

Trigonometry is a branch of mathematics that deals with the relationships between the sides and angles of triangles. It is widely used in various fields such as engineering, physics, and navigation. Key concepts in trigonometry include angles, trigonometric functions (such as sine, cosine, and tangent), and the Pythagorean theorem. These concepts help in calculating distances, angles, and various other measurements in real-life situations. Trigonometry can be divided into two main branches: plane trigonometry, which deals with triangles on a flat surface, and spherical trigonometry, which deals with triangles on a curved surface, such as the surface of a sphere. Some common applications of trigonometry include calculating the height of buildings or trees, analyzing the motion of waves and vibrations, and determining the angles and distances in surveying and navigation. Overall, trigonometry is a fundamental topic in mathematics that provides important tools for solving problems involving angles, relationships between sides and angles of triangles, and various other mathematical situations.