Ravi Maths Tuition Centre

Mensuration

8th Standard

Mathematics

Exam Time : 00:01:00 Hrs

Total Marks : 1

15 x 1 = 15

1) Volume of a cylinder with radius r and height h is_____

2) Opposite faces of a cuboid are_____ in area

3) All six faces of a cuboid are_____in shape and of____area.

4) Area of rhombus =$\frac{1}{2}\times$ Product of _____

5) A metal sheet 27 cm long, 8 cm broad and 1 cm thick is melted into a cube. The side of cube is _____

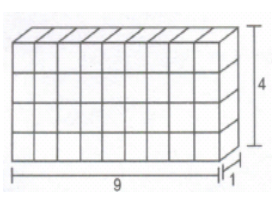
6) Two cubes have volumes in the ratio 1: 64. The ratio of the area of a face of first cube to that of the other is_____

7) A cube of side 5 cm is cut into 1 cm cubes. The percentage increase in volume after each such cutting is ____

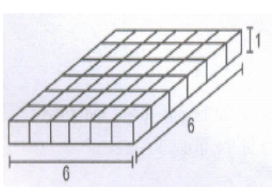
8) The surface area of a cuboid formed by joining two cubes of sides c face to face is_____

9) 1 cm^3= 1 cm x 1 cm x 1 cm = ... mm^3

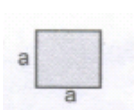
10) 1 m^3 = 1 m x 1 m x 1m = ... cm^3

11) 

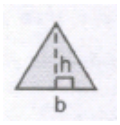
Find Length, Breadth, Height, Volume.

12) 

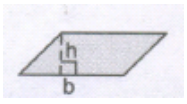
Find Length, Breadth, Height, Volume.

13) 

Find Shape,Area?

14) 

Find Shape, Area?

15) 

Find Shape, Area?

8 x 1 = 8

16) The lateral surface area of a cuboid whose length is 5 m, breadth is 4 m and height is 2 m, is 36 m^2.

(a) False (b) True

17) A cube of side 4 cm is painted on all its sides. If it is sliced in 1 cu cm cubes, then number of such cubes that will have exactly two of their faces painted is 24.

(a) False (b) True

18) The areas of any two faces of a cuboid are equal.

(a) False (b) True

19) The areas of any two faces of a cuboid are equal

(a) True (b) False

20) The area of trapezium becomes 4 times if its height gets doubled.

(a) True (b) False

21) Two cuboids with equal volumes will always have equal surface areas.

(a) True (b) False

22) Volumes of a solid is the measurement of the space occupied by it.

(a) False (b) True

23) Two cylinders of same volume have their radii in the ratio 1 : 6, then ratio of their heights is 216 :1.

(a) True (b) False

13 x 1 = 13

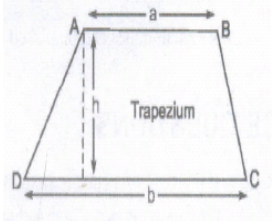
24) Area of a parallelogram is

25) Area of trapezium is

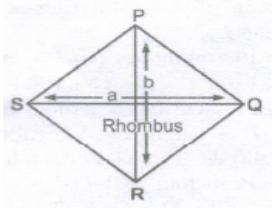
26) Area of a circle is

27) Area of rhombus is

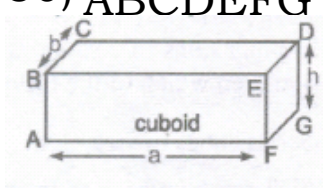
28) Area of ABCD



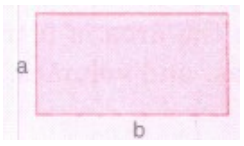
29) Area of PORS

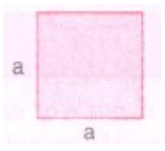


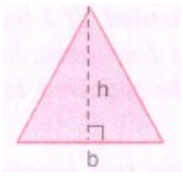
30) surface area of the cuboid ABCDEFG

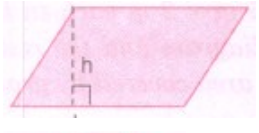


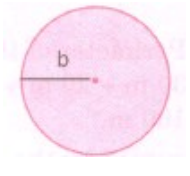
31) Volume of cuboid ABCDEFG

32) 

