



MATHS

NCERT - NCERT MATHEMATICS(TAMIL ENGLISH)

MENSURATION

Example

1. The lengths of sides of a triangular field are 28 m, 15 m and 41 m. Calculate the area of the

field. Find the cost of levelling the field at the rate of ₹ 20 per m^2 .



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2. Find the TSA and LSA of a cuboid whose length, breadth and height are 7.5 m, 3 m and 5 m respectively



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3. The length, breadth and height of a hall are 25 m, 15 m and 5 m respectively. Find the cost of renovating its floor and four walls at the rate of ₹80 per m^2 .



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4. Find the Total Surface Area and Lateral Surface Area of the cube, whose side is 5 cm.



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5. A cube has the Total Surface Area of 486cm^2 .

Find its lateral surface area.



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6. Two identical cubes of side 7 cm are joined end to end. Find the Total and Lateral surface area of the new resulting cuboid.



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7. The length, breadth and height of a cuboid is 120 mm, 10 cm and 8 cm respectively. Find the volume of 10 such cuboids.



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8. The length, breadth and height of a cuboid are in the ratio 7:5:2. Its volume is 35840cm^3 . Find its dimensions.



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9. The dimensions of a fish tank are $3.8m \times 2.5m \times 1.6m$. How many litres of water it can hold?



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10. Find the volume of cube whose side is 10 cm.



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11. A cubical tank can hold 64,000 litres of water. Find the length of its side in metres.



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Exercise 7 1

1. Using Heron's formula, find the area of a triangle whose sides are
10 cm, 24 cm, 26 cm



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2. Using Heron's formula, find the area of a triangle whose sides are

1.8m, 8 m, 8.2 m



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3. The sides of the triangular ground are 22 m, 120 m and 122 m. Find the area and cost of levelling the ground at the rate of ₹ 20 per m^2 .



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4. The perimeter of a triangular plot is 600 m. If the sides are in the ratio 5:12:13, then find the area of the plot.

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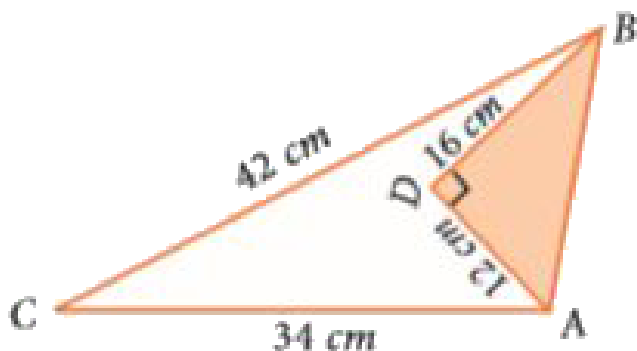
5. Find the area of an equilateral triangle whose perimeter is 180 cm.

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6. An advertisement board is in the form of an isosceles triangle with perimeter 36m and each of the equal sides are 13 m. Find the cost of painting it at ₹ 17.50 per square metre.

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7. Find the area of the unshaded region.





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8. Find the area of a quadrilateral ABCD whose sides are $AB = 13\text{cm}$, $BC = 12\text{cm}$, $CD = 9$, cm $AD = 14\text{cm}$ and diagonal $BD = 15\text{cm}$.



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9. A park is in the shape of a quadrilateral. The sides of the park are 15 m, 20 m, 26 m and 17 m

and the angle between the first two sides is a right angle. Find the area of the park.



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10. A land is in the shape of rhombus. The perimeter of the land is 160 m and one of the diagonal is 48 m. Find the area of the land.



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11. The adjacent sides of a parallelogram measures 34 m, 20 m and the measure of one of the diagonal is 42 m. Find the area of parallelogram.



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Exercise 7 2

1. Find the Total Surface Area and the Lateral Surface Area of a cuboid whose dimensions

are: length = 20 cm, breadth = 15 cm and
height = 8 cm



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2. The dimensions of a cuboidal box are $6m \times 400cm \times 1.5m$. Find the cost of painting its entire outer surface at the rate of ₹22 per m^2 .



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3. The dimensions of a hall is $10m \times 9m \times 8m$. Find the cost of white washing the walls and ceiling at the rate of ₹8.50 per m^2 .



