

Mathematical Viewpoints, Mediterranean Routes

Welcome to the exhibition "**Mathematical Viewpoints: Mediterranean Routes**", a journey through the Mediterranean which explores the circulation of scientific knowledge and those who made the formulation of ideas and concepts, that are still alive in today's mathematics, possible.

Images, texts, objects and instruments are displayed around maps that show how mathematical science has developed and has been disseminated. A timeline also serves to situate the previously mentioned events in their historical context, highlighting the considerable time frame over which this adventure played out.

Thanks to the researches of recent decades, we now have a better grasp of the respective contributions of the different civilizations around the Mediterranean, from the historical perspective of the interactions and transmission of knowledge. The Babylonians laid down the beginnings of calculus and geometry and provided the experimental basis for astronomy. Ancient Greece saw a significant development of these concepts and the birth of scientific reasoning. As was shown by the end of the twentieth century, the Arab scholars of the Middle Ages were not only the founders of modern algebra, but especially the mediators between ancient science and medieval Europe. It was then left to Renaissance scientists to synthesize this impressive body of knowledge which made the emergence of modern science possible.

Without claiming to be exhaustive, this exhibition presents some particularly significant historical events, grouped together in five areas:



Reckoning

- How the numerals travelled around the Mediterranean
- Writing numbers
- Multiplication around the Mediterranean
- Mathematics in Occitania



Measuring

- A Babylonian tablet: IM 55357
- Archimedes: the origin of calculus
- The Mediterranean origins of trigonometry
- Aristarchus and Eratosthenes: measuring Earth and Heaven
- Measuring instruments: the astrolabe, the geometric square



Locating

- Pytheas measures the obliquity of the ecliptic plane
- Stories of the sphere
- The early days of astronomy in the Mediterranean
- Greek astronomy - philosophical and geometrical
- Arabic and Persian astronomy - mathematical and religious
- Galileo - a new dimension to the observation of the Heavens



Representing

- Plato's five solids
- The three great problems of Antiquity
- The adventure of conics
- Perspective geometry
- Tilings



The emergence of Mathematics

- A founding text of mathematics, Euclid's elements
- Routes taken by Euclid's elements
- Greece, birthplace of mathematical proof
- Algebra ... before letters
- Diophantus of Alexandria, the father of algebra?
- Arabic algebra
- Meeting the Italian algebraists, Cardan and Tartaglia
- At the origin of modern science, Galileo
- The modern circulation of knowledge, Gergonne's Annals

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