elements of chemical reaction engineering , H. Scott Fogler, 1986, Technology & Engineering, 769 pages. The Definitive, Fully-Updated Guide to Solving Real-World Chemical Reaction Engineering ProblemsThis book combines authoritative coverage of the principles of chemical reaction ....

First course in abstract algebra , Richard E. Johnson, 1953, Mathematics, 257 pages. .

Introduction to Abstract Algebra , W. Keith Nicholson, Mar 20, 2012, Mathematics, 535 pages. Praise for the Third Edition ". . . an expository masterpiece of the highest didactic value that has gained additional attractivity through the various improvements ....

American journal of mathematics, Volume 12 , Johns Hopkins University, American Mathematical Society, 1890, , . .

The Asian Journal of Mathematics: AJM., Volume 11, Pages 1-340 AJM., , 2007, Mathematics, . .

Abstract algebra a first course, Dan Saracino, Feb 1, 1980, , 233 pages. This text includes an unusually large number of examples, in order to help clarify the concepts of abstract algebra..

Plane geometry and its groups , Heinrich Walter Guggenheimer, 1967, Mathematics, 288 pages. .

Complex Analysis for Mathematics and Engineering , John H. Mathews, Russell W. Howell, 2006, Computers, 633 pages. The New Fifth Edition Of Complex Analysis For Mathematics And Engineering Presents A Comprehensive, Student-Friendly Introduction To Complex Analysis Concepts. Its Clear ....

A first course in linear algebra with optional introduction to groups, rings, and fields, Raymond A. Beauregard, John B. Fraleigh, Feb 1, 1973, Mathematics, 410 pages. .

Considered a classic by many, A First Course in Abstract Algebra, Seventh Edition is an in-depth

introduction to abstract algebra. Focused on groups, rings and fields, this text gives students a firm foundation for more specialized work by emphasizing an understanding of the nature of algebraic structures.

I am a mathematics professor at a small liberal arts university in Canada, and I use Fraleigh's book to teach a 300-level full-year introductory course in abstract algebra. I find it excellent. It is clear to me that Fraleigh has been teaching a course very similar to mine, to students very similar to mine, for probably three decades. He has figured out almost exactly the right way to introduce a difficult subject. He makes my job easy.

The book is broken into many small chapters, each of which can be easily translated into one or two hours of high-quality lecture. Thus, I can structure my lectures to closely follow the book, which has two advantages: (1) less preparation time for me (important when you have a heavy teaching load but still want to do a good job) and (2) The students have effectively a preprinted copy of the classroom lecture notes (so they can spend less time writing notes and more time paying attention and learning).

Fraleigh avoids the countless pitfalls which bedevil the naive algebra instructor (and many other textbook writers). He keeps things simple without making them stupid. Math students at my university have a wide range of background and skills. Some are highly talented and motivated, and I want to adequately prepare these students for graduate school. Others students are `future highschool teachers' (may God help our children) who apparently chose to study math because they thought it would resemble the polynomial arithmetic which they enjoyed in highschool, and who are often quite upset to discover otherwise. For these people, math is `supposed' to be computation, and any kind of logic or abstraction is anathema.

There are some abstract algebra texts (such as Bloch) which are designed to appeal to the `computational' crowd. Abstract algebra is one of the most beautiful and important parts of mathematics, and I describe these books as `algebra murdered and come back rotting from the grave'. There are also algebra books (such as Dummit & Foote, or Michael Artin) which are designed for `future graduate students'. Although I love these books, they are too sophisticated for most of my students. Also, their long chapters and sometimes poor organization means that preparing a decent lecture is often a lot of work.

Fraleigh finds an excellent compromise between these extremes. He develops some quite sophisticated material (including Galois theory and homology), but always finds a way to explain things simply and clearly. He provides exactly the right amount of information (e.g. the right number of examples and corollaries) to allow the instructor to move through the material efficiently (so you can actually finish the syllabus), while still explaining everything clearly. The exposition is lucid, and the books tightly organized. There are plenty of exercises which are challenging, but not too challenging, which is a boon when you are designing homework assignments.

I have a few small issues. For example, I don't think it's a good idea to develop group theory in terms of `abstract binary operations; one should develop it in terms of concrete symmetry groups. Also, I found that the section on the structure theory of finitely generated abelian groups and the chapter on homology theory were both a bit weak and needed to be supplemented. However, these are both very minor complaints compared to the overall quality of the book.

It is in this context that Fraleigh's textbook should be reviewed. After looking at all the major texts out there for basic undergraduate Algebra (Artin, D&F, Rotman, Herstein, Gallian), I'd say Fraleigh belong somewhere between Galian and Herstein. It is true that it does not cover as much material as D&F, but clearly it was not written with the same purpose in mind as D&F.

If we delve into the actual text-material we do again admit that Herstein is slightly more "mature" then Fraleigh. I believe the exposition in Herstein is probably a little clearer, however, Fraliegh does more "work" for you and gives you more detail. Further Fraleigh gives more application such as to coding, chemistry, and quantum physics etc.. Those who do not believe that the exposition is

roughly at the same level, I invite you to turn to p. 83 in Herstein and p. 253 in Fraliegh. Both start with the defintion of rings. Again Herstein spells out the actaul defintion in all 8 axioms. Fraleigh has 3 shortening them by merely giving the condition that a ring must be an abelian group under addition (note it is not always the case that Herstein introduces everything out the long way and Fraleigh the short, more on that later). After defintions, both text introduce examples, again I think most of the examples given by Herstein are rather trivial, whereas Fraleigh's examples are more intresting with some useful links back to Group Theory.

