

1. Record Nr.	UNINA9910299781103321
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Titolo	5000 Years of Geometry : Mathematics in History and Culture // by Christoph J. Scriba, Peter Schreiber
Pubbl/distr/stampa	Basel : , : Springer Basel : , : Imprint : Birkhäuser, , 2015
ISBN	3-0348-0898-4
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (638 p.)
Disciplina	510 510.9 516 516.009
Soggetti	Geometry Mathematics History History of Mathematical Sciences
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di contenuto	Introduction -- 1.The beginnings of geometrical representations and calculations -- 2.Geometry in the Greek-Hellenistic era and late Antiquity -- 3.Oriental and old American geometry -- 4.Geometry in the European Middle Ages -- 5.New impulses for geometry during the Renaissance -- 6.The development of geometry in the 17th/18th centuries -- 7.New paths of geometry in the 19th century -- 8. Geometry in the 20th century -- Appendix: Selection of original texts -- References -- List of Figures -- Index of Names -- Index of Subjects.
Sommario/riassunto	The present volume provides a fascinating overview of geometrical ideas and perceptions from the earliest cultures to the mathematical and artistic concepts of the 20th century. It is the English translation of the 3rd edition of the well-received German book "5000 Jahre Geometrie," in which geometry is presented as a chain of developments in cultural history and their interaction with architecture, the visual arts, philosophy, science, and engineering. Geometry originated in the ancient cultures along the Indus and Nile Rivers and in Mesopotamia,

experiencing its first "Golden Age" in Ancient Greece. Inspired by the Greek mathematics, a new germ of geometry blossomed in the Islamic civilizations. Through the Oriental influence on Spain, this knowledge later spread to Western Europe. Here, as part of the medieval Quadrivium, the understanding of geometry was deepened, leading to a revival during the Renaissance. Together with parallel achievements in India, China, Japan and the ancient American cultures, the European approaches formed the ideas and branches of geometry we know in the modern age: coordinate methods, analytical geometry, descriptive and projective geometry in the 17th and 18th centuries, axiom systems, geometry as a theory with multiple structures, and geometry in computer sciences in the 19th and 20th centuries. Each chapter of the book starts with a table of key historical and cultural dates and ends with a summary of essential contents of geometry in the respective era. Compelling examples invite the reader to further explore the problems of geometry in ancient and modern times. The book will appeal to mathematicians interested in Geometry, and to all readers with an interest in cultural history. From letters to the authors for the German language edition I hope it gets a translation, as there is no comparable work. Prof. J. Grattan-Guinness (Middlesex University London) "Five Thousand Years of Geometry" - I think it is the most handsome book I have ever seen from Springer, and the inclusion of so many color plates really improves its appearance dramatically! Prof. J.W. Dauben (City University of New York) An excellent book in every respect. The authors have successfully combined the history of geometry with the general development of culture and history. ... The graphic design is also excellent. Prof. Z. Nádenik (Czech Technical University in Prague).

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