

Summer Assessment

Class 10 Mathematics

1. Explain why trigonometric ratios of an acute angle remain the same for all similar right triangles.
2. A student knows the angle of elevation to the top of a tower and the horizontal distance from the tower. Which trigonometric ratio would be most suitable to find the height? Justify your answer.
3. Why is it not always necessary to measure the height of a tall object directly? Explain using applications of trigonometry.
4. Two students standing at different distances from a building observe different angles of elevation to its top. Explain how these observations are related.
5. In a right triangle, if one acute angle increases, explain how the values of sine and cosine change.
6. Give one real-life situation where applications of trigonometry are useful and explain how they help solve the problem.