But Fraliegh clearly does more to motivate the reader to learn every new bit of material displayed in the book, althoguh the outline is not always the clearest. This is very evident when comparing the section introducing Fields. Fraleigh commutes the introduction of the topics of fields and homorphisms. Introducing homorphisms of rings first, although it makes little differnece in understanding the material, I muchl liked Herstein's direct introduction. I felt it was more natural to introduce fields then homorphisms, then ID, PID, ED

Fraliegh again says almost the exact same thing that Herstein does except he has far more exposition (although i found sometimes that the exposition could be a bit confusing). Another observation I'd like to make was I felt Fraleigh was far stronger in its Group Theory sections then it was with Fields and Polynomials. For some reason, the sections on polynomial rings were rather weak for the work we were doing in class and I cannot recommend Fraliegh for this if thats what you need. However, in general I found Fraleigh was easily digestable and could be read very leisurely.

The major drawback of the book of course is its problem sets. Although they are good for extra practice, they are by no means challenging. In this respect, Herstein and the rest are lightyears away from Fraleigh. This setup again is proabbly mroe to do with the differnt philosophies of how a student should learn rather then some weakness in design. Fraleigh nurtures a student so he can take his first steps in the subject and walk. As opposed to D&F whose terse exposition is akin to throwing a child onto the floor and yelling at him to return to you on his own. Which is better? I don't know, but I must certainly say I felt much "happier" when I was reading "A First Course in Algebra."

Again, I feel that Fraleigh's text is a wonderful introduction and supplement to a student (like myself) who did not come from a long and prestigious mathematics background. For this audience, the book is perfect for the first half of Algebra (Group Theory) and somewhat lacking for the second half (Rings, Fields, and Galois) but no book is perfect and given its size and the wealth of knowledge (historywise and application wise) that is stored in this volume I am content with what it offers to the reader. Also, as mentioned, since it covers roughly the same as Herstein, a more difficult class could utilize this book by just offering differnt problem sets to the students with additional supplementary exposition from the instructor. Overall the book is, gentle, flexible, and broad. Read more ›

This book was my introduction to algebra, and I can say that with me it hit its target - I not only learned and understood abstract algebra, but I grew to love it and be thrilled by it. If you are outside of mathematics and looking for the way in, I don't think you can do much better than Fraleigh. You'll outgrow it - almost as soon as you put it down. But that's just testament to how far it can take you in just a dozen or so chapters.

I would recommend, if you can afford it, also buying a copy of a zippier book like Hungerford or Dummit & Foote (ask around) and using it together with Fraleigh. Fraleigh won't let you down in terms of giving you the space you sometimes need to grasp things (for example, he gives Tons of examples, and there are plenty of easy exercises that allow you to soak in patterns in the structures for yourself) and an advanced book will give you increased perspective and power.

My undergrad Abstract Algebra I & II classes used this book (or rather the 6th edition which Amazon is no longer carrying). I think it's a very good book with a sufficient number of examples and detailed explanations. The reviewer who stated that this is not a book for mathematicians is correct; this is a book for undergrad students taking their first course in theoretical mathematics. The title of the book, "A FIRST Cource in Abstract Algebra", assumes this which is why proofs and explanations are often incorporated together. I think that most students would appreciate the lengthly explanations and lack

of overly technical proofs. Having a good professor to go along with this book, however, is what sold it to me.

"Abstract Algebra" is one of the most important field in mathematics. This book start with some really interesting & understandable examples. The most beautiful part of this book is the Galois Theorem & insolvability of the quintic(the "final" goal), which the example illustracte many confusing that one may get while reading the theorem. However, I stil wish there are more examples in the end of every important theory & ideas. Besides that, it is a pleasure of reading it!

Having taken Algebra (e.g, using van der Warden, Herstein, Lang, MacLane etc) courses in1950's, I found Fraleigh's delightful and informative book the one I continually refer to (still have my 1968 copy) for 'tune ups'. His style is that of a chalk covered tutor/mentor/ friend standing next to you to grasp inductively algebraic mental metaphors which allow you to further grasp their elaborations from Topolgy to Topos. His humor pervades the book (e.g. p11"..e) Mathematicians are eager to have some ambiguity in their work so that it has a better chance of being right [grin]).

This is a good text to learn the basics of abstract algebra. I would have liked there to be a few problems that were more advanced and perhaps some more interesting applications to geometry. It would also have been nice if specific groups, other than the Klein-4, etc., could have been mentioned at least. Overall, it gives a solid axiomatic approach to abstract algebra.

An essential part to any mathematician or to anyone who wants to learn about Group and Ring Theory. The prose is sharp and concise. Plenty of examples to faciliate learning of theorems and defintions. It was my textbook for a class and enabled me to master the subject of group and ring theory throughly. A pleasure to own!

content is designed around specific learning objectives.
http://edufb.net/1004.pdf
http://edufb.net/685.pdf
http://edufb.net/117.pdf
http://edufb.net/1119.pdf
http://edufb.net/241.pdf
http://edufb.net/416.pdf
http://edufb.net/1078.pdf
http://edufb.net/889.pdf