

Abstract

This didactic oriented bachelor project helps to approach an origin of relations for the volumes of solids taught at high school. It is focused on high school and university students. At the beginning the project shows historical meaning of the volumes of solids and the processes which were used to enumerate them in the ancient Egypt and Mesopotamia. Further, the project deals with the definition of volume of solids; it is based on Jordan's measure. The relations for volumes of the sorted solids are derived using the integral calculus. In the end the other ways of deriving of these relations are shown. At first, it is the method that Archimedes from Syracuse invented, furthermore by the visual imaginations and the Cavalieri's principle.