


APPLICATION OF TRIGONOMETRY

One can't just sit and fear Mathematics. One has to have some courage.

In fact courage is not the acknowledgement of our fears.

Rather it is the acknowledgement of something which is more important than our fears!

By **O.P. GUPTA** Math Mentor
INDIRA AWARD WINNER

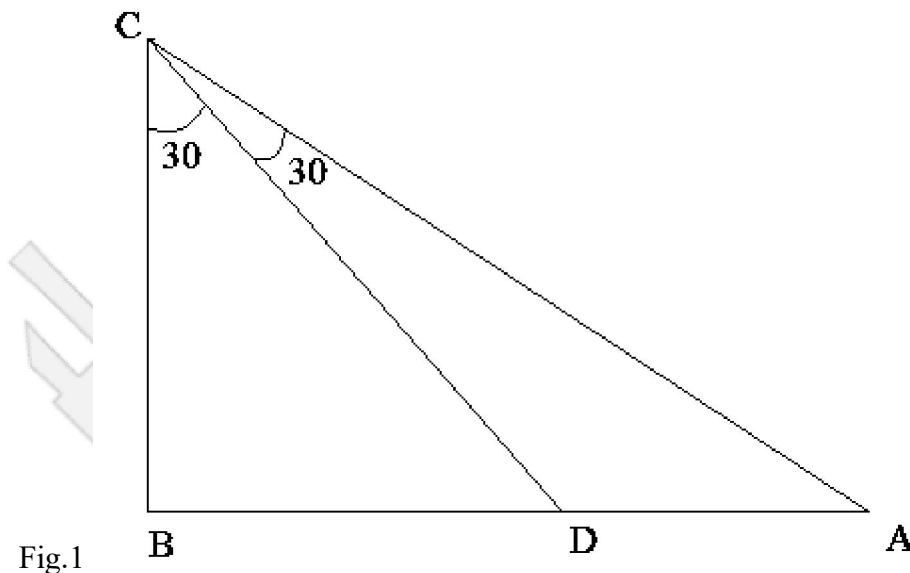
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☆ Multiple Choice Questions, with **only** one correct option.

Q01. In given Fig.1, if $BD = 1$ unit and $DA = x$, then x equals:



- (a) 1 unit (b) 2 units (c) 3 units (d) None of these
- Q02. The angle of elevation of the top of a tower from the points at a distance of 4 m and 9 m from the base of the land in the same straight line with it, are complementary. The height of the tower is:
(a) 4 m (b) 7 m (c) 12 m (d) 6 m
- Q03. The angle of elevation of the top of a tower from two points at distances 'a' and 'b' from the base and on the same straight line with it are complimentary. The height of the tower is:
(a) ab (b) \sqrt{ab} (c) $(ab)^2$ (d) $\frac{a}{b}$
- Q04. In the Fig.2, $\tan m = \frac{3}{4}$. If $AB = 12$ cm, then BC is:

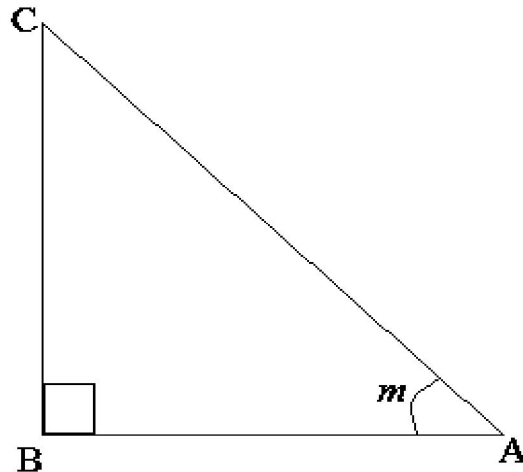


Fig.2

- (a) 8 cm (b) 12 cm (c) 10 cm (d) 9 cm

Q05. A tower stands vertically on the ground, from a point on the ground, which is 15 m away from the foot of the tower, the angle of elevation of the top of the tower is found to be 60° . The height of tower is:

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

Q06. An observer 1.5m tall is 28.5m away from chimney. The angle of elevation of the chimney from her eyes is 45° . The height of the chimney is:

- (a) 30 m (b) 27 m (c) 15 m (d) None of these

Q07. The shadow of a tree 6 m in its height is $2\sqrt{3}$ m . The angle of elevation of the sun is:

- (a) 60° (b) 30° (c) 85° (d) 45°

Q08. A tower on the ground is in the vertical position. At a point on the ground 16 m away from the foot of the tower the angle of elevation of the tower is 60° . The height of the tower is:

- (a) $6\sqrt{3}$ m (b) $16\sqrt{3}$ m (c) 16 m (d) None of these

Q09. In the following figure [Fig.3], the perimeter of rectangle ABCD is:

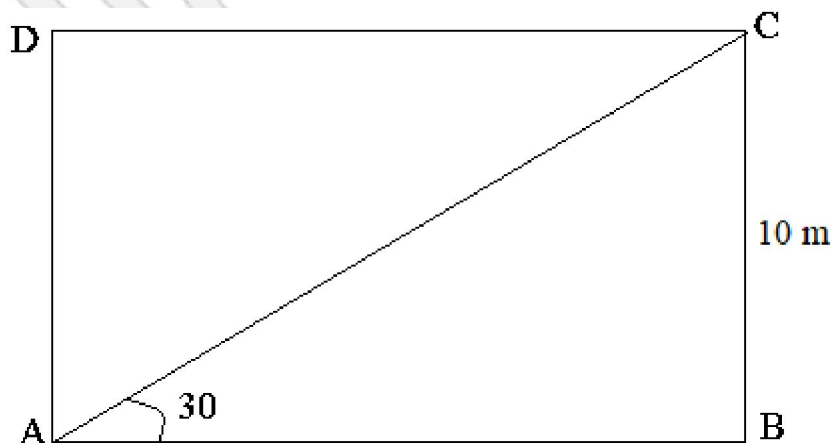


Fig.3

- (a) 40 m (b) $10(\sqrt{3} + 1)$ m (c) $20(\sqrt{3} + 1)$ m (d) 60 m

Q10. Two poles P_1 and P_2 stand 30m apart on the ground [See fig.4]. M is a point on pole P_2 such that the two ends of pole P_1 subtend a right angle at the point M and the angle of elevation of the top of pole P_1 from the point M is 60° . The height of pole P_1 , in metres is:

- (a) $20\sqrt{3}$ (b) $40\sqrt{3}$ (c) $60\sqrt{3}$ (d) $120\sqrt{3}$

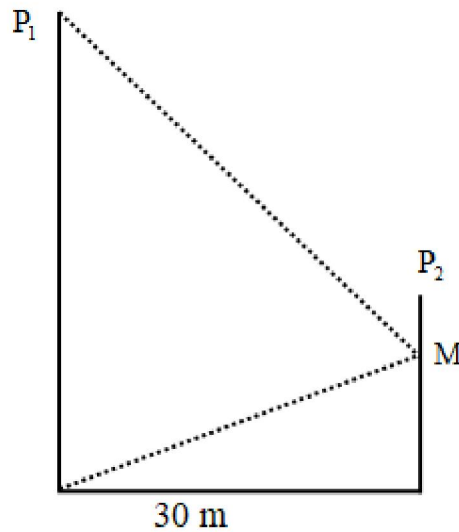


Fig.4

Q11. A boy on the top of a tower (having height 'h') is looking at a point P on the ground, making an angle of depression of 45° . This point P is at 15 m away from the foot of tower. Then 'h' equals:

- (a) 15 units (b) 15 m (c) 1.5 m (d) None of these

ANSWERS KEY

Q01. c Q02. d Q03. b Q04. d Q05. b Q06. a Q07. a
Q08. b Q09. c Q10. c Q11. b

Dear math scholars,

We have taken utmost care while preparing this draft. Still chances of human error can't be ruled out. Please inform us about any Typing error / mistake in this document. This will help many future learners of Mathematics.