33) 

34) 

35) 

36) 

(1)

Shape	Area
Parallelogram	b x h

(2) 2[ab+bh+ha]

(3) $\frac{1}{2}\times$ Product of diagonals

(4)

Shape	Area
Circle	πb^2

(5) $\frac{1}{2}\times$ Sum of parallel sides $\times$ height

(6)

Shapes	Area
rectangle	a x b

(7)

Shapes	Area
square	a x a

(8) $\frac{1}{2}\times$ Product of diagonals

(9) $\frac{1}{2}[a+b]\times h$

(10)

Shapes	Area
triangle	πb^2

(11) Base $\times$ Corresponding height

(12) abh

(13) $\frac{1}{2}a\times b$

4 x 1 = 4

37) What is the total surface area of a cube whose volume is 1 cu. cm?

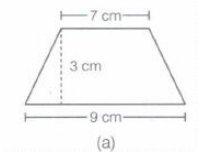
38) If the base area and volume of a cuboid are respectively $12cm^2$ and 36 cm^3 then what is its height?

39) A hollow cylinder. having base radius and height respectively rand h, is open from one end. Its total surface area is $2\pi r (r+h)$ or $\pi r (2h+r)$.

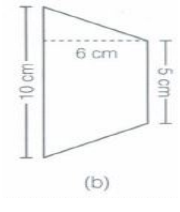
40) Is the volume of a cuboid equal to the product of the base area and height?

103 x 2 = 206

41) Find the area of the following trapezium

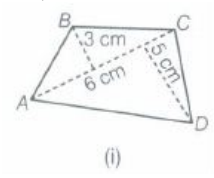


42) Find the area of the following trapezium

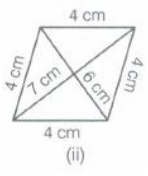


43) Parallelogram is divided into two congruent triangles by drawing a diagonal across it. Can we divide a trapezium into two congruent triangles?

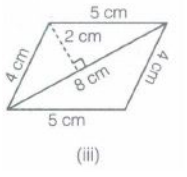
44) Find the area of these quadrilateral

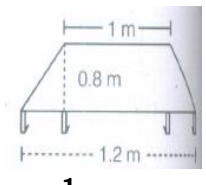


45) Find the area of these quadrilateral



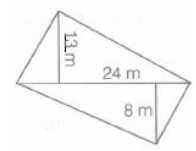
46) Find the area of these quadrilateral



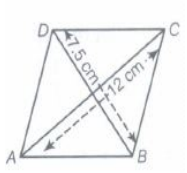
47) 

The shape of the top surface of a table is a trapezium. Find its area, if its parallel sides are 1 m and 1.2 m and perpendicular distance between them is 0.8 m

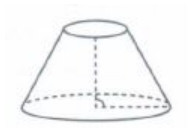
48) The area of a trapezium is 34 cm^2 and the length of one of the parallel sides is 10 cm and its height is 4 cm. Find the length of the other parallel side.

49) 

The diagonal of a quadrilateral shaped field is 24 m and the perpendiculars dropped on it from the remaining opposite vertices are8m and 13 m. Find the area of the field.

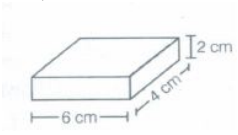
50) 

The diagonals of a rhombus are 7.5 cm and 12 cm. Find its area.

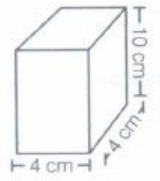
51) 

Why is it incorrect to call the solid shown here a cylinder?

52) Find the total surface area of the following cuboid

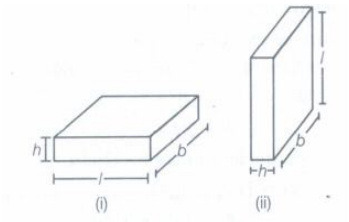


53) Find the total surface area of the following cuboid

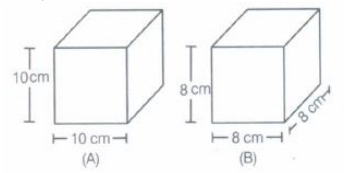


54) Can we say that, the total surface area of cuboid= lateral surface area + 2 $\times$ area of base?

