



**GOVERNMENT DEGREE COLLEGE**

**NARSAPUR, MEDAK.DIST**

**DEPT.OF MATHEMATICS**

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**“APPLICATIONS OF TRIGONOMETRY”**

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# “APPLICATIONS OF TRIGONOMETRY”

## Introduction:

- Trigonometry the branch of mathematics concerned with Specific functions of angles and their applications to calculations.
- There are six functions of angle commonly used in trigonometry.
- Their names **sine, cosine, Tangent, cotangent, secant and cosecant**
- These functions are used in obtaining in unknown angles and distances from known or measured angles in geometric figures.
- Trigonometry developed from a need to compute angles and distance in such fields as astronomy, map making, surveying and large caliber guns (weapons) etc.....

## Aims and Objectives:

- Identify the trigonometric formulas using in real life applications.
- Trigonometry is used in **measuring the height of a building or a mountain**. The distance of a building from the viewpoint and the elevation angle can easily determine the height of a building using the trigonometric functions.
- To Create and analyse trigonometric formulas using right angled triangle.

## Applications of Trigonometry

- Trigonometry has been used in a variety of fields throughout history, including architecture, theoretical physics, and surveying.
- It can be used for a variety of things, including: Oceanography, seismology, meteorology, physical sciences, astronomy, acoustics, navigation, electronics, and many other subjects are among them.
- It may also be used to determine the length of lengthy rivers, measure the height of a mountain, and so on.

## Real-Life Applications of Trigonometry

- Many real-life examples are used frequently in trigonometry. Let's use an example to better understand trigonometry.

### **Other Applications include:**

- Trigonometry is used in construction
- Trigonometry can be used to measure the height of a building or mountains.
- Trigonometry is used video games.
- Trigonometry is used in physics
- Archaeologists use trigonometry
- Trigonometry is used in criminology
- Trigonometry in aviation
- Trigonometry is used in navigation

### **Other uses of trigonometry**

- The calculus is based on trigonometry and algebra.
- The fundamental trigonometric functions like sine and cosine are used to describe the sound and light waves.
- Trigonometry is used in oceanography to calculate the height of waves and tides in ocean.
- It is used in creation of maps and also used in satellite systems.

### **Findings:**

- Trigonometry is a very important part of Mathematics that is used in different fields of our life.
- To name a few, trigonometry formula helps in construction, marine navigation and archaeology.
- We can conclude that without trigonometry, life would be much more difficult.
- Without going through the troubles you can easily find something so we think that it was a good invention by Archimedes and thanks to these many architects need not go through the trouble to calculate things, so it really helps in real life applications not only in our tests and exams.