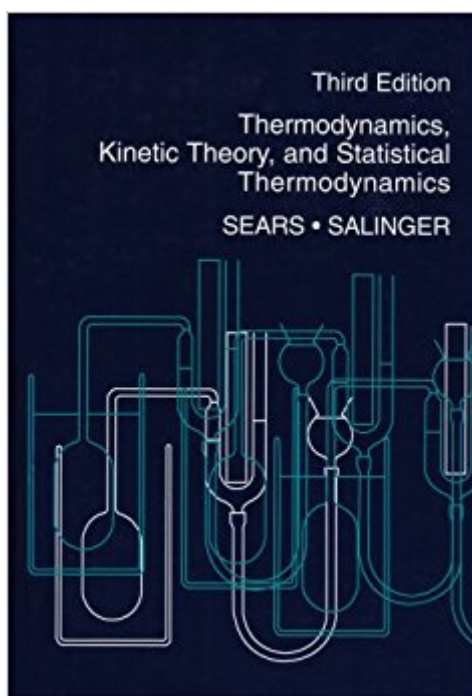The book was found

Thermodynamics, Kinetic Theory, And Statistical Thermodynamics (3rd Edition)

Synopsis

This text is a major revision of An Introduction to Thermodynamics, Kinetic Theory, and Statistical Mechanics by Francis Sears. The general approach has been unaltered and the level remains much the same, perhaps being increased somewhat by greater coverage. The text is particularly useful for advanced undergraduates in physics and engineering who have some familiarity with calculus.

Book Information

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Average Customer Review: 3.5 out of 5 stars   7 customer reviews

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Customer Reviews

Most of the book is devoted to thermodynamics and it doesn't introduce statistical mechanics until the final chapters. As an undergraduate text it provides all you'll need for a solid foundation in thermal physics and it's a bit more rigorous than Schroeder. The problems at the end of the chapters are not as good as the ones you'll find in Schroder or other standard texts, and are often ambiguously worded. Answers to problems are in the back of the book which lets you check your work (there isn't a solutions manual). It's a book that will get you by the thermal physics portion of the GRE, but I find my knowledge in statistical mechanics to be lacking after a semester with this book. Overall, I think this textbook is better for classical thermodynamics and the Schroeder book is better for statistical mechanics.

Good summary of thermodynamics.

Overcomplicated. The entire book. I'm not just talking rigorous... A good example is the two page

proof that the number of microstates in n particles, if each can range from 0 to q, whereas the sum of all must add up to q, is n + q - 1 CHOOSE q. This can be proved (just as formally) in about 3 lines, while being much more intuitive!

Old

"Thermodynamics, Kinetic Theory, and Statistical Thermodynamics (3rd Edition)" is an excellent text to learn the fundamentals. This text should be the text any Physics Professor uses. Do not be fooled by other texts. This one is the best. My professor now is trying to create his own text for Thermo, and it is horrible. Publishers need to be more honest to their clients!

Not very useful.That was my first impression of this book. Suppose I had left my review to the three words above. You would have been left with an empty feeling with expectations unfulfilled, wondering if there was more to it than just those words. You'd probably say my review wasn't very helpful.Well, that about sums up my feelings for this text. Every time I open it for reference, I read a few pages, looking for something that just doesn't seem to be there. I am left with expectations unfulfilled, wondering if I was missing something. I usually put it back on the shelf and move to the next book, thinking "Hmm. That wasn't very helpful."This book sits in my library next to the Callen text on thermo and stat mech. I also have a copy of Reichl's stat mech text. Between Salinger, Callen, and Reichl, one might begin to get a handle on the subject, but not one of these books is the *definitive* text on the subject. I haven't found that one yet. I would suggest that if one is looking for yet another reference text, put this one in the number 2 or number 3 slot on your list.

This is the best introductory thermo, stat mech book available. Very clear with a nice set of problems.

Thermodynamics, Kinetic Theory, and Statistical Thermodynamics (3rd Edition) Thermal Physics: An Introduction to Thermodynamics, Statistical Mechanics, and Kinetic Theory (Oxford Science Publications) Thermodynamics, Statistical Thermodynamics, & Kinetics (3rd Edition) Kinetic theory of gases,: With an introduction to statistical mechanics, (International series in physics) Thermodynamics and the Kinetic Theory of Gases: Volume 3 of Pauli Lectures on Physics (Dover Books on Physics) The Mathematical Theory of Non-uniform Gases: An Account of the Kinetic Theory of Viscosity, Thermal Conduction and Diffusion in Gases (Cambridge Mathematical Library)

Molecular Driving Forces: Statistical Thermodynamics in Biology, Chemistry, Physics, and Nanoscience, 2nd Edition 2nd edition by Ken A. Dill, Sarina Bromberg (2010) Paperback Kinetic Theory and Transport Phenomena (Oxford Master Series in Physics) Elements of the Kinetic Theory of Gases (The International Encyclopedia of Physical Chemistry and Chemical Physics) Kinetic Theory of Gases (Dover Books on Chemistry) Kinetic theory of gases, the: an anthology of classic papers with historical commentary (History of Modern Physical Sciences, 1) Classical Kinetic Theory of Fluids Analytics: Business Intelligence, Algorithms and Statistical Analysis (Predictive Analytics, Data Visualization, Data Analytics, Business Analytics, Decision Analysis, Big Data, Statistical Analysis) Molecular Driving Forces: Statistical Thermodynamics in Biology, Chemistry, Physics, and Nanoscience, 2nd Edition Molecular Driving Forces: Statistical Thermodynamics in Biology, Chemistry, Physics, and Nanoscience, Second Edition Thermodynamics and Statistical Mechanics of Macromolecular Systems An Introduction to Statistical Thermodynamics (Dover Books on Physics) Molecular Driving Forces: Statistical Thermodynamics in Chemistry & Biology Statistical Thermodynamics (Oxford Chemistry Primers) An Introduction to Applied Statistical Thermodynamics