Euclid Website

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Euclid is known as a Greek mathematician who became the “Father of Geometry”. He is known to have taught during the reign of Ptolemy I. He wrote “Elements”, which served to be one of the most influential mathematical books. When Euclid wasn’t tutoring in the Alexandria library, he was creating different elements of mathematics such as geometric systems, infinite values, factorizations, and the congruence of shapes that went on to the contour Euclidean Geometry. He was heavily influenced by Pythagoras, Aristotle, Eudoxus, and Thales.

Little is known about his early life except that Euclid was born in the mid-4th century BC and lived in Alexandria, Egypt. The world hasn’t known much about him until a philosopher named Proclus wrote:

“Not much younger than these [pupils of Plato] is Euclid, who put together the “Elements”, arranging in order many of Eudoxus’s theorems, perfecting many of Theaetetus’s, and also bringing to irrefutable demonstration the things which had been only loosely proved by his predecessors. This man lived in the time of the first Ptolemy; for Archimedes, who followed closely upon the first Ptolemy makes mention of Euclid, and further they say that Ptolemy once asked him if there were a shorted way to study geometry than the Elements, to which he replied that there was no royal road to geometry.”

Math:

Euclidean geometry is the study of plan and solid figures on the basis of axioms and theorems written by Euclid. This is taught mainly in high school. This subject is used to apply theorems in special situations and emphasises the importance of proof. One of the things that Euclid realized when it comes to geometry, you need to have a firm and strong foundation. This is why he wrote “Elements”. Euclid proposed five common notions for a basis on further logical deductions. With these five common notions he also proposed five unprovable but intuitive principles known as postulates or axioms. Here are examples of postulates or axioms:

1. Given two points, there is a straight line that joins theme.
2. A straight line segment can be prolonged indefinitely.
3. A circle can be constructed when a point for its centre and a distance for its radius are given.
4. All right angles are equal.
5. If a straight line falling on two straight lines make the interior angles on the same side less than two right angles, the two straight lines, if produced indefinitely, will meet on that side on which the angles are less than the two right angles.

All five of these postulates or axioms provide a basis for numerous provable theorems on which Euclid built his geometry.

Here are a few examples of Euclidean geometry being put to use:

1. Congruent Triangles: (SAS Theorem) is when two sides and the included angle of one triangle are equal to the two sides and the included angle of another triangle, then the triangles are congruent. The other two corresponding theorems are (ASA and SSS).
2. Areas: “By placing a triangle into an appropriate rectangle, one can show that the area of the triangle is half the product of the length of one of its bases and its corresponding height. One can then solve for the area of the polygon by dissecting it into triangular regions.”
3. Circles: “A chord AB is a segment in the interior of a circle connecting two points (A and B) on the circumference. When a chord passes through the circle’s center, it is a diameter, d. The circumference of a circle is given by π d or 2πr where r is the radius of the circle; the area of the circle is πr^2. An important theorem states that for any chord AB in a circle, the angle subtended by any point on the same semiarc of the circle will be invariant. Slightly modified, this means that in a circle, equal chords determine equal angles, and vice versa.”

Writings:

“Elements” is Euclid’s most well-known influential book that he has written. This consists of thirteen books that is a mathematical and geometric treatise. This is Euclid’s collection of definitions, postulates, theorems, and constructions.

“Data” is a book that holds ninety-four propositions and deals with the nature and implications of any given information in geometrical problems.

“On Divisions of Figures” is another important work, but is only in partial Arabic translation in present day.

“Phaenomena” is a book that contains a spherical astronomy. This is similar to “On the Moving Sphere” by Autolycus.

“Optics” is a work that shores the knowledge about theory and perspective. This is in early Greek translation.

(<http://www.thefamouspeople.com/profiles/euclid-436.php>)

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**Who is Euclid? Everything You Need to Know. (n.d.). Retrieved January 26, 2017, from** [**http://www.thefamouspeople.com/profiles/euclid-436.php**](http://www.thefamouspeople.com/profiles/euclid-436.php)

**Euclidean geometry. (n.d.). Retrieved January 26, 2017, from https://www.britannica.com/topic/Euclidean-geometry**