55) If we interchange the lengths of the base and the height of a cuboid [fig.(i)] to get another cuboid [fig (ii)], will its lateral surface area change?



56) Find the surface area of cube A and lateral surface area of cube B.

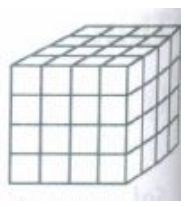


57) 

After the surface area of a cube is painted, the cube is cut into 64 smaller cubes of sane dimensions (see the figure). How many have no face painted? 1 face painted?

58) 

After the surface area of a cube is painted, the cube is cut into 64 smaller cubes of sane dimensions (see the figure). How many have no face painted? 2 faces painted?

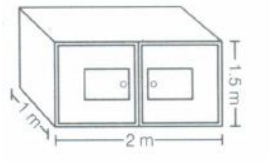
59) 

After the surface area of a cube is painted, the cube is cut into 64 smaller cubes of sane dimensions (see the figure). How many have no face painted? 3 faces painted?

60) Note that lateral surface area of a cylinder is the circumference of base $\times$ height of cylinder. Can we write lateral surface area of a cuboid as perimeter of base $\times$ height of cuboid?

61) Find the side of a cube whose surface area is 600 cm^2.

62) Rukhsar painted the outside of the cabinet of measure 1m$\times$ 2m$\times$ 1.5m. How much surface area did she cover, if she painted all except the bottom of the cabinet?

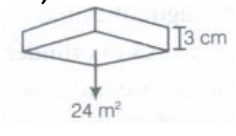


63) Find the volume of the following cubes : with a side 4 cm.

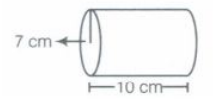
64) Find the volume of the following cubes : with a side 1.5 m.

65) Find the volume of the following cuboid

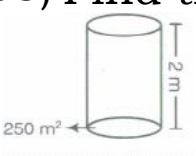
66) Find the volume of the following cuboid



67) Find the volume of the following cylinders.



68) Find the volume of the following cylinders.



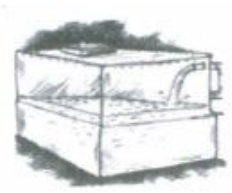
69) Find the height of a cuboid whose base area is 180 cm^2 and volume is 900 cm^3

70) A cuboid is of dimensions 60 cm$\times$ 54 cm$\times$ 30 cm. How many small cubes with side 6 cm can be placed in the given cuboid?

71) If each edge of a cube is doubled, how many times will its surface area increase?

72) If each edge of a cube is doubled, how many times will its volume increase?

73)

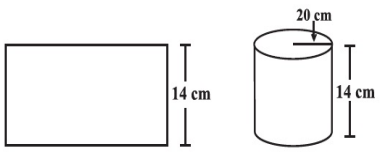


Water is pouring into a cuboidal reservoir at the rate of 60 L/min. If the volume of reservoir is 108m^3 , find the number of hours it will take to fill the reservoir.

74) Find the height of a cuboid whose volume is 275 cm^3 and base area is 25 cm^2.

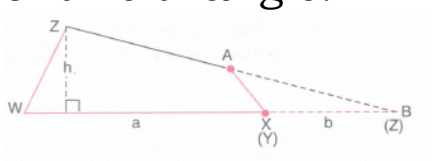
75) A godown is in the form of a cuboid of measures 60 m x 40 m x 30 m. How many cuboidal boxes can be stored in it if the volume of one box is 0.8 m^3?

76) A rectangular paper of width 14 cm is rolled along its width and a cylinder of radius 20 cm is formed. Find the volume of the cylinder $(Take\ \pi = \frac{22}{7})$



77) A rectangular piece of paper is having measures 11 cm x 4 cm. It is folded without overlapping to make a cylinder of height 4 cm. Find the volume of the cylinder.

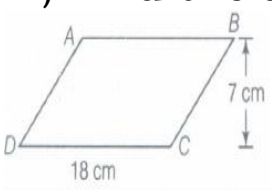
78) What is the length of the base of the larger triangle? Write an expression for the area of this triangle.



