

1. If the altitude of the sun is 60° , the height of a tower which casts a shadow of length 90m is

- (a) 60m
- (b) 90m
- (c) $60\sqrt{3}$ m
- (d) $90\sqrt{3}$ m

► (d) $90\sqrt{3}$ m

2. The top of a broken tree has its top touching the ground at a distance of 10m from the bottom. If the angle made by the broken part with the ground is 30° , then the length of the broken part is

- (a) 20m
- (b) $20\sqrt{3}$ m
- (c) $10\sqrt{3}$ m
- (d) $20/\sqrt{3}$ m

► (d) $20/\sqrt{3}$ m

3. When the sun's altitude changes from 30° to 60° , the length of the shadow of a tower decreases by 70m. What is the height of the tower?

- (a) 35 m
- (b) 140 m
- (c) 60.6 m
- (d) 20.2 m

► (c) 60.6 m

4. If a kite is flying at a height of $10\sqrt{3}$ m from the level ground attached to a string inclined at 60° to the horizontal then the length of the string is

- (a) 20m
- (b) $40\sqrt{3}$ m
- (c) $60\sqrt{3}$ m
- (d) $80\sqrt{3}$ m

► (a) 20m

5. The upper part of a tree broken by the wind falls to the ground without being detached. The top of the broken part touches the ground at an angle of 30° at a point 8m from the foot of the tree. The original height of the tree is

(a) 8m

(b) 24m

(c) $24\sqrt{3}$ m

(d) $8\sqrt{3}$ m

► (d) $8\sqrt{3}$ m

6. If the length of a shadow of a tower is increasing, then the angle of elevation of the sun is

(a) neither increasing nor decreasing

(b) decreasing

(c) increasing

(d) none of these

► (b) decreasing

7. An electric pole is $10\sqrt{3}$ m high and its shadow is 10m in length, then the angle of elevation of the sun is

(a) 15°

(b) 30°

(c) 45°

(d) 60°

► (d) 60°

8. The angle of elevation from a point 30 feet from the base of a pole, of height h , as level ground to the top of the pole is 45° . Which equation can be used to find the height of the pole.

(a) $\cos 45^\circ = h/30$

(b) $\tan 45^\circ = 30/h$

(c) $\tan 45^\circ = h/30$

(d) $\sin 45^\circ = h/30$

► (c) $\tan 45^\circ = h/30$

9. The angle formed by the line of sight with the horizontal, when the point being viewed is above the horizontal level is called:

(a) Obtuse angle

(b) Vertical angle

(c) Angle of depression

(d) Angle of elevation

► (d) Angle of elevation

10. The angle of elevation of the sun when the length of the shadow of the tree is $\sqrt{3}$ times the height of the tree is

(a) 30°

(b) 90°

(c) 60°

(d) 45°

► (a) 30°

11. A kite is flying at a height of 60m from the level ground, attached to a string inclined at 30° to the horizontal. The length of the string is

(a) 60m

(b) 120m

(c) $40\sqrt{3}$ m

(d) $60\sqrt{3}$ m

► (b) 120m

12. If altitude of the sun is 60° , the height of a tower which casts a shadow of length 30m is

(a) $10\sqrt{3}$ m

(b) $15\sqrt{3}$ m

(c) $20\sqrt{3}$ m

(d) $30\sqrt{3}$ m

► (d) $30\sqrt{3}$ m

13. The angle of elevation from a point 30 metre from the base of tree as level ground to the top of the tree is 60° . The height of the tree is :

(a) $60\sqrt{3}$ m

(b) $30\sqrt{3}$ m

(c) 30 m

(d) $30/\sqrt{3}$ m

► (b) $30\sqrt{3}$ m

14. A man is standing on the deck of a ship, which is 8 m above water level. He observes the angle of elevation of the top of a hill as 60° and angle of depression of the base of the hill as 30° . What is the height of the hill?

(a) $8\sqrt{3}$ m

(b) 24 m

(c) 32 m

(d) $24\sqrt{3}$ m

► (c) 32 m

15. A tree casts a shadow 4 m long on the ground, when the angle of elevation of the sun is 45° . The height of the tree is:

(a) 5.2 m

(b) 4 m

(c) 3 m

(d) 4.5 m

► (b) 4 m

16. A ladder 14m long rests against a wall. If the foot of the ladder is 7m from the wall, then the angle of elevation is

(a) 30°

(b) 60°

(c) 45°

(d) 75°

► (b) 60°

17. If the length of a shadow cast by a pole is $\sqrt{3}$ times the length of the pole, then the angle of elevation of the sun is

