

## Short Communication on Euclidean Geometry

Joseph\*

*Department of Mathematics, University of Patras, Greece*

The word “geometry” comes from the Greek words “geo”, which implies the “earth”, and “matron”, which implies “to measure”. Euclidean geometry could be a mathematical system attributed to geometer an instructor of arithmetic in Alexandria in Egypt. geometer gave North American nation associate exceptional plan concerning the fundamental ideas of pure mathematics, in his book referred to as “Elements”.

Euclid listed twenty three definitions in his book “Elements”. Some small print square measure mentioned below:

- A line is associate endless length.
- A purpose has no dimension (length, breadth and width).
- A line that lies equally with the points on itself could be a line.
- Points square measure the ends of a line.
- A surface is that that has breadth and length solely.
- A plane surface could be a surface that lies equally with the straight lines on itself.
- Lines square measure the sides of a surface.

Types of pure mathematics

In two-dimensional plane, there square measure majorly 3 sorts of geometries.

Euclidean (for flat surfaces)

Spherical (for sickle-shaped surfaces)

Hyperbolic

### Euclidean Geometry:

Euclid's parts could be a mathematical and geometrical work consisting of thirteen books written by Hellenic man of science geometer in Alexandria, Ptolemaic Egypt. Further, the 'Elements' was divided into 13 books that popularized pure mathematics everywhere the planet. As a whole, these parts could be A assortment of definitions, postulates (axioms), propositions (theorems and constructions), and mathematical proofs of the propositions.

Book one to fourth and sixth discuss geometry. He gave 5 postulates for {plane pure mathematics geometry} referred to as Euclid's Postulates and therefore the geometry is thought as

elementary geometry. it had been through his works, we've got a collective supply for learning pure mathematics; it lays the inspiration for geometry as we all know currently.

### Euclidean Axioms

Here square measure the seven axioms given by geometer for pure mathematics.

1. Things that square measure up to identical issue square measure up to each other.
2. If equals square measure additional to equals, the wholes square measure equal.
3. If equals square measure subtracted from equals, the remainders square measure equal.
4. Things that coincide with each other square measure up to each other.
5. The total is larger than the half.
6. Things that square measure double of identical things square measure up to each other.
7. Things that square measure halves of identical things square measure up to each other

### Euclid pure mathematics Worksheet

1. What percentage dimensions do solids, points and surfaces have?
2. What's the form of a pyramid's base?
3. If  $a + b = 10$  and  $a = c$ , then prove that  $c + b = 10$ .
4. Will 2 distinct intersect ant line be parallel to every different at identical time? Justify.
5. Browse the subsequent sentence and mention that of Euclid's axiom is followed: “X's wage is up to Y's wage. because of the recession, the salaries of X and y square measure reduced to 0.5. Currently the ultimate wage of X can still be up to Y.”

Use of elementary geometry

Euclidean geometry is majorly employed in the sphere of design to make a spread of structures and buildings. planning is that the immense application of this pure mathematics. Also, in measuring, it's accustomed do the leveling off the bottom.

---

\*Corresponding author: Joseph, Associate Professor, University of Patras, Greece. E-mail: Joseph863@gmail.com

Received: February 5, 2021; Accepted: February 18, 2021; Published: February 27, 2021

Citation: Joseph (2021) Short Communication on Euclidean Geometry. Mathematica Eterna. 11:122.10.35248/1314-3344.21.11.122.

Copyright: ©2021 Joseph. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited