

CLASS 10

MATHS

REVISION NOTES

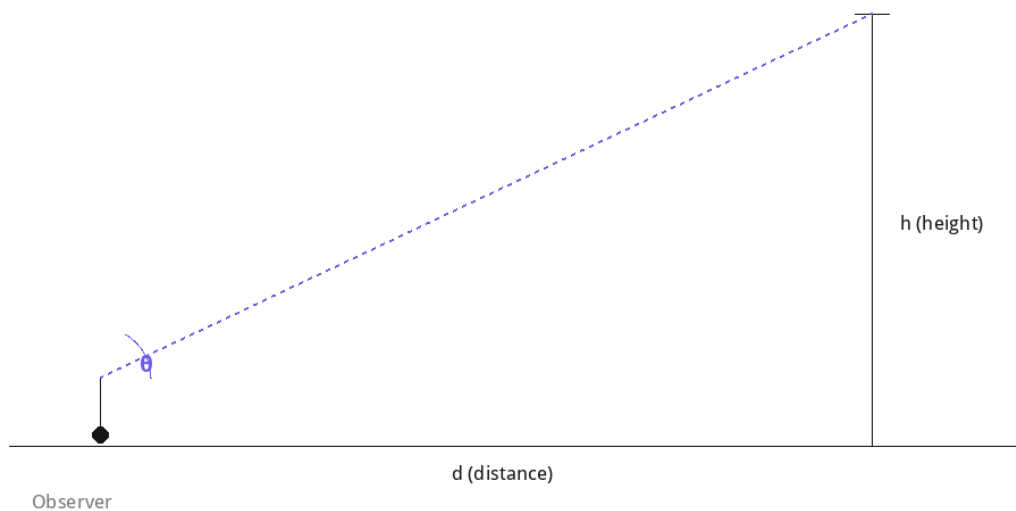
Class 10 Maths Chapter 9 Revision Notes – Some Applications of Trigonometry

Need full answers or more practice? See the Class 10 Mathematics Chapter 9 Solutions and Class 10 Mathematics Chapter 9 Extra Questions. These Class 10 Mathematics Chapter 9 notes are ideal for quick revision just before exams.

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$\tan\theta = h/d$, where θ is the angle of elevation from the observer to the top of the object.

Reference figure — angle of elevation, height and distance

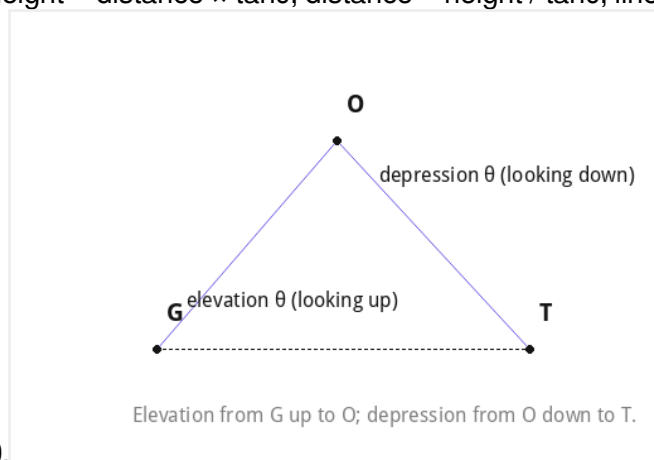
Class 10 Maths Chapter 9 – Revision Notes

Line of sight: the line from the observer's eye to the object being viewed.

Angle of elevation: angle between the horizontal and the line of sight when the object is above the horizontal level.

Angle of depression: angle between the horizontal and the line of sight when the object is below the horizontal level.

Core formula: height = distance $\times \tan\theta$; distance = height / $\tan\theta$; line-of-sight length = height / $\sin\theta$



= distance / $\cos\theta$.

Standard values: $\tan 30^\circ = 1/\sqrt{3}$, $\tan 45^\circ = 1$, $\tan 60^\circ = \sqrt{3}$; $\sin 30^\circ = 1/2$, $\sin 45^\circ = 1/\sqrt{2}$, $\sin 60^\circ = \sqrt{3}/2$.

Complementary-angle result: if elevations from distances p and q are complementary, height =

$\sqrt{pq}$.

Two-position (moving observer) formula: if elevation changes from θ to ϕ after moving distance a towards the object, height = $a \cdot \tan\theta \cdot \tan\phi / (\tan\phi - \tan\theta)$.

Exam tip: always draw the right triangle and label the known angle/side before choosing a ratio.

Syllabus note (2026-27): only Exercise 9.1 (16 questions) is in the current rationalised syllabus; the old Exercise 9.2 was removed.

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