INDIAN SCHOOL AL WADI AL KABIR

Class X, Mathematics

Worksheet-Some Applications of Trigonometry(MCQ)

13 - 10 - 2026

Questions of 1 mark each

1. A kite is flying at a height of 150 m from the ground. It is attached to a string inclined at an angle of 30 to the horizontal. The length of the string is :

(A) $100\sqrt{3}$ m **(B)** 300 m **(C)** $150\sqrt{2}$ m **(D)** $150\sqrt{3}$ m

2. An observer 1.8 m tall stands away from a chimney at a distance of 38.2 m along the ground. The angle of elevation of the top of the chimney from the eyes of the observer is 45°. The height of the chimney above the ground is:

(A) 38.2 m **(B)** 36.4 m **(C)** 40 m **(D)** $(38.2)\sqrt{2}$m

3. A peacock sitting on the top of a tree of height 10 m observes a snake moving on the ground. If the snake is $10\sqrt{3}$m away from the base of the tree, then the angle of depression of the snake from the eye of the peacock is:

(A) 30° **(B)** 45° **(C)** 60° **(D)** 90°

4. A pole of height 6 m casts a shadow of length $2\sqrt{3}$m. The angle of elevation of the sun is:

(A) 30° **(B)** 45° **(C)** 60° **(D)** 90°

5. A ladder is twice as long as its distance from a wall. The angle made by the ladder with the horizontal is:

(A) 30° **(B)** 45° **(C)** 60° **(D)** 90°

6. From the top of a 60 m high cliff, the angle of depression of a boat is 30°. The horizontal distance of the boat from the foot of the cliff is:

(A) $20\sqrt{3}$ m **(B)** $30\sqrt{3}$ m **(C)** $60\sqrt{3}$ m **(D)** 120 m

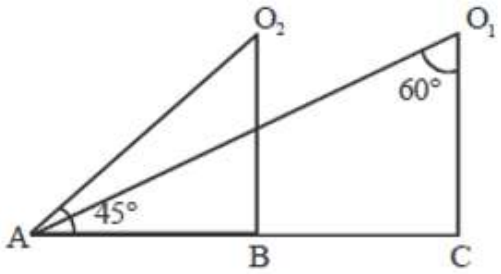
7. The angle of depression of an object on the ground from the top of a 25 m high tower is 30°. The distance of the object from the foot of the tower is:

(A) 25 m **(B)** $25\sqrt{3}$ m **(C)** $25\sqrt{3}$ m **(D)** 50 m

8. A car is moving away from the base of a 30 m high tower. At an instant, the car is $10\sqrt{3}$m away from the base of the tower. The angle of elevation of the top of the tower from the car is:

(A) 30° **(B)** 45° **(C)** 60° **(D)** 90°

9. In Fig. 3, the angles of depressions from the observing positions O_1 and O_2 respectively of the object A are:



(A) 30° , 45° **(B)** 45° , 30° **(C)** 60°, 45° **(D)** 60°, 30°

10. A 9 m high street-light pole is broken during a storm. The top end of the pole touches the ground at 30°. The height at which the pole broke is:

(A) 3 m **(B)** 3.75 m **(C)** 4.5 m **(D)** 9 m

11. The tops of two poles of height 20 m and 15 m are connected by a wire of length x metres. If the wire makes an angle of 30^0 with the horizontal, then x is equal to:

(A) 20 m **(B)** 16 m **(C)** 12 m **(D)** 10 m

DIRECTION: In the following questions, a statement of **assertion (A)** is followed by statement of **Reason (R)**. Choose the correct option

(a) Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A)

(b) Both assertion (A) and reason (R) are true and reason (R) is not the correct explanation of assertion (A)

(c) Assertion (A) is true but reason (R) is false.

(d) Assertion (A) is false but reason (R) is true

12. **Assertion (A) :** A ladder leaning against a wall, stands at a horizontal distance of 6 m from the wall. If the height of the wall upto which the ladder reaches is 8 m, then the length of the ladder is 10 m.

Reason (R): The ladder makes an angle of 60^0 with the ground.

Answers

Answers	**1**	B	**2**	C	**3**	A	**4**	C
	5	A	**6**	C	**7**	B	**8**	C
	9	A	**10**	A	**11**	D	**12**	c