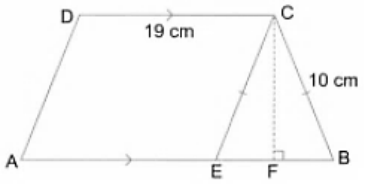
EXTRA QUESTIONS

PERIMETE AND AREA

1. The area of trapezium ABCD is 352 cm^2. Length of side BC = CE is 10 cm. The distance between parallel sides is 16 cm and one of the parallel sides is 19 cm, the perimeter of isosceles ΔEBC is



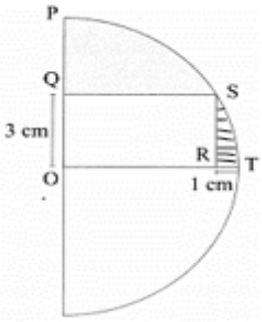
(a) 22 cm (b) 23 cm (c) 26 cm (d) 24 cm

2. If every side of a triangle is doubled, then increase in area of the triangle is

(a) (√2 × 100)% (b) 200% (c) 300% (d) 400%

3. In the figure below RT = 1 cm and OQ = 3 cm. Find the area of shaded region, where O is the centre of the semicircle.

(a) (12.5π – 12) cm^2
(b) (6.25π – 12) cm^2
(c) (12.5π – 15) cm^2
(d) (6.25π – 15) cm^2



4. If the sides of a triangle are 56 cm, 60 cm and 52 cm long, then the area of the triangle is

(a) 1322 cm^2 (b) 1311 cm^2 (c) 1344cm^2 (d) 1392cm^2

5. The edges of a triangular board are 6cm, 8cm and 10cm. The cost of painting it at the rate of 9 paise per cm^2 is

(a) ₹ 2.00 (b) ₹ 2.16 (c) ₹ 2.48 (d) ₹ 3.00

Select the correct answer from the options (a), (b), (c), and (d) given below.

(a) Both Assertion (A) and Reason (R) are true, and Reason (R) is the correct explanation of the Assertion (A).

(b) Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of the Assertion (A),

(c) Assertion (A) is true, but Reason (R) is false.

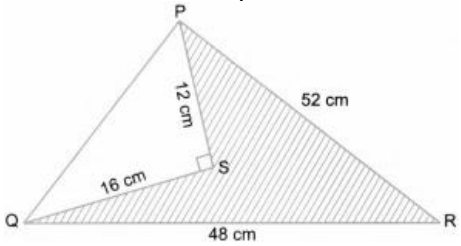
(d) Assertion (A) is false, but Reason (R) is true.

6. Assertion (A): The area of a triangle is 24 cm^2 whose sides are 6 cm, 8 cm and 10 cm respectively.
Reason (R): Area of a triangle = $\sqrt{s(s-a)(s-b)(s-c)}$

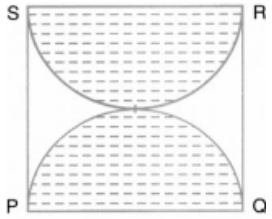
7. Assertion (A): In triangle PQR, if arcs have been drawn with radii r cm each with centres P, Q and R, then the area of the shaded region is $\frac{1}{2}\pi r^2$.

Reason (R): 1f the length of an arc of a circle of radius is equal to that of an arc of a circle of radius 2r, then the angle of the corresponding sector of the first circle is double the angle of the corresponding sector of the other circle.

8. In the given figure, calculate the area of shaded portion.



9. PQRS is a square land of side 28 m. Two semi-circular grass covered positions are to be made on two of its opposite sides as shown in the figure. How much area will be left uncovered?



10. The perimeter of a right triangle is 144 cm and its hypotenuse measure 65 cm. Find the length of other sides and calculate its area.

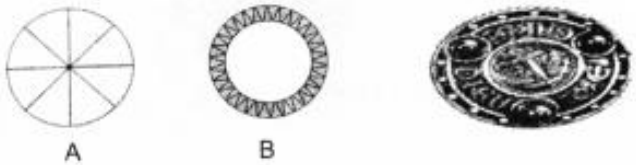
11. Avikant bought a pair of glasses with wiper blades. He was curious to know the area being cleaned by each of the wiper blades. With the help of a ruler and a protractor, he found the length of each blade as 3 cm and the angle swept as 60°.

(i) Find the area that each wiper cleans in one swipe, in terms of π.

(ii) If the diameter of each circular glass is 5 cm, what percent of the area of the glass will be cleaned by the blade in one swipe?

12. To warn ships of underwater rocks, a lighthouse spreads a red coloured light over a sector of angle 80° to a distance of 16.5 km. Find the area of the sea over which the ships are warned. [take, π = 3.14]

13. A brooch is a small piece of jewellery which has a pin at the back so it can be fastened on a dress, blouse or coat. Designs of some brooches are shown below. Observe them.



Design A: Brooch A is made with silver wire in the form of a circle with diameter 28 mm. The wire used for making 4 diameters which divide the circle into 8 equal parts. Design B: Brooch B is made two colours: Gold and silver. Outer part is made with Gold. The circumference of silver part is 44 mm and the gold part is 3 mm wide everywhere.

(i) Find the total length of silver wire required to make design A.

(ii) What is the area of each sector of the brooch in design A?

(iii) Find the area of golden part in the brooch in design B.

OR

A boy is playing with brooch B. He makes a revolution with it along its edge. How many complete revolutions must it take to cover 80π mm?