

Power-Up: Unlocking the Hidden Mathematics in Video Games

By Matthew Lane

Download now

Read Online

Power-Up: Unlocking the Hidden Mathematics in Video Games By Matthew Lane

A fun and lively look at the mathematical ideas concealed in video games

Did you know that every time you pick up the controller to your PlayStation or Xbox, you are entering a game world steeped in mathematics? *Power-Up* reveals the hidden mathematics in many of today's most popular video games and explains why mathematical learning doesn't just happen in the classroom or from books?you're doing it without even realizing it when you play games on your cell phone.

In this lively and entertaining book, Matthew Lane discusses how gamers are engaging with the traveling salesman problem when they play *Assassin's Creed*, why it is mathematically impossible for Mario to jump through the Mushroom Kingdom in *Super Mario Bros.*, and how *The Sims* teaches us the mathematical costs of maintaining relationships. He looks at mathematical pursuit problems in classic games like *Missile Command* and *Ms. Pac-Man*, and how each time you play *Tetris*, you're grappling with one of the most famous unsolved problems in all of mathematics and computer science. Along the way, Lane discusses why *Family Feud* and Pictionary make for ho-hum video games, how realism in video games (or the lack of it) influences learning, what video games can teach us about the mathematics of voting, the mathematics of designing video games, and much more.

Power-Up shows how the world of video games is an unexpectedly rich medium for learning about the beautiful mathematical ideas that touch all aspects of our lives?including our virtual ones.

Download Power-Up: Unlocking the Hidden Mathematics in Vide ...pdf

Read Online Power-Up: Unlocking the Hidden Mathematics in Vi ...pdf

Power-Up: Unlocking the Hidden Mathematics in Video Games

By Matthew Lane

Power-Up: Unlocking the Hidden Mathematics in Video Games By Matthew Lane

A fun and lively look at the mathematical ideas concealed in video games

Did you know that every time you pick up the controller to your PlayStation or Xbox, you are entering a game world steeped in mathematics? *Power-Up* reveals the hidden mathematics in many of today's most popular video games and explains why mathematical learning doesn't just happen in the classroom or from books?you're doing it without even realizing it when you play games on your cell phone.

In this lively and entertaining book, Matthew Lane discusses how gamers are engaging with the traveling salesman problem when they play *Assassin's Creed*, why it is mathematically impossible for Mario to jump through the Mushroom Kingdom in *Super Mario Bros.*, and how *The Sims* teaches us the mathematical costs of maintaining relationships. He looks at mathematical pursuit problems in classic games like *Missile Command* and *Ms. Pac-Man*, and how each time you play *Tetris*, you're grappling with one of the most famous unsolved problems in all of mathematics and computer science. Along the way, Lane discusses why *Family Feud* and Pictionary make for ho-hum video games, how realism in video games (or the lack of it) influences learning, what video games can teach us about the mathematics of voting, the mathematics of designing video games, and much more.

Power-Up shows how the world of video games is an unexpectedly rich medium for learning about the beautiful mathematical ideas that touch all aspects of our lives?including our virtual ones.

Power-Up: Unlocking the Hidden Mathematics in Video Games By Matthew Lane Bibliography

- Rank: #425454 in Books
- Brand: Lane Matthew
- Published on: 2017-05-23
- Original language: English
- Dimensions: 9.40" h x 1.00" w x 6.40" l,
- Binding: Hardcover
- 264 pages

Download Power-Up: Unlocking the Hidden Mathematics in Vide ...pdf

Read Online Power-Up: Unlocking the Hidden Mathematics in Vi ...pdf

Download and Read Free Online Power-Up: Unlocking the Hidden Mathematics in Video Games By Matthew Lane

Editorial Review

From the Back Cover

"Are you a video game enthusiast who is getting tired of being asked ‘How can you waste time on such stuff?' This book is your answer! Matthew Lane skillfully weaves a tale of how video games can be important tools for teaching mathematics and physics. As a long-time video gamer, I highly recommend *Power-Up*."**--Paul J. Nahin, author of *In Praise of Simple Physics***

"What a delightful journey through the math of hidden worlds! This is much more than a book about video games. It's an exploration of interconnectedness and an invitation for the perpetually curious."**--Karim Ani, founder of Mathalicious**

"After reading *Power-Up*, parents, teachers, and nongamers who have eschewed letting young people play video games may see that games are not the ‘evil distraction' they have been made out to be."**--Robin Angotti, University of Washington**

About the Author
Matthew Lane is a mathematician and cofounder of Rithm, a school for aspiring web developers. He is also the creator of *Math Goes Pop!*, a blog that explores the interconnections between mathematics and popular culture. He lives in San Francisco.

Users Review

From reader reviews:

Donald Taylor:

People live in this new moment of lifestyle always attempt to and must have the extra time or they will get lots of stress from both way of life and work. So , once we ask do people have free time, we will say absolutely sure. People is human not really a huge robot. Then we ask again, what kind of activity do you possess when the spare time coming to an individual of course your answer may unlimited right. Then do you try this one, reading books. It can be your alternative with spending your spare time, the book you have read is Power-Up: Unlocking the Hidden Mathematics in Video Games.

Gina Gregg:

Many people spending their time by playing outside together with friends, fun activity with family or just watching TV all day every day. You can have new activity to spend your whole day by reading through a book. Ugh, do you consider reading a book can actually hard because you have to use the book everywhere? It ok you can have the e-book, taking everywhere you want in your Smart phone. Like Power-Up: Unlocking the Hidden Mathematics in Video Games which is having the e-book version. So , try out this book? Let's observe.

Dane People:

A lot of reserve has printed but it is different. You can get it by world wide web on social media. You can choose the most beneficial book for you, science, amusing, novel, or whatever through searching from it. It is named of book Power-Up: Unlocking the Hidden Mathematics in Video Games. Contain your knowledge by it. Without leaving behind the printed book, it can add your knowledge and make a person happier to read. It is most significant that, you must aware about e-book. It can bring you from one place to other place.

Megan Jordan:

Reading a book make you to get more knowledge from this. You can take knowledge and information from a book. Book is composed or printed or highlighted from each source which filled update of news. Within this modern era like at this point, many ways to get information are available for anyone. From media social just like newspaper, magazines, science e-book, encyclopedia, reference book, book and comic. You can add your knowledge by that book. Do you want to spend your spare time to open your book? Or just searching for the Power-Up: Unlocking the Hidden Mathematics in Video Games when you required it?

Download and Read Online Power-Up: Unlocking the Hidden Mathematics in Video Games By Matthew Lane #OSN2I5WPGEV

Read Power-Up: Unlocking the Hidden Mathematics in Video Games By Matthew Lane for online ebook

Power-Up: Unlocking the Hidden Mathematics in Video Games By Matthew Lane 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 Power-Up: Unlocking the Hidden Mathematics in Video Games By Matthew Lane books to read online.

Online Power-Up: Unlocking the Hidden Mathematics in Video Games By Matthew Lane ebook PDF download

Power-Up: Unlocking the Hidden Mathematics in Video Games By Matthew Lane Doc

Power-Up: Unlocking the Hidden Mathematics in Video Games By Matthew Lane Mobipocket

Power-Up: Unlocking the Hidden Mathematics in Video Games By Matthew Lane EPub