

Euclid's Accomplishments

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This was a paper i was assigned to write for my Algebra 2 class. I made a 100% on it, so please read about the life of Euclid of Alexandria and enjoy!

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1 - Life and Contributions

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Euclid's Accomplishments

Euclid of Alexandria was one of the greatest Greek geometers and logicians of all time. His works earned him the nickname the Father of Math. He lived in the early B.C. era along with many other mathematicians such as Plato. His work was known throughout history as the glue of mathematics (Bruno 283, Volume 2), referring to the fact that his theories held mathematics together.

Not much is known about the personal life of Euclid. Many are certain he was born around 325 B.C. He lived his life teaching in Alexandria, Egypt after Plato died, yet before Archimedes of Syracuse. It was said he learned his knowledge of arithmetic at Plato's Academy, but it is not certain. He eventually died around 265 B.C. presumably in Alexandria. Ironically, his name is a synonym for geometry (Bruno 125, Volume 1).

Euclid contributed many works to the history of mathematics. His greatest work, which is still remembered today, was his series called The Elements. This series was a compilation of earlier knowledge that became the centre of mathematical teaching for 2000 years (O Conner and Robertson article). The Elements was a series divided into thirteen books. Books one and two explain the basic properties of triangles, parallels, parallelograms, rectangles, and squares (O Conner and Robertson).

Book three examines the properties of a circle. Book four states that all right angles are equal (O Conner and Robertson). The fifth book lays out the work of Eudoxus.

It explains the proportion applied to commensurable and incommensurable magnitudes (O Conner and Robertson). Commensurable means two lines or distances whose ratio of their lengths ends up as a rational number. Incommensurable has almost the same definition, but has the ratio of the two lines or distances ending up as irrational numbers. The sixth book goes over the applications of the results of the fifth book to plane geometry (O Conner and Robertson). Books seven through nine have to do with the explanation of number theory, which is the study of properties of the natural numbers. To be specific, book seven is its own introduction to number theory. This book also contains the Euclidean algorithm, which is an efficient procedure to calculate the highest common factor d of a pair of m , n and write in the form: $d = pm + qn$, with p and q used as integers (O Conner and Robertson article). Book eight looks at certain numbers in geometrical progression. Geometrical progression is a sequence in which each number is the same multiple (the common ratio) of the previous one (O Conner and Robertson). The tenth book explains the theory of irrational numbers and a lot of work done by Theaetetus. Euclid ended up altering the proofs of several theorems in this book so that they fitted the new definition of proportion stated by Eudoxus. Books eleven through thirteen dealt with three-dimensional geometry. Unusual as it may seem, but Euclid never truly proved that these works were true. Though the layout and explanations of the material were all done by the Euclid, the actual work was not. Other pieces of work done by Euclid of Alexandria were Data (with ninety-four proportions), On Divisions, Optics,

Phaenomena, Surface Loci (two books), Porisms (three books), Conics (four books), The Book of Fallacies, and The Elements of Music.

People may say that Euclid of Alexandria was great in his time, and I believe he was great. But, I do not think he should be titled the Father of Math, due to the fact that all of his work was all simple compilations of earlier knowledge. Any and all work he did contribute was a simple set of books explaining these theories. Therefore, I believe that any and all credit to founding mathematics should go to the founders of each and every single theory.

This man was known as the Father of Math. His theories were the glue of mathematics. He represented how one person could explain all of math in one series of books and ironically have his name be a synonym for geometry. This man's name was Euclid of Alexandria.

2 - Works Cited

Works Cited for Euclid's Accomplishments

Bruno, Leonard C. Math Mathematics: The History of Math Discoveries Around the World Volume 1: A-H. Farmington Hills, MI: UXL, 1999.

Bruno, Leonard C. Math Mathematics: The History of Math Discoveries Around the World Volume 2: I-Z. Farmington Hills, MI: UXL, 1999.

O Conner and Robertson. Euclid of Alexandria. Jan. 1999. University of St. Andrews.
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