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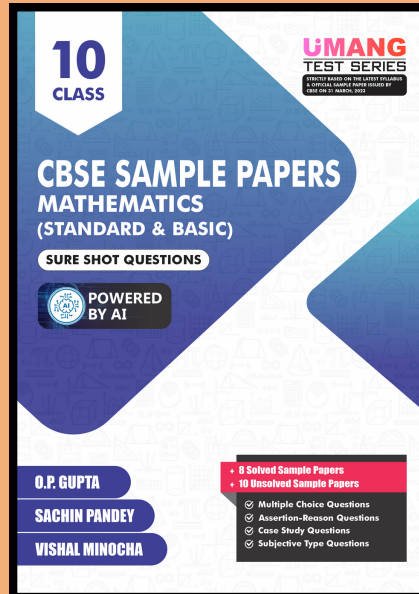
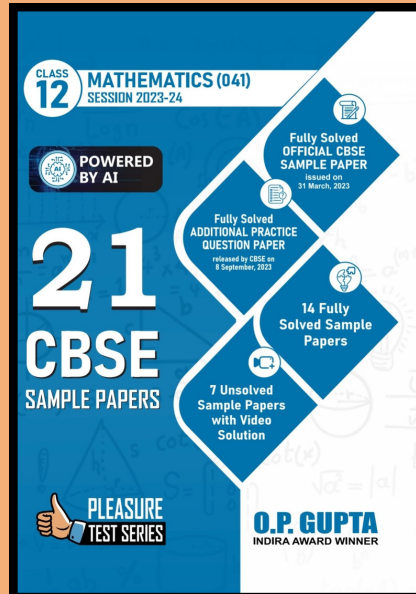
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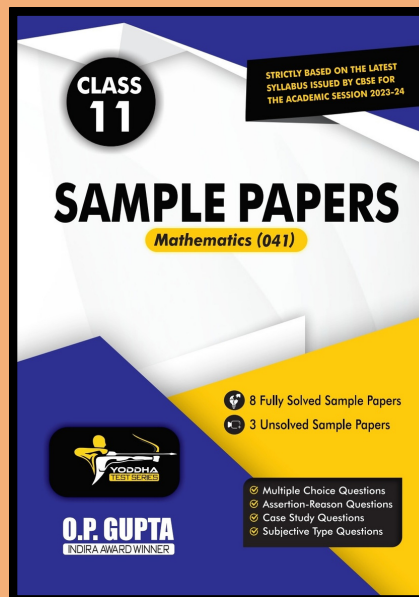
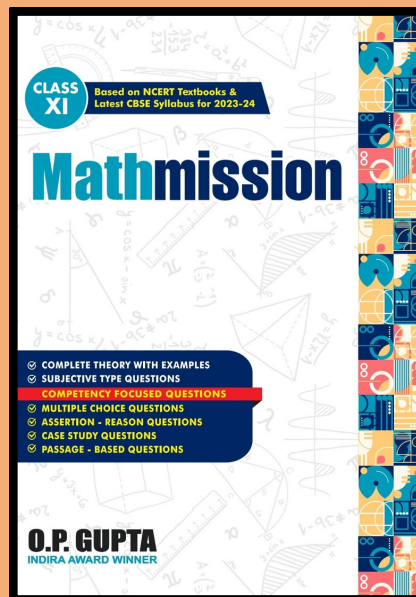
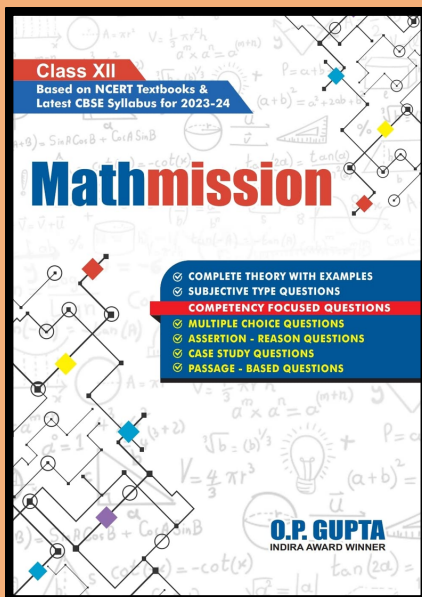
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