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4. Find the TSA and LSA of the cube whose side is
8m



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5. Find the TSA and LSA of the cube whose side is
21 cm

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6. Find the TSA and LSA of the cube whose side is
 7.5cm

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7. If the total surface area of a cube is 2400cm^2 then, find its lateral surface area.

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8. A cubical container of side 6.5 m is to be painted on the entire outer surface. Find the area to be painted and the total cost of painting it at the rate of ₹24 per m^2 .

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9. Three identical cubes of side 4 cm are joined end to end. Find the total surface area and lateral surface area of the new resulting cuboid.



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Exercise 7 3

1. Find the volume of a cuboid whose dimensions are

length = 12 cm, breadth = 8 cm, height = 6 cm



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2. Find the volume of a cuboid whose dimensions are

length = 60 m, breadth = 25 m, height = 1.5 m



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3. The dimensions of a match box are 6 cm \times 3.5cm \times 2.5cm. Find the volume of a packet containing 12 such match boxes.



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4. The length, breadth and height of a chocolate box are in the ratio 5:4:3. If its volume is 7500cm^3 , then find its dimensions.



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5. The length, breadth and depth of a pond are 20.5 m, 16 m and 8 m respectively. Find the capacity of the pond in litres.



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6. The dimensions of a brick are $24\text{cm} \times 12\text{cm} \times 8\text{cm}$. How many such bricks will be required to build a wall of 20 m length, 48 cm breadth and 6 m height?



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7. The volume of a container is 1440m^3 . The length and breadth of the container are 15 m and 8 m respectively. Find its height.



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8. Find the volume of a cube each of whose side is

5 cm



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9. Find the volume of a cube each of whose side is

3.5 m





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10. Find the volume of a cube each of whose side is

21 cm



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11. A cubical milk tank can hold 125000 litres of milk. Find the length of its side in metres.



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12. A metallic cube with side 15 cm is melted and formed into a cuboid. If the length and height of the cuboid is 25 cm and 9 cm respectively then find the breadth of the cuboid.



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Exercise 7 4

1. The semi-perimeter of a triangle having sides 15 cm, 20 cm and 25 cm is

A. 60 cm

B. 45 cm

C. 30 cm

D. 15 cm

Answer: C



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2. If the sides of a triangle are 3 cm, 4 cm and 5 cm, then the area is

A. 3cm^2

B. 6cm^2

C. 9cm^2

D. 12cm^2

Answer: B



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3. The perimeter of an equilateral triangle is 30 cm. The area is

A. $10\sqrt{3}cm^3$

B. $12\sqrt{3}cm^2$

C. $15\sqrt{3}cm^2$

D. $25\sqrt{3}cm^2$

Answer: D



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4. The lateral surface area of a cube of side 12 cm is

A. 144cm^2

B. 196cm^2

C. 576cm^2

D. 664cm^2

Answer: C



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5. If the lateral surface area of a cube is 600cm^2 , then the total surface area is

A. 150cm^2

B. 400cm^2

C. 900cm^2

D. 1350cm^2

Answer: C



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6. The total surface area of a cuboid with dimension $10\text{cm} \times 6\text{cm} \times 5\text{cm}$ is

A. 280cm^2

B. 300cm^2

C. 360cm^2

D. 600cm^2

Answer: A



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7. If the ratio of the sides of two cubes are 2:3, then ratio of their surface areas will be

A. 4:6

B. 4:9

C. 6:9

D. 16:36

Answer: B



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8. The volume of a cuboid is 660cm^3 and the area of the base is 33cm^2 . Its height is

A. 10 cm

B. 12 cm

C. 20 cm

D. 22 cm

Answer: C



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9. The capacity of a water tank of dimensions

$10m \times 5m \times 1.5m$ is

A. 75 litres

B. 750 litres

C. 7500 litres

D. 75000 litres

Answer: D



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10. The number of bricks each measuring $50\text{cm} \times 30\text{cm} \times 20\text{cm}$ that will be required to build a wall whose dimensions are $5\text{m} \times 3\text{m} \times x^2\text{m}$ is

A. 1000

B. 2000

C. 3000

D. 5000

Answer: A



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