CLASS X
SAMPLE PAPER
MATHS

CHAPTER - 9
SOME APPLICATIONS TO TRIGONOMETRY

1. The angle of elevation of the top of a tower from a point on the ground, which is 20m away from the foot of the tower is 60^0. Find the height of the tower.
(a) $10\sqrt{3}$ m (b) $30\sqrt{3}$ m (c) $20\sqrt{3}$ m (d) none of these

2. The height of a tower is 10m. What is the length of its shadow when Sun's altitude is 45^0?
(a) 10 m (b) 30 m (c) 20 m (d) none of these

3. The angle of elevation of a ladder leaning against a wall is 60^0 and the foot of the ladder is 9.5 m away from the wall. Find the length of the ladder.
(a) 10 m (b) 19 m (c) 20 m (d) none of these

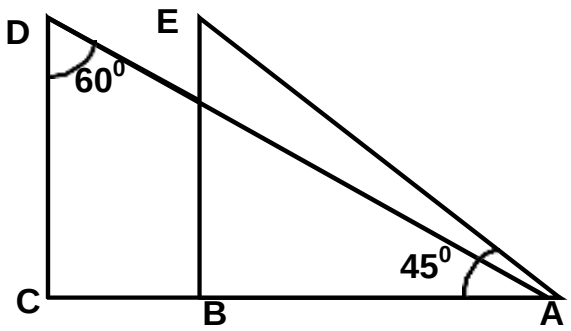
4. If the ratio of the height of a tower and the length of its shadow is $\sqrt{3}$: 1, what is the angle of elevation of the Sun?
(a) 30^0 (b) 60^0 (c) 45^0 (d) none of these

5. What is the angle of elevation of the Sun when the length of the shadow of a vertical pole is equal to its height?
(a) 30^0 (b) 60^0 (c) 45^0 (d) none of these

6. From a point on the ground, 20 m away from the foot of a vertical tower, the angle of elevation of the top of the tower is 60^0, what is the height of the tower?
(a) $10\sqrt{3}$ m (b) $30\sqrt{3}$ m (c) $20\sqrt{3}$ m (d) none of these

7. If the angles of elevation of the top of a tower from two points at a distance of 4 m and 9 m from the base of the tower and in the same straight line with it are complementary, find the height of the tower.
(a) 10 m (b) 6 m (c) 8 m (d) none of these

8. In the below fig. what are the angles of depression from the observing positions D and E of the object A?
(a) 30^0, 45^0 (b) 60^0 , 45^0 (c) 45^0, 60^0 (d) none of these



9. The ratio of the length of a rod and its shadow is 1: $\sqrt{3}$. The angle of elevation of the sun is
(a) 30^0 (b) 60^0 (c) 45^0 (d) none of these

10. If the angle of elevation of a tower from a distance of 100m from its foot is 60^0, then the height of the tower is

(a) $100\sqrt{3}$ m (b) $\frac{200}{\sqrt{3}}$ m (c) $50\sqrt{3}$ m (d) $\frac{100}{\sqrt{3}}$ m