



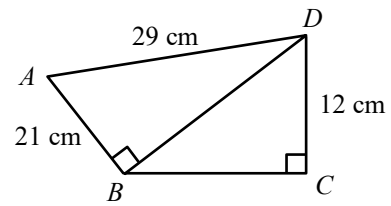
Stage Assessment 8

New

Questions Updated

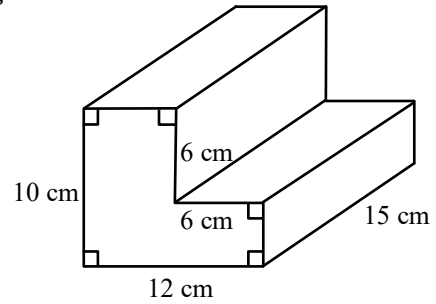
1. In the figure, the area of quadrilateral $ABCD$ is

- A. 270 cm^2 .
- B. 306 cm^2 .
- C. 540 cm^2 .
- D. 612 cm^2 .



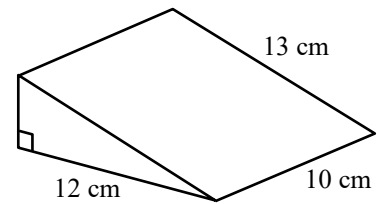
2. In the figure, the total surface area of the solid right prism is

- A. 660 cm^2 .
- B. 744 cm^2 .
- C. 828 cm^2 .
- D. 1260 cm^2 .



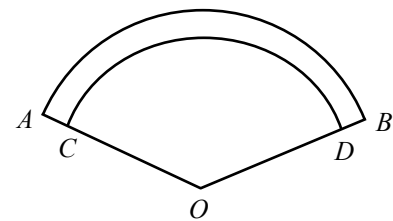
3. In the figure, the volume of the solid right triangular prism is

- A. 300 cm^3 .
- B. 325 cm^3 .
- C. 420 cm^3 .
- D. 650 cm^3 .



4. In the figure, OAB and OCD are sectors with centre O . If $\widehat{AB} = 27\pi \text{ cm}$, $\widehat{CD} = 24\pi \text{ cm}$ and $OC = 32 \text{ cm}$, then $AC =$

- A. 3 cm.
- B. 4 cm.
- C. 6 cm.
- D. 8 cm.

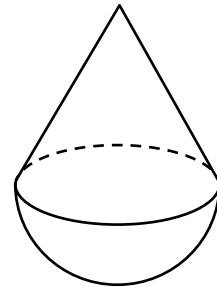


5. Find the curved surface area of a right circular cone of base radius 8 cm and height 15 cm.

- A. $120\pi \text{ cm}^2$
- B. $136\pi \text{ cm}^2$
- C. $200\pi \text{ cm}^2$
- D. $255\pi \text{ cm}^2$

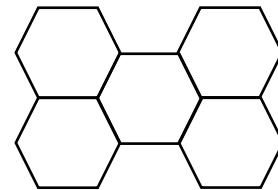
6. In the figure, the solid consists of a right circular cone and a hemisphere with a common base. The base radius and the height of the circular cone are 18 cm and 24 cm respectively. Find the volume of the solid.

- A. $6480\pi \text{ cm}^3$
- B. $10\,368\pi \text{ cm}^3$
- C. $11\,664\pi \text{ cm}^3$
- D. $12\,672\pi \text{ cm}^3$



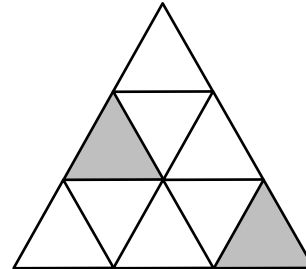
7. The figure below consists of five identical regular hexagons. The number of axes of reflectional symmetry of the figure is

- A. 2.
- B. 3.
- C. 4.
- D. 5.



8. The figure shows an equilateral triangle. It is divided into nine identical equilateral triangles and two of them are shaded. The number of axes of reflectional symmetry of the equilateral triangle is

- A. 0.
- B. 1.
- C. 2.
- D. 3.



9. If an interior angle of a regular n -sided polygon is greater than an exterior angle by 108° , which of the following are true?

- I. The value of n is 10.
- II. The number of diagonals of the polygon is 80.
- III. The number of folds of rotational symmetry of the polygon is 10.

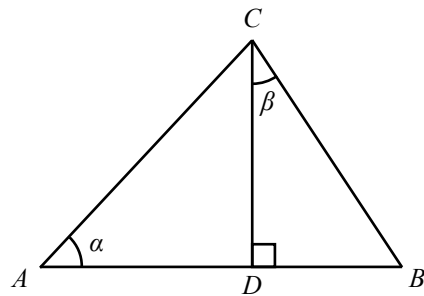
- A. I and II only
- B. I and III only
- C. II and III only
- D. I, II and III

10. The point $P(-4, -9)$ is rotated anticlockwise about the origin through 270° , and then the image of P is translated upwards by 3 units to the point Q . Then the coordinates of Q are
- $(-9, 7)$.
 - $(-9, 1)$.
 - $(9, -1)$.
 - $(9, -7)$.

11. In $\triangle ABC$, $AB : BC : AC = 8 : 17 : 15$. Find $\tan B : \cos C$.
- $8 : 17$
 - $17 : 8$
 - $15 : 17$
 - $17 : 15$

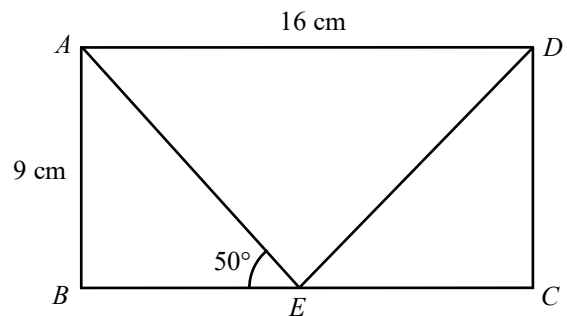
12. In the figure, D is a point lying on AB such that CD is perpendicular to AB . If $AC = k$, then $BC =$

- $\frac{k \sin \alpha}{\cos \beta}$.
- $\frac{k \cos \alpha}{\sin \beta}$.
- $\frac{k \sin \beta}{\cos \alpha}$.
- $\frac{k \cos \beta}{\sin \alpha}$.



13. In the figure, $ABCD$ is a rectangle. If E is a point lying on BC such that $\angle AEB = 50^\circ$, find $\angle CDE$ correct to 3 significant figures.

- 41.6°
- 42.8°
- 43.2°
- 46.8°



14. $\cos \theta + \sin \theta \tan \theta =$

A. $2 \cos \theta$.

B. $\frac{1}{\sin \theta}$.

C. $\frac{1}{\cos \theta}$.

D. $\frac{1}{\tan \theta}$.

15. $2 \cos (90^\circ - \theta) \sin 30^\circ + \cos 0^\circ \sin \theta =$

A. $\sin \theta$.

B. $2 \sin \theta$.

C. $\sqrt{3} \cos \theta$.

D. $(\sqrt{3} + 1) \sin \theta$.