1. Record Nr. UNINA9910792094003321 Autore Woolfson M. M. Titolo Everyday probability and statistics [[electronic resource]]: health, elections, gambling and war / / Michael M. Woolfson Pubbl/distr/stampa London, : Imperial College Press Singapore; ; Hackensack, NJ, : Distributed by World Scientific Pub., c2012 **ISBN** 1-283-59352-1 1-84816-763-6 Edizione [2nd ed.] Descrizione fisica 1 online resource (289 p.) 519.2 Disciplina Soggetti **Probabilities Statistics** Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Includes index. Nota di contenuto Contents; Introduction; Introduction to Second Edition; Chapter 1. The Nature of Probability; 1.1. Probability and Everyday Speech; 1.2. Spinning a Coin; 1.3. Throwing or Spinning Other Objects; Problems 1; Chapter 2. Combining Probabilities; 2.1. Either-or Probability; 2.2. Both-and Probability; 2.3. Genetically Inherited Disease - Just Gene Dependent: 2.4. Genetically Inherited Disease - Gender Dependent: 2.5. A Dice Game - American Craps; Problems 2; Chapter 3. A Day at the Races; 3.1. Kinds of Probability; 3.2. Betting on a Horse; 3.3. The Best Conditions for a Punter: Problem 3 Chapter 4. Making Choices and Selections 4.1. Children Leaving a Room; 4.2. Picking a Team; 4.3. Choosing an Email Username; 4.4. The UK National Lottery; Problems 4; Chapter 5. Non-Intuitive Examples of Probability; 5.1. The Birthday Problem; 5.2. Crown and Anchor; 5.3. To Switch or Not to Switch, That is the Question; Problems 5; Chapter 6. Probability and Health; 6.1. Finding the Best Treatment; 6.2. Testing Drugs; Problems 6; Chapter 7. Combining Probabilities: The Craps Game Revealed; 7.1. A Simple Probability Machine; 7.2. Pontoon: A

7.3. The Thrower's Chance of Winning at American CrapsThrowing a "natural"; Setting a "point" of 4 (or 10) and then winning; Setting a

Card Game

"point" of 5 (or 9) and then winning; Setting a "point" of 6 (or 8) and then winning; Problems 7; Chapter 8. The UK National Lottery, Loaded Dice and Crooked Wheels; 8.1. The Need to Test for Fairness; 8.2. Testing Random Numbers; 8.3. The UK National Lottery; 8.4. American Craps with Loaded Dice; Probability of a "natural"; Setting a "point"; Setting a "point" of 4 and then winning; Setting a "point" of 5 and then winning

Setting a "point" of 6 and then winningSetting a "point" of 8 and then winning; Setting a "point" of 9 and then winning; Setting a "point" of 10 and then winning; 8.5. Testing for a Loaded Die; 8.6. The Roulette Wheel; Problems 8; Chapter 9. Block Diagrams; 9.1. Variation in Almost Everything; 9.2. A Shoe Manufacturer; 9.3. Histogram Shapes; 9.4. Lofty and Shorty; Problem 9; Chapter 10. The Normal (or Gaussian) Distribution; 10.1. Probability Distributions; 10.2. The Normal Distribution; 10.3. The Variance and Standard Deviation; 10.4. Properties of Normal Distributions

10.5. A Little Necessary Mathematics10.5.1. Some special numbers; 10.5.2. Powers of numbers; 10.6. The Form of the Normal Distribution; 10.7. Random and Systematic Errors; 10.8. Some Examples of the Normal Distribution; 10.8.1. Electric light bulbs; 10.8.2. People on trolleys and under-used resources; Problems 10; Chapter 11. Statistics: The Collection and Analysis of Numerical Data; 11.1. Too Much Information; 11.2. Another Way of Finding the Variance; 11.3. From Regional to National Statistics; Problems 11; Chapter 12. The Poisson Distribution and Death by Horse Kicks; 12.1. Rare Events 12.2. Typing a Manuscript

Sommario/riassunto

Probability and statistics impinge on the life of the average person in a variety of ways - as is suggested by the title of this book. Very often information is provided that is factually accurate but intended to give a biased view. This book presents the important results of probability and statistics without making heavy mathematical demands on the reader. It should enable an intelligent reader to properly assess statistical information and to understand that the same information can be presented in different ways. In this second edition the author presents a new chapter exploring science and