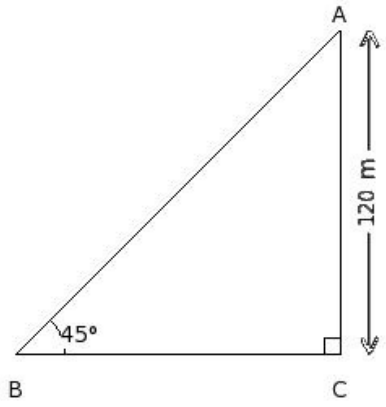
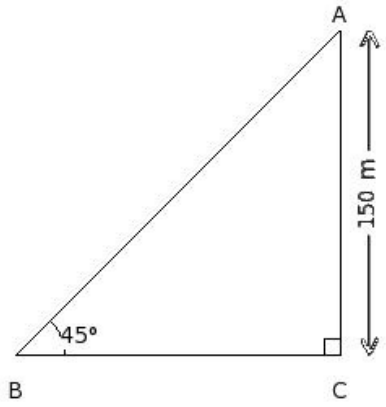
1. A building stands vertically on the ground. From a point on the ground, the angle of elevation of the top of the building is found to be $45°$. If the height of the building is 120 m, find the distance between the observation point and the top of the building.



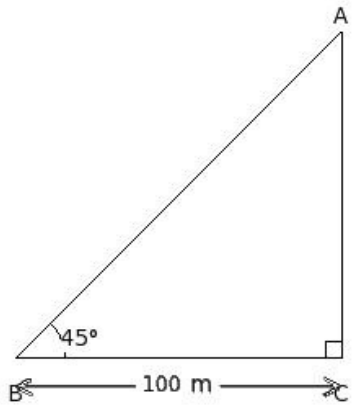
(i) 240 m (ii) $120\sqrt{2}$ m (iii) 120 m (iv) $60\sqrt{12}$ m (v) $240\sqrt{3}$ m

2. A building stands vertically on the ground. From a point on the ground, the angle of elevation of the top of the building is found to be $45°$. If the height of the building is 150 m, find the distance between the observation point and the foot of the building.



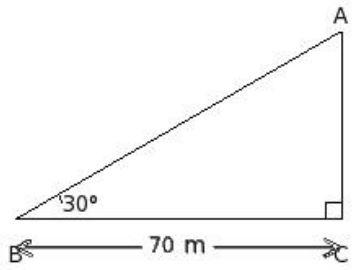
(i) 148 m (ii) 149 m (iii) 153 m (iv) 151 m (v) 150 m

3. A chimney stands vertically on the ground. From a point on the ground, the angle of elevation of the top of the chimney is found to be $45°$. If the distance between the point and the foot of the chimney is 100 m, find the distance between the observation point and the top of the chimney.



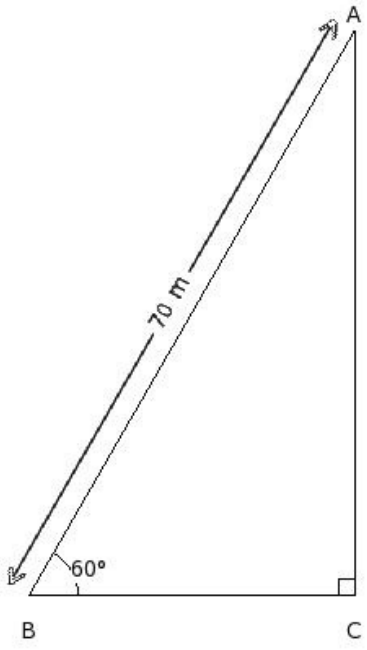
(i) $200\sqrt{3}$ m (ii) 100 m (iii) $50\sqrt{12}$ m (iv) 200 m (v) $100\sqrt{2}$ m

4. A tower stands vertically on the ground. From a point on the ground, the angle of elevation of the top of the tower is found to be $30°$. If the distance between the point and the foot of the tower is 70 m, find the height of the tower.



