



MATHS

BOOKS - TARGET PUBLICATION

BOARD QUESTION PAPER: MARCH 2019

A Solve The Following Questions Any Four

1. In right-angled $\triangle ABC$, if $\angle B = 90^\circ$, $AB = 6$, $BC=8$, then find AC .



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2. Write the length of largest chord of a circle with radius 3.2 cm.



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3. Find the value of $\sin 30^\circ + \cos 60^\circ$



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4. Attempt the following : (1) Find the area of a circle with radius 7 cm.



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B Solve The Following Questions Any Two

1. Draw seg AB of length 5.7 cm and bisect it.



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2. In right-angled triangle PQR, if $\angle P = 60^\circ$, $\angle R = 30^\circ$ and $PR = 12$, then find the values of PQ and QR.



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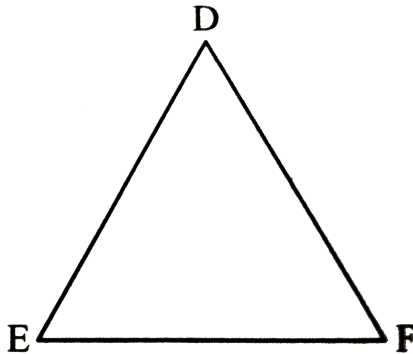
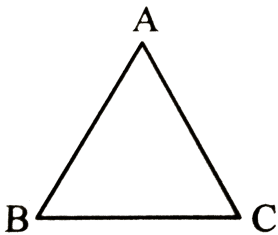
3. In a right circular cone, if perpendicular height is 12 cm and radius is 5 cm, then find its slant height.



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A Choose The Correct Alternative

1. $\triangle ABC$ and $\triangle DEF$ are equilateral triangles. $A(\triangle ABC) : A(\triangle DEF) = 1 : 2$. If $AB = 4$, then what is length of DE ?



A. $2\sqrt{2}$

B. 4

C. 8

D. $4\sqrt{2}$

Answer:



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2. Out of the following which is a Pythagorean triplet ?

A. (5, 12, 14,)

B. (3, 4, 2)

C. (8, 15, 17)

D. (5, 5, 2)

Answer:



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3. $\angle ACB$ is inscribed in arc ACB of a circle with centre O . If $\angle ACB = 65^\circ$, find $m(\text{arc } ACB)$

A. 130°

B. 295°

C. 230°

D. 65°

Answer:



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4. $1 + \tan^2 \theta = ?$

A. $\sin^2 \theta$

B. $\sin^2 \theta$

C. $\cos^2 \theta$

$$D. \cot^2 \theta$$

Answer:



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B Solve The Following Questions Any Two

1. Find slope of a line passing through the points A(3, 1) and B(5, 3).



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2. Find the surface area of a sphere of radius 3.5 cm.



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A Complete The Following Activities Any Two

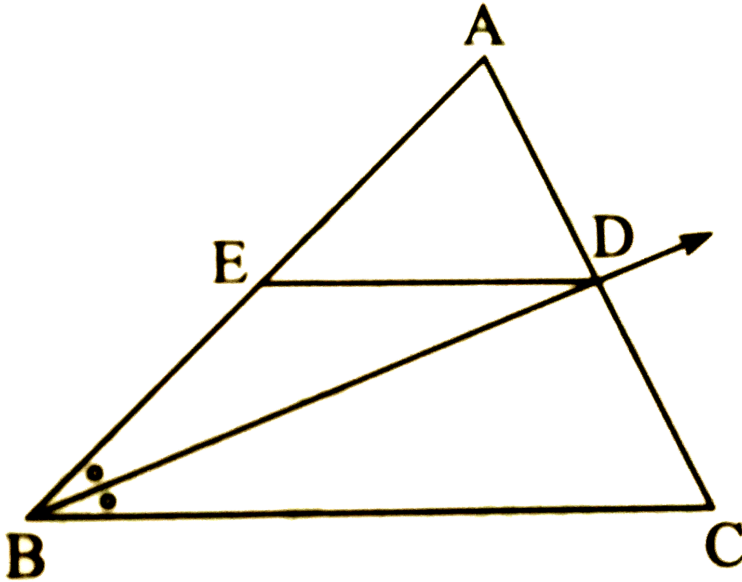
1. In $\triangle ABC$, ray BD bisects $\angle ABC$.

$A - D - C$, side $DE \parallel$ side BC , $A - E - B$

.

Prove that, $\frac{AB}{BC} = \frac{AE}{EB}$.

Complete the activity by filling the boxes.



In $\triangle ABC$, ray BD is the bisector of $\angle ABC$

$$\therefore \frac{AB}{BC} = \square \dots\dots(I) \quad (\text{By angle bisector theorem})$$

In $\triangle ABC$, seg $DE \parallel$ side BC

$$\therefore \frac{AE}{EB} = \frac{AD}{DC} \dots\dots(II) \quad \square$$

$$\therefore \frac{AB}{\square} = \frac{\square}{EB} \dots\dots[\text{From (I) and (II)}]$$



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2. How many solid cylinders of radius 6 cm and height 12 cm can be made by melting a solid sphere of radius 18 cm?

Activity: Radius of the sphere, $r = 18$ cm

For cylinder, radius $R = 6$ cm, height $H = 12$ cm

\therefore Number of cylinders can be made

$$= \frac{\text{Volume of the sphere}}{\square}$$

$$= \frac{\frac{4}{3}\pi r^3}{\square}$$

$$= \frac{\frac{4}{3} \times 18 \times 18 \times 18}{\square}$$

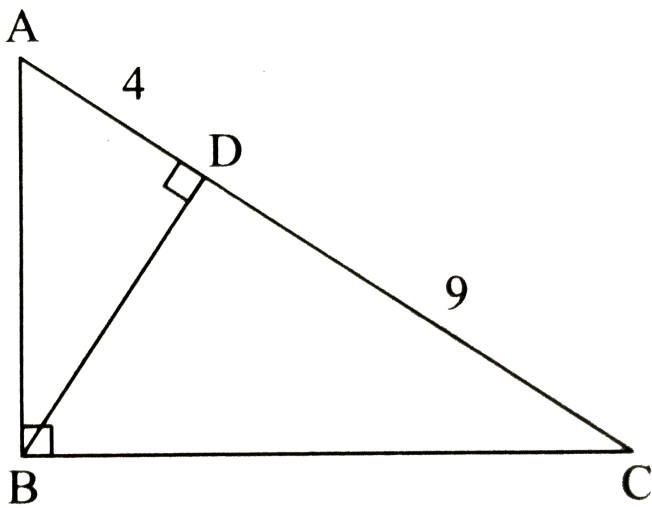
$$= \square$$



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B Solve The Following Questions Any Two

1. In right angled $\triangle ABC$, $BD \perp AC$. If $AD = 4$, $DC = 9$, then find BD .



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2. Verify whether the following points are collinear or not:

$A(1, -3)$, $B(2, -5)$, $C(-4, 7)$.



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3. If $\sec \theta = \frac{25}{7}$, then find the value of $\tan \theta$



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Solve The Following Questions Any Three

1. In ΔPQR , seg PM is a median, $PM=9$ and $PQ^2 + PR^2 = 290$. Find the length of QR .



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2. A boy is at a distance of 60 m from a tree, makes an angle of elevation of 60° with the top of the tree. What is the height of the tree?



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