(a) 45°

(b) 60°

(c) 30°

(d) 90°

► (c) 30°

18. An electric pole is tied from the top to a point (some distance away from the base) on the ground using a string. The ratio of the height of pole to the string is $\sqrt{3} : 2$, then the angle of elevation of the top from the point on the ground is

(a) 30°

(b) 45°

(c) 60°

(d) none of these

► (c) 60°

19. An observer 1.5m tall is 23.5m away from a tower 25m high. The angle of elevation of the top of the tower from the eye of the observer is

(a) 30°

(b) 45°

(c) 60°

(d) none of these

► (b) 45°

20. If the shadow of a tower is 30m long, when the sun's elevation is 30° . The length of the shadow, when the sun's elevation is 60° is

(a) 10m

(b) 20m

(c) 30m

(d) 40m

► (a) 10m

21. An observer 1.5 m tall is 28.5 m away from a tower. The angle of elevation of the top of the tower from his eyes is 45° . The height of the tower is

(a) 10 m

(b) 40 m

(c) 30 m

(d) 20 m

► (c) 30 m

22. If the length of the shadow of a tower is equal to its height, then the angle of elevation of the sun is

(a) 30°

(b) 45°

(c) 60°

(d) 65°

► (b) 45°

1. The shadow of a tower is equal to its height at 10-45 a.m. The sun's altitude is

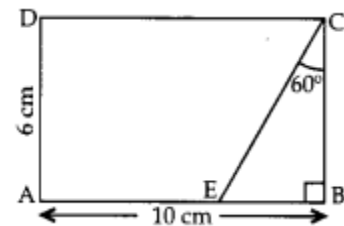
(a) 30°

(b) 45°

(c) 60°

(d) 90°

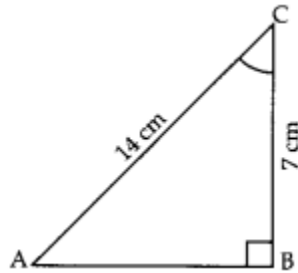
2. In given figure, the value of CE is



(a) 12 cm

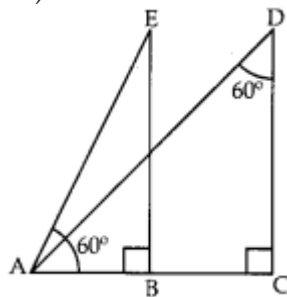
- (b) 6 cm
- (c) 9 cm
- (d) $6\sqrt{3}$ cm

Question 3. In given figure, the value of $\angle C$ is



- (a) 90°
- (b) 45°
- (c) 30°
- (d) 60°

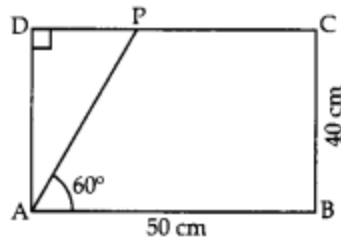
Question 4. In given Fig., the angle of depression from the observing position D and E of the object at A are



- (a) $60^\circ, 60^\circ$
- (b) $30^\circ, 30^\circ$
- (c) $30^\circ, 60^\circ$
- (d) $60^\circ, 30^\circ$

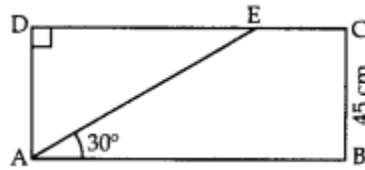
Question 5. In given figure, the length of AP is

- (a) $\frac{8\sqrt{3}}{3}$ cm
- (b) $\frac{80\sqrt{3}}{3}$ cm
- (c) $8\sqrt{3}$ cm
- (d) $80\sqrt{3}$ cm



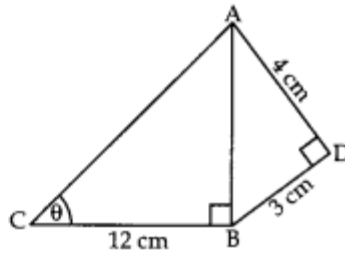
Class 10 Question 6. In given figure, the value of AE is

- (a) 90 cm
- (b) 45 cm
- (c) $45\sqrt{2}$ cm
- (d) $90\sqrt{2}$ cm

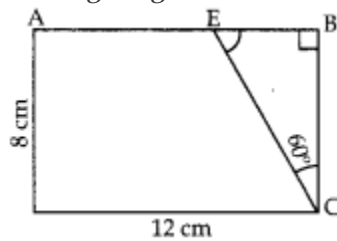


Question 7. In given figure, AD = 4 cm, BD = 3 cm and CB = 12 cm. The value of $\tan \hat{I}$, is

