

Devlin, Keith J.

The unfinished game. Pascal, Fermat, and the seventeenth-century letter that made the world modern. A tale of how mathematics is really done. (English) Zbl 1175.00001
New York, NY: Basic Books (ISBN 978-0-465-00910-7/hbk). x, 191 p. (2008).

The unfinished game to which the title refers is of this type: Suppose two players place equal bets on who will win the best of five tosses of a fair coin. They start the game, but have to stop before either player has won. How should the pot be divided? If their counts are equal at the interruption, the answer is clear. But what if they stop after 3 tosses, where one player is ahead 2 to 1? This problem was at the heart of a lengthy letter from Pascal to Fermat written on August 24, 1654. The resulting exchange led to the introduction to the world of the idea of the mathematical likelihood of the occurrence of a particular event. This exchange, plus some earlier discussion of the unfinished game by Pacioli and Cardano, and the subsequent development of a mathematical theory of probability and actuarial science, with the participation of de Moivre, Lagrange, Laplace, Graunt (life expectancy tables), Huygens, several of the Bernoullis, and others, are the subject matter of this attractively written book. Expected value and Bayes' Theorem are nicely explained, the meaning of being 95% sure of something, and even the Nobel Prize-winning work of Black, Scholes and Merton on the derivatives market and the pricing of options, are treated. The book is written for non-mathematicians, by an author with an outstanding record of such writing, and should find a large and appreciative readership.

Reviewer: [Gerald A. Heuer \(Moorhead\)](#)

MSC:

[00A05](#) Mathematics in general
[60-03](#) History of probability theory
[01A45](#) History of mathematics in the 17th century

Cited in 1 Review Cited in 3 Documents

Keywords:

[history of probability](#); [Pascal-Fermat correspondence](#); [unfinished game](#)