

UNIT TEST PAPER

Mensuration

- The length and breadth of a playing ground measure $7x$ and $6x$ respectively. If the area of the ground is 1512 m^2 , find how much it would cost to erect a fence along its boundary at Rs 14.50 per metre.
- Find the length of the diagonal of a square, correct upto 2 decimal places, given that its area is 144 m^2 .
- Find the area of a rectangle given that its length is 14.4 cm and its diagonal measures 18 cm.
- A gardener has to lay a grass lawn, leaving space for an 80 cm wide bed of flowers along the inside edge of a square garden with an area of 72.25 m^2 . What will be the area of the grass lawn?
- If it costs Rs 7897.50 at Rs 3.90 per sq. m to level a square plot of land, find how much it would cost to erect a fence along its boundary at Rs 16.45 per metre.
- Find the altitude of an equilateral triangle with 8 cm sides, given that $\sqrt{3} = 1.73$.
- Find the area of a scalene triangle, given the measure of its sides as 2.7 cm, 3.6 cm, and 4.5 cm.
- In $\triangle ABC$ shown in Figure (i), $AB = 5.4 \text{ cm}$, $AC = 8.1 \text{ cm}$ and altitude $BE = 2.4 \text{ cm}$. Find the measure of altitude CD .

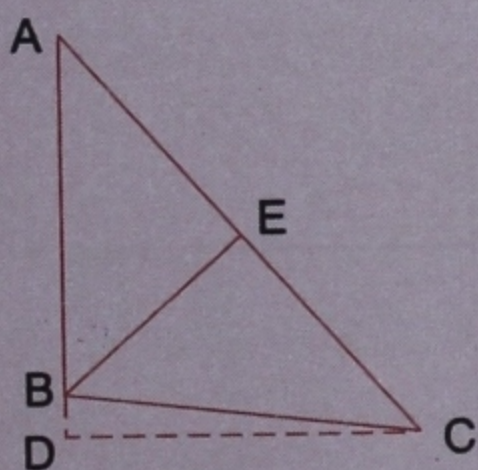


Fig. (i)

- Find the area of a scalene triangle, given that its three sides measure 4 cm, 3.2 cm, and 2.4 cm and then find the measure of its altitude on the longest side.
- Applying a single coat of paint uniformly on a triangular courtyard and a square courtyard requires

an equal amount of paint. If the edges of the triangular courtyard measure 16.5 m, 27.5 m, and 22 m, find the length of the square courtyard, correct upto 2 decimal places.

- The base of a parallelogram is $7x$ while its altitude is $5x$. Find the measure of the base and altitude if the area of the parallelogram is given as 617.4 cm^2 .
- The diagonals of a rhombus are in the ratio 4 : 3. If the area of the rhombus is given to be 174.96 cm^2 , find the measures of its diagonals.
- The parallel sides of a trapezium are given as $5x$ and $3x$, while the distance between them is 7 cm. If the area of the trapezium is 137.2 cm^2 , find the measures of the parallel sides.
- The adjacent sides of a parallelogram measure 5.2 cm and 6.5 cm. If the distance between the longer sides of the parallelogram measures 2.6 cm, find the distance between its shorter sides.
- Find the area and perimeter of a rhombus whose diagonals measure 10.8 cm and 14.4 cm.
- Find the length of a semicircle whose radius measures 34.3 cm.
- What should be the radius of a wheel if it is required to cover 23.32 m in 10 complete revolutions?
- Find the area of the semicircular region of a circle whose diameter measures 51.8 cm.
- A 7 m wide road runs around the boundary of a circular park outside it. If the area of the circular park is 1386 m^2 find the cost of:
 - erecting a fence, at Rs 7.50 per metre, along the outer boundary of the road that runs around it.
 - paving the road with cobblestones at Rs 35 per sq. m.
- A wire is bent to form a 54 cm long rectangle that encloses an area of 1836 cm^2 . The wire is then straightened and bent to form a circle. Find the area of the circle so formed.
- The length, breadth, and height of a cuboid are in the ratio 5 : 4 : 3. If the total surface area of the

cuboid is 846 cm^2 , find its length, breadth, and height.

22. The diagonal of a cube-shaped tank measures 432.5 cm . Given $\sqrt{3} = 1.73$, find the volume of water that it can contain.
23. A bar of silver that measures 15 cm in length, 10 cm in breadth, and 9 cm in height is melted and recast to make 400 small cube-shaped paperweights. What is the length of each small paperweight?

24. 4 cm of rainfall was recorded after an hour of rain. How much water fell on the roof of a cuboidal house 20 m long, 15 m wide, and 10 m in height during that hour?
25. The exterior of an ice box made of thermocol measures 75 cm in length, 75 cm in width, and 50 cm in height. If the thermocol is 10 cm thick all around, find how much thermocol was used to make the ice box.

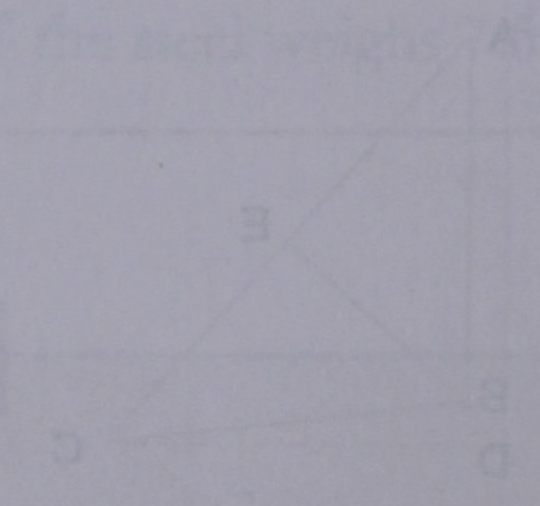


Fig. 10.10