



Mathematics of Social Choice: Voting, Compensation, and Division

Christoph Borgers

Download now

[Click here](#) if your download doesn't start automatically

Mathematics of Social Choice: Voting, Compensation, and Division

Christoph Borgers

Mathematics of Social Choice: Voting, Compensation, and Division Christoph Borgers

How do you select a winner from a field of candidates? How do you rank a field of candidates? How do you share a divisible resource like a cake, or an indivisible one like a pet or a house? These are the questions addressed in this fun and accessible book that takes an entertaining look at the choices made by groups of people with different preferences, needs, and interests.

Divided into three parts, the text first examines voting methods for selecting or ranking candidates. A brief second part addresses compensation problems wherein an indivisible item must be assigned to one of several people who are equally entitled to ownership of the item, with monetary compensation paid to the others. The third part discusses the problem of sharing a divisible resource among several people.

Mathematics of Social Choice: Voting, Compensation, and Division can be used by mathematics majors as well as students whose only mathematical background is elementary algebra. Material geared toward more sophisticated readers can be skipped without any loss of continuity. The book includes many elementary and usually simple, but rigorous mathematical proofs appropriate for beginning mathematics majors. Students will also find appendices with background material on set notation, logic, and mathematical induction and solutions to many of the homework exercises.

Audience: This book is primarily addressed to readers without a high-level mathematical background, such as college students majoring in subjects other than mathematics and advanced high school students. However, some material appropriate for more sophisticated readers is included in small print, and makes the text appealing to undergraduate mathematics majors interested in learning about applications of mathematics in the social sciences. The book can also serve as an easy introduction to topics such as the Gibbard Satterthwaite theorem, Arrow's theorem, and fair division for readers with more mathematical background.

Contents: Preface; Part I: Voting: Chapter 1: Winner selection; Chapter 2: Rule of the majority; Chapter 3: Election spoilers; Chapter 4: The Smith set; Chapter 5: Smith-fairness and the no-weak-spoiler criterion; Chapter 6: Schulze's beatpath method; Chapter 7: Monotonicity; Chapter 8: Elections with many or few voters; Chapter 9: Irrelevant comparisons and the Muller Satterthwaite theorem; Chapter 10: Strategic voting and the Gibbard Satterthwaite theorem; Chapter 11: Winner selection versus ranking; Chapter 12: Irrelevant alternatives and Arrow's theorem; Part II: Compensation: Chapter 13: Fairness and envy-freeness; Chapter 14: Pareto-optimality and equitability; Chapter 15: Equality, equitability, and Knaster's procedure; Part III: Division: Chapter 16: Envy-free, Pareto-optimal, and equitable cake cutting; Chapter 17: I cut, you choose for three: Steinhaus's method; Chapter 18: Hall's marriage theorem; Chapter 19: I cut, you choose for more than three: Kuhn's methods; Chapter 20: The method of Selfridge and Conway; Chapter 21: The geometry of Pareto-optimal division between two people; Chapter 22: The adjusted winner method of Brams and Taylor; Chapter 23: Conflict resolution using the adjusted winner method; Chapter 24: The effect of dishonesty on the adjusted winner method; Chapter 25: Proportional allocation; Chapter 26: Dividing a piecewise homogeneous cake among more than 2 people; Part IV: Appendices: Appendix A: Sets; Appendix B: Logic; Appendix C: Mathematical induction; Appendix D: Solutions to selected exercises; Index.

 [Download Mathematics of Social Choice: Voting, Compensation ...pdf](#)

 [Read Online Mathematics of Social Choice: Voting, Compensati ...pdf](#)

Download and Read Free Online Mathematics of Social Choice: Voting, Compensation, and Division Christoph Borgers

From reader reviews:

Antonio Fells:

Have you spare time for just a day? What do you do when you have much more or little spare time? Yeah, you can choose the suitable activity regarding spend your time. Any person spent all their spare time to take a wander, shopping, or went to the particular Mall. How about open or maybe read a book called Mathematics of Social Choice: Voting, Compensation, and Division? Maybe it is being best activity for you. You already know beside you can spend your time with your favorite's book, you can more intelligent than before. Do you agree with it is opinion or you have other opinion?

Bernice King:

Book will be written, printed, or highlighted for everything. You can realize everything you want by a guide. Book has a different type. As it is known to us that book is important point to bring us around the world. Adjacent to that you can your reading proficiency was fluently. A book Mathematics of Social Choice: Voting, Compensation, and Division will make you to possibly be smarter. You can feel much more confidence if you can know about every thing. But some of you think that open or reading any book make you bored. It is not make you fun. Why they are often thought like that? Have you searching for best book or suitable book with you?

Mary Brown:

Beside this Mathematics of Social Choice: Voting, Compensation, and Division in your phone, it could possibly give you a way to get more close to the new knowledge or details. The information and the knowledge you will got here is fresh from the oven so don't possibly be worry if you feel like an older people live in narrow town. It is good thing to have Mathematics of Social Choice: Voting, Compensation, and Division because this book offers to you readable information. Do you sometimes have book but you don't get what it's all about. Oh come on, that wil happen if you have this with your hand. The Enjoyable blend here cannot be questionable, such as treasuring beautiful island. So do you still want to miss the item? Find this book along with read it from right now!

Nancy Herman:

Reserve is one of source of know-how. We can add our expertise from it. Not only for students but additionally native or citizen want book to know the change information of year to help year. As we know those publications have many advantages. Beside many of us add our knowledge, can also bring us to around the world. By the book Mathematics of Social Choice: Voting, Compensation, and Division we can acquire more advantage. Don't you to be creative people? To become creative person must want to read a book. Simply choose the best book that acceptable with your aim. Don't end up being doubt to change your life at this time book Mathematics of Social Choice: Voting, Compensation, and Division. You can more desirable than now.

Download and Read Online Mathematics of Social Choice: Voting, Compensation, and Division Christoph Borgers #L4R2NV5Z3TW

Read Mathematics of Social Choice: Voting, Compensation, and Division by Christoph Borgers for online ebook

Mathematics of Social Choice: Voting, Compensation, and Division by Christoph Borgers 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 Mathematics of Social Choice: Voting, Compensation, and Division by Christoph Borgers books to read online.

Online Mathematics of Social Choice: Voting, Compensation, and Division by Christoph Borgers ebook PDF download

Mathematics of Social Choice: Voting, Compensation, and Division by Christoph Borgers Doc

Mathematics of Social Choice: Voting, Compensation, and Division by Christoph Borgers Mobipocket

Mathematics of Social Choice: Voting, Compensation, and Division by Christoph Borgers EPub