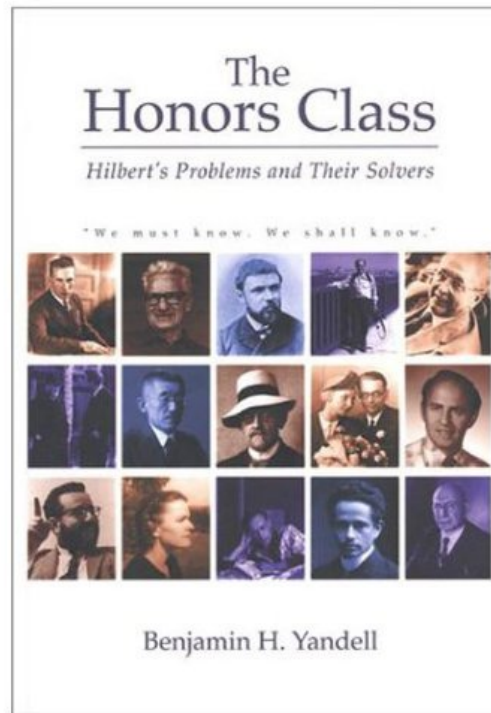


The Honors Class: Hilbert's Problems and Their Solvers

Benjamin H. Yandell

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Benjamin H. Yandell : The Honors Class: Hilbert's Problems and Their Solvers before purchasing it in order to gage whether or not it would be worth my time, and all praised The Honors Class: Hilbert's Problems and Their Solvers:

1 of 1 people found the following review helpful. Mathematics is Rational - Mathematicians are NotBy Clay GarnerThis can be seen as history of modern mathematics or as history of modern mathematicans. It is both. The reader would need at least some curiosity about mathematics or it will not hold attention. The biographical parts are well done, the mathematical parts were too deep for me.The focus is on Hilbert's twenty-three problems he presented in 1900. Yandell covers them one by one, although he groups them together in some cases. German, Russian, French, American and Japanese mathematicans all play a part.The point that stayed with me at the end, was the amazing variety of personalities that made up these world class scholars. Hilbert the rational, logical German professor. Cantor the mystic, unstable outsider, creating the wonder of set theory. Gdel and Church, more philosophical than mathematical. Hesse, the unrepentant Nazi. Julia Robinson and Emmy Noether, women working in a very male world. Carl Siegel, fighting Nazism with every breath. Takagi working in 'utter scientific solitude' during the war. Poincar, developing mathematics in his head, without paper. Kolmogorov, living and enduring from Stalin to Gorbachev. And much more. FascinatingA few examples. Gdel and Einstein were best friends at Princeton. Gdel was hostile to the Catholic Church. However he had "a soft spot for new sects in the New World, of which he spoke often in conversation, and wrote at some length to his mother. Einstein was such a legend that most people were unwilling to challenge him. Gdel wasn't." (36)Emil Arin recieves several pages. Quotes a review: "We all believe that mathematics

is an art. The author of a book, the lecturer in a classroom tries to convey structural beauty of mathematics to his readers, to his listeners. In this he will always fail. Mathematics is logical to be sure; each conclusion is drawn from previously derived statements. Yet the whole of it, the real piece of art, is not linear. . . . Clinging stubbornly to the logical sequence inhibits the visualization of the whole, and this logical structure must predominate or chaos would result." (240) Keen insight. Covers a lot of the effect of Nazism on mathematics and mathematicians in Germany. Many of the best were Jewish or married to them. Very sad. Destroyed the temple to mathematics in Gttingen. Worse, destroyed the flower of German culture. Stalin's similar effect on Russia is presented. Kolmogorov resisting Lysenko and his hatred of Mendel. Comments on the "often false, scientization of everything". (348) Many disappear or go into the camps. How many scientific wonders died there? Good short biographies. Nevertheless, someone with a measure of mathematical knowledge will enjoy this book even more. Mathematics is a difficult discipline. However, mathematicians are all different and few, if any, are always disciplined. 7 of 9 people found the following review helpful. The Honors Class: Hilbert's Problems and Their Solvers By Peter Haggstrom The task of explaining Hilbert's problems and their solutions for perhaps a general audience is not an easy one. William Yandell has done a wonderful job in explaining the development of some significant mathematics as a by product of reviewing the work on Hilbert's problems. Along the way he gives us some insights in how mathematicians in other societies and periods have existed in a social context. The interesting thing about books such as this is that they actually help you put things in context. One of the hardest things in mathematics is that professionals tend to launch into "There exists a t_0 such that for alletc" mode as though the motivation has come from outer space (the motivations are of course appreciated by those in the field). Books such as this actually bring the motivations together in an accessible way for others. Overall a very good read. 7 of 8 people found the following review helpful. A great work By A Customer Due to rapid development of mathematics in the last century, now one cannot master all subjects of mathematics. This is also true for those historians. Most of the books of " History of Mathematics " end in the beginning of 20th century. So we know very little about the contemporary mathematicians. This book can be described as a gap for it. After reading this book, not only you have a knowledge about the life of the great mathematicians, you also get the period in World War II how Nazis forced those mathematicians out of Germany and the reason why U. S. A. is now the leading centre of mathematics.

This eminently readable book focuses on the people of mathematics and draws the reader into their fascinating world. In a monumental address, given to the International Congress of Mathematicians in Paris in 1900, David Hilbert, perhaps the most respected mathematician of his time, developed a blueprint for mathematical research in the new century. Jokingly called a natural introduction to thesis writing with examples, this collection of problems has indeed become a guiding inspiration to many mathematicians, and those who succeeded in solving or advancing their solutions form an Honors Class among research mathematicians of this century. In a remarkable labor of love and with the support of many of the major players in the field, Ben Yandell has written a fascinating account of the achievements of this Honors Class, covering mathematical substance and biographical aspects.

" my mind it is one of the best popular books about mathematics and mathematicians written in the last ten years. . . clearly a labor of love. I particularly recommend The Honors Class as an outstanding achievement of mathematical exposition. Read it yourself and recommend it to all lovers of mathematics." -- American Mathematical Monthly - November 2003 ""Yandell writes well and has done a good job of researching... the resulting profiles are interesting, readable, and insightful."" -Fernando Q. Gouvea, Science , May 2002 ""The Honors Class, which follows the history of the Hilbert Problems, is a remarkable book and I take my hat off to its author."" -Phillip J. Davis, SIAM Book , June 2002 like a novel. Fascinating."" -Arnold Ostebee, Telegraphic s, March 2003 ""The book is not just about mathematical problems. As the title implies, it is as much about the people who solved them, and it is this aspect which distinguishes the book from other accounts of Hilbert's problems."" -George Willis, Australian Mathematical Society Gazette, October 2002 ""Yandell turned his back on a mathematics to become a writer after a distinguished undergraduate career at Stanford University. This makes him an ideal author for a book of this sort, to which he brings a rare combination of mathematical and literary sophistication."" -W. Timothy Gowers, NATURE , June 2002 In this work, Hilbert problems serve as a motivation to present biographies of mathematicians connected with their solutions. - Jean Mahwin, Belgian Mathematical Society, February 2005 ""Yandell gives us a glimpse of the mathematical culture of part of the twentieth century. He has uncovered details that would have been lost were it not for his personal efforts."" -The of Modern Logic, March 2007"