

## EVALUATION OF THE VIEWPOINTS OF MUSLIM MATHEMATICIANS (2-11 Centuries AH) ABOUT THE CONCEPT OF GEOMETRY IN ARCHITECTURE

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### Abstract

“Geometry “and” proportions “are ranked in the category of sciences in the category of mathematics and are known as knowledge of continuous quantities and ratios. Geometry in architectural practice, implies a fixed identity that is responsible for creating the visual beauty and order. The reflection of beauty in Iranian architecture is in fact the balance of components and the proportion between them which is the cause of the relationship between geometry and architecture. Accordingly, the method of applying geometry in the building and city structures provides various definitions about the nature of this science. Hence, this study intends, for the first time, to deal with a systematic analysis of the predicated definitions and viewpoints by the Muslim mathematicians, in order to specify a clearer view of the contents and applications of this knowledge in architecture. Based on this and with the belief that during the views of mathematicians, access to ideas, expression of the nature of the Geometry there; This study is a reliable review, which is done by utilizing the desk study data, to become familiar with the considered theories regarding the state of geometry and evaluate the similarities and differences of the mentioned points of views. The ideas of the Muslim mathematicians in the beginning Islamic centuries are primarily considered, and then their approaches and inclinations about the concept of science of geometry were revealed according to the obtained similarities and differences. The research findings suggest the relationship between wisdom (religious philosophy), geometry and architecture in Islamic civilization. By measuring the views of Muslim’s mathematicians on the nature of geometry and its application in architecture, two dominant views are recognized. So, due to the fact that the Islamic worldview, according to the concepts and phenomena within the universe, has a special role in shaping and advancing science; the specific effect that mathematical science has had on the aesthetic concepts that dominate architecture, as well as, it has considered the follow up of applied geometry from the theoretical regulations adapted from the Islamic philosophical ideas (doctrine) to be the cause of mystical subjects beyond the geometric shapes. Therefore, geometry as a part of mathematical science in architecture is regarded as an example by which abstract thinking and Islamic philosophy are the nature of art and industry and they can be coded for the manifestation of the names and attributes of “Allah” in the industry. This was the result of collaboration between mathematicians and architects in the early Islamic centuries And continue the process, leading to the creation of an architectural approach that is intended to be an expression of profound ideas associated with Islamic culture in body of the buildings which was founded on the basis of the semantic attitude to the knowledge of geometry in architecture by Muslim mathematicians.

**Keyword:** Geometry nature, Muslim mathematicians, Islamic architecture, Theoretical geometry, wisdom (religious philosophy)

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