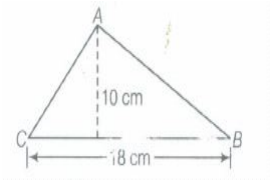
79) The area of this triangle and the area of the trapezium WXYZ are same (How?). Get the expression for the area of trapezium by using the expression for the area of triangle.

80) Cover the lateral surface of a cuboidal duster (which your teacher uses in the class-room) using a strip of brown sheet of paper, such that it just fits around the surface. Remove the paper. Measure the area of the paper. Is it the lateral surface area of the duster?

81) Find the area of the following figure



82) Find the area of the following figure



83) Find the area of the following figure

84) Find the area of a rectangle having length 15 cm and breadth 8

85) The length of a rectangular field is 100 m and its breadth is 40 m. What will be the area of the field?

86) The ratio of the length and breadth of a rectangle is 5 : 3. If length is 8 m more than breadth, then find the area of the rectangle.

87) Find the perimeter of a rectangle having area equal to 144 cm^2 and sides in the ratio 4: 9.

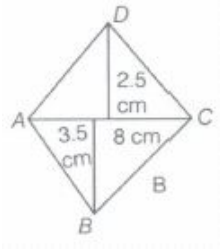
88) What is the area of a square having perimeter 68 cm?

89) The diagonals of two squares are in the ratio 3 : 2. Find the ratio of their areas.

90) The perimeters of two squares are 12 cm and 24 cm. The area of the bigger square is how many times that of the smaller square?

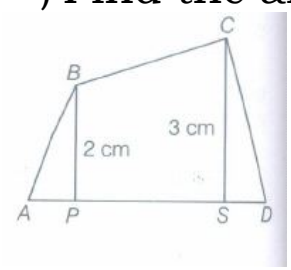
91) The area of trapezium is 450 m^2, the distance between two parallel sides is 10m and one of the parallel side 15 m. Find the other parallel side.The perimeters of two squares are 12 cm and 24 cm. The area of the bigger square is how many times that of the smaller square?

92) Find the area of following quadrilateral ABCD



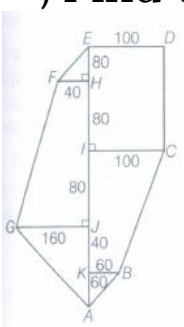
93) Find the area of a rhombus, whose diagonals are of lengths 20 cm and 15 cm.

94) Find the area of the polygon ABCD, if AD= 10 cm, AS= 7 cm and AP=2 cm

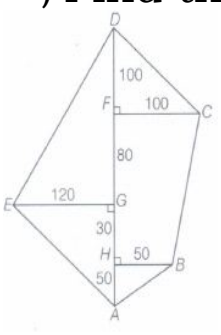


95) The area of a trapezium with equal non-parallel sides is 168m^2, If the lengths of the parallel sides are 36 m and 20 m, find the length of the non-parallel sides.

96) Find the area of the following fields,All dimensions are in metres,



97) Find the area of the following fields,All dimensions are in metres,



98) The area of a trapezium is 384 cm^2 . If its parallel sides are in the ratio 3:5 and the perpendicular distance between them is 12 cm, then find the smaller of the parallel side.

99) The ratio of the length of the parallel side of a trapezium is 3 : 2, The shortest distance between them is 15 cm, If the area of the trapezium is 450 cm^2 then find the sum of the lengths of the parallel sides.

100) Diagonals of a rhombus are 1m and 1.5 m in lengths, Then, find the area of the rhombus.

101) If the diagonals of a rhombus are 4.8 cm and 1.4 cm, then what is the perimeter of the rhombus?

102) One side of a parallelogram is 8.06 cm and its perpendicular distance from opposite side is 2.08 cm. What is the approximate area of the parallelogram?

103) The base of a parallelogram is thrice of its height. If the area of the parallelogram is 2187 cm^2, find its height.

104) The base of a parallelogram is twice its height. If the area of the parallelogram is 144cm^2, then find its height.

105) 

After the surface area of a cube is painted, the cube is cut into 64 smaller cubes of sane dimensions (see the figure). How many have no face painted? no face printed?

106) Find the total surface area of the following cylinders

107) A closed cylindrical tank of radius 7m and height 3 m is made from a sheet of metal. How much sheet of metal is required?

