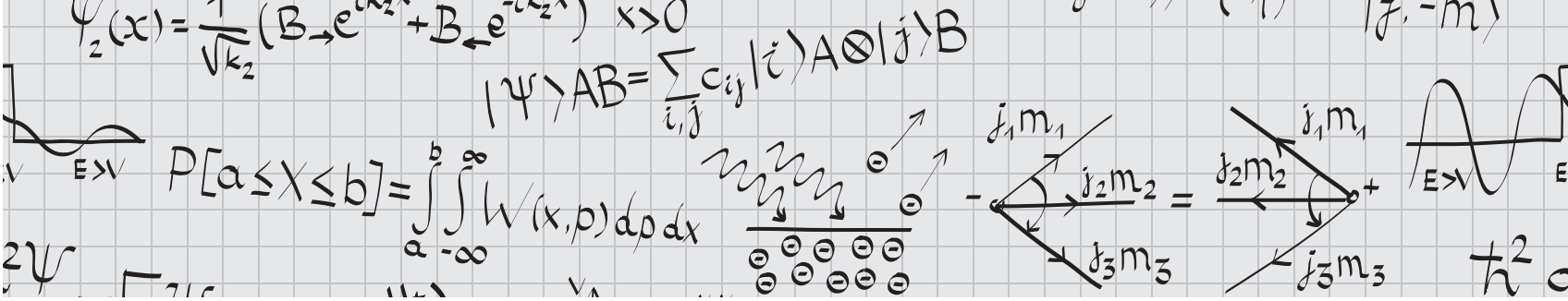

HOW TO USE THIS BOOK

Studying for the GRE can be overwhelming! This book is long because it contains all the information you need to ace the exam, but not every student needs to study every chapter in equal detail. Here are some suggestions for how to use this book.

- **Only numbered equations are worth remembering.** The Physics GRE is a test of outside knowledge, so some memorization is inevitable. However, we have made a concerted effort to separate equations that are only used in specific worked examples from equations that are worth remembering for the test. Only the equations worth remembering are given equation numbers and are included in the Equation Index at the back of the book along with the page number where they appear; anything else you can safely forget for test day. This is still quite a long list, so rather than memorize each equation, check out Chapter 9 for suggestions on how to reduce your memorization workload by deriving more complex equations from more basic ones.
- **Use these sample exams as diagnostics.** ETS has released precious few actual GREs, and only the most recent (from 2001, 2008, and 2017) are representative of the current content of the test. We strongly suggest you leave the ETS exams until shortly before the actual test, where you can take them under simulated test-taking conditions. To start your studying, consider taking one of the sample exams provided in this book as a diagnostic, and note which areas you need to review the most. You can then focus on the review chapters covering these particular subject areas. Once you feel you've sufficiently filled in the gaps in your knowledge of undergraduate physics, you can take another sample exam and track your improvement, leaving the last exam for extra practice a week or two before the test, should you need it. Because we don't have access to ETS's proprietary scoring formula, we do not attempt to offer any conversion between raw score and scaled score (200–990) for our sample exams. Guessing at a formula would be extremely misleading at best, so use your score on our exams only as an estimate, but by all means use the ETS-provided conversion charts when taking the ETS exams.
- **Don't try to learn all of undergraduate physics from our book.** We have tailored the length and content of each of our review chapters to roughly follow the proportions of the GRE: 20% classical mechanics, 18% electromagnetism, 9% optics and waves, 10% thermodynamics and statistical mechanics, 22% quantum mechanics and atomic physics, 6% relativity, 6% laboratory methods, and 9% specialized topics. Our expositions of standard first- and second-year undergraduate topics are extremely brief or nonexistent, and we have given slightly more weight to more unfamiliar topics you're unlikely to find together in a single book, in order to make this book self-contained. If you find yourself totally mystified by a topic or completely unfamiliar with a formula, look it up in a more detailed reference! We've provided a list of suggested resources below.
- **Treat the end-of-chapter or end-of-section problems as subject practice rather than actual exam questions.** While our review problems follow the GRE multiple-choice format and don't require calculators, we don't intend them to exactly replicate GRE questions in style and difficulty: that's the purpose of the sample exams. Rather, the problems are there to highlight important problem types or calculational shortcuts, and as a result may feature solutions with more steps than you would see on test day. We recommend you work these problems as you're studying a particular chapter, but don't feel the need to keep to the GRE time limit of under two minutes per question.

Best of luck studying!