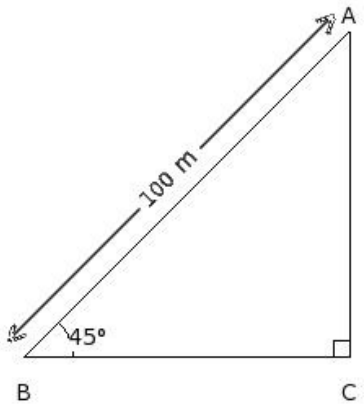
(i) $\frac{70}{3}\sqrt{18}$ m (ii) $\frac{70}{3}\sqrt{3}$ m (iii) 70 m (iv) $\frac{70}{3}$ m (v) $35\sqrt{2}$ m

5. A building stands vertically on the ground. From a point on the ground, the angle of elevation of the top of the building is found to be $60°$. If the distance between the point and the top of the building is 70 m, find the height of the building.



(i) 35 m (ii) 105 m (iii) $\frac{105}{2}\sqrt{2}$ m (iv) $35\sqrt{3}$ m (v) $35\sqrt{18}$ m

6. A radio tower stands vertically on the ground. From a point on the ground, the angle of elevation of the top of the radio tower is found to be 45°. If the distance between the point and the top of the radio tower is 100 m, find the distance between the observation point and the foot of the radio tower.



(i) 50 m (ii) $50\sqrt{2}$ m (iii) $25\sqrt{12}$ m (iv) $100\sqrt{3}$ m (v) 100 m

7. A tower stands vertically on the ground.

The height of the tower is $150\sqrt{3}$ m.

The distance between the observation point and its foot is 450 m.

Find the angle of elevation.

(i) 60° (ii) 30° (iii) 75° (iv) 90° (v) 45°

8. The upper part of a tree is broken into two parts without being detatched. It makes an angle of 30° with the ground. The top of the tree touches the ground at a distance of 60 m from the foot of the tree . Find the height of the tree before it was broken.

(i) 119.93 m (ii) 75.93 m (iii) 90.93 m (iv) 103.93 m (v) 111.93 m

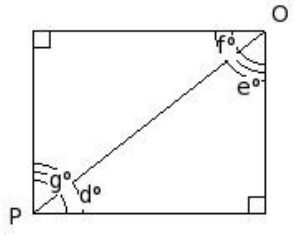
9. An observer 1.9 m tall, is 180 m away from a tower . The angle of elevation of the top of the tower from her eyes is 30°. Find the height of the tower .

(i) 117.83 m (ii) 105.83 m (iii) 90.83 m (iv) 81.83 m

10. A man 1.4 m tall stands at a distance of 3.9 m from a lamp post and casts a shadow of 9.7 m on the ground. Find the height of the lamp post .

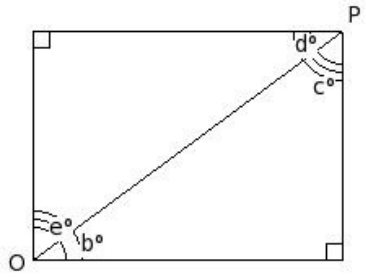
(i) 1.96 m (ii) 9.96 m (iii) 0.96 m (iv) 2.96 m (v) 3.96 m

11. If P is the point of observation and the observed object is at point O, which of the following angles represent the angle of elevation ?



(i) ∠g (ii) ∠f (iii) ∠e (iv) ∠d

12. If P is the point of observation and the observed object is at point O, which of the following angles represent the angle of depression ?



(i) ∠c (ii) ∠b (iii) ∠e (iv) ∠d

Assignment Key

1) (ii)	2) (v)	3) (v)	4) (ii)	5) (iv)	6) (ii)
7) (ii)	8) (iv)	9) (ii)	10) (i)	11) (iv)	12) (iv)