- (a) $\frac{5}{13}$
- (b) $\frac{12}{13}$
- (c) $\frac{5}{12}$
- (d) $\frac{12}{5}$

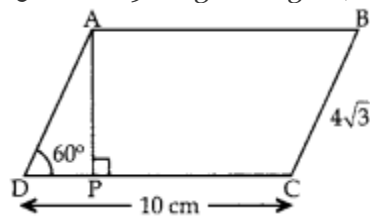


8. In figure given ABCD is a rectangle, the value of CE is



- (a) 1 cm
- (b) 2 cm
- (c) 3 cm
- (d) 4 cm

Question 9. In given figure, ABCD is a || gm. The length of AP is



- (a) 2 cm
- (b) 4 cm
- (c) 6 cm
- (d) 8 cm

Question 10. When the length of shadow of a vertical pole is equal to $\sqrt{3}$ times of its height, the angle of elevation of the Sun's altitude is

- (a) 30°
- (b) 45°
- (c) 60°
- (d) 15°

Question 11. The angle of elevation of top of a tower from a point on the ground, which is 30 m away from the foot of the tower is 30° . The length of the tower is

- (a) $\sqrt{3}$ m
- (b) $2\sqrt{3}$ m
- (c) $5\sqrt{3}$ m
- (d) $10\sqrt{3}$ m

Question 12. A plane is observed to be approaching the airport. It is at a distance of 12 km from the point of observation and makes an angle of elevation of 60° . The height above the ground of the plane is

- (a) $6\sqrt{3}$ m
- (b) $4\sqrt{3}$ m
- (c) $3\sqrt{3}$ m
- (d) $2\sqrt{3}$ m

Question 13. The upper part of a tree is broken by the wind and makes an angle of 30° with the ground. The distance from the foot of the tree to the point where the top touches the ground is 5 m. The height of the tree is

- (a) $10\sqrt{3}$ m
- (b) $5\sqrt{3}$ m
- (c) $\sqrt{3}$ m
- (d) $\sqrt{3}/5$ m

Question 14. The angles of elevation of the top of a rock from the top and foot of 100 m high tower are respectively 30° and 45° . The height of the rock is

- (a) 50 m
- (b) 150 m
- (c) $50\sqrt{3}$ m
- (d) $50(3 + \sqrt{3})$

Question 15. The tops of two poles of height 20 m and 14 m are connected by a wire. If the wire makes an angle of 30° with horizontal, the length of the wire is

- (a) 6 m
- (b) 10 m
- (c) 12 m
- (d) 20 m

Question 16. The angle of depression of a car, standing on the ground, from the top of a 75 m high tower, is 30° . The distance of the car from the base of the tower (in m) is:

- (a) $25\sqrt{3}$

- (b) $50\sqrt{3}$
- (c) $75\sqrt{3}$
- (d) 150

Question 17. A ladder 15 m long just reaches the top of a vertical wall. If the ladder makes an angle of 60° with the wall, then the height of the wall is

- (a) $15\sqrt{3}$ m
- (b) $\frac{15\sqrt{3}}{2}$ m
- (c) $\frac{15}{2}$ m
- (d) 15 m

Question 18. The line drawn from the eye of an observer to the point in the object viewed by the observer is known as

- (a) horizontal line
- (b) vertical line
- (c) line of sight
- (d) transversal line

Question 19. The tops of two poles of heights 20 m and 14 m are connected by a wire. If the wire makes an angle of 30° with the horizontal, then the length of the wire is

- (a) 8 m
- (b) 10 m
- (c) 12 m
- (d) 14 m

Question 20. If two towers of heights h_1 and h_2 subtend angles of 60° and 30° respectively at the mid-point of the line joining their feet, then $h_1 : h_2 =$

- (a) 1 : 2
- (b) 1 : 3
- (c) 2 : 1
- (d) 3 : 1

Question 21. The angle of elevation of the top of a tower from a point 20 metres away from its base is 45° . The height of the tower is

- (a) 10 m
- (b) 20 m
- (c) 30 m
- (d) $20\sqrt{3}$ m

Question 22. Two poles are 25 m and 15 m high and the line joining their tops makes an angle of 45° with the horizontal. The distance between these poles is

- (a) 5 m
- (b) 8 m

- (c) 9 m
- (d) 10 m

Question 23. A portion of a 60 m long tree is broken by tornado and the top struck up the ground making an angle of 30° with the ground level. The height of the point where the tree is broken is equal to

- (a) 30 m
- (b) 35 m
- (c) 40 m
- (d) 20 m