108) Four horses are tethered with equal ropes at 4 corners of a square field of side 70 m, so that they just can reach one another.Find the area left ungrazed by the horses.

109) The walls and ceiling of a room are to be plastered. The length, breadth and height of the room are 4.5 m, 3 m and 350 cm, respectively. Find the cost of plastering at the rate of Rs 8 per $m.^2$

110) The base radius and height of a right circular cylinder are 5 cm and 10 cm, respectively. Find its surface area.

111) Find the volume of a right circular cylinder of length 80 cm and diameter of the base 14 cm.

112) The diameter of the base of a right circular cylinder is 14 cm, while its length is 40 cm. Find the total surface area of the cylinder.

113) What will be the curved surface area of a right circular cylinder having length 160 cm and radius of the base 7 cm?

114) If a rod of 2 cm diameter and 30 cm length is connected with a wire of 3 m length and diameter 1 cm. Then, find the total surface area.

115) What is the height of a solid cylinder of radius 5 cm and total surface area is 660 cm^2?

116) The whole surface area of a rectangular block is 8788cm^2. If length, breadth and height are in the ratio of 4 : 3 : 2, then find the length.

117) How many cubes of 3 cm edge can be cut-out of a cube of 18 cm edge?

118) Find the volume of the following cuboid figure.

119) Find the volume of the following cylinders: Given, radius = 7 cm, height = 10 cm

120) Find the volume of the following cylinders: Given, area of base = 250 m^2 , height = 2 m

121) Find the volume of the following cube: with a side of 4 cm

122) Find the volume of the following cube: with a side of 1.5 m

123) Find the capacity of water tank in litres, whose dimensions are 4.2 m, 3 m and 1.8 m

124) How many cubes each of side 0.5 cm are required to build a cube of volume 8 cm^3

125) A hollow garden roller of 42 cm diameter and length 152 cm is made of cast iron 2 m thick. Find the volume of the iron used in the roller.

126) The side of a cube measure is 9 cm. What will be the diagonal of the cube?

127) If the total surface area of a cube is 6 sq unit, then what is the volume of the cube?

128) If the volume of a cube is 729 cm^3, then what is the length of its diagonals?

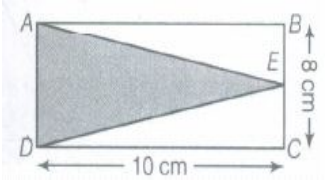
129) The volume of a cuboid is 1989 cm^3 while its length and breadth are 17 cm and 13 cm, respectively. Find the height of the cuboid.

130) The capacity of a cuboid tank of water is 50000 L. Find the breadth of the tank if its length and depth are 2.5 m and 10 m respectively.

131) A drainage tile is a cylindrical shell 21 cm long. The inside and outside diameters are 4.5 cm and 5.1 cm, respectively. What is the volume of the clay required for the tile?

132) A cylindrical pillar is 50 cm in diameter and 3.5 cm in height.Find the cost of painting the curved surface of the piller at the rate of Rs 10 per sq m.

133) Whatis the area of Δ ADE in the following figure?



134) If the area of a face of cube is 20 cm^2, then find the total surface area of the cube.

135) Two cylinders of equal volume have heights in the ratio 1 : 16. Find the ratio of their radii.

136) The volume of a cube is 343cm^3. Find its surface area.

137) A bicycle wheel makes 200 revolutions in moving 1 km. Find the diameter of the wheel.

138) The areas of two circles are in the ratio 49 : 64. Find the ratio of their circumferences.

139) Find the volume and surface area of a cuboid 18 m long 14 m broad and 7 m high.

140) Find the area of a rhombus whose diagonals are 12 cm and 9.2 cm.

141) Draw at least three trapeziums which have different areas but equal perimeters on a squared sheet.

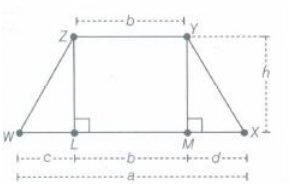
142) Observe that some shapes have two or more than two identical (congruent) faces. Name them. Which solid has all congruent faces?

143) Can you think of such objects whose volume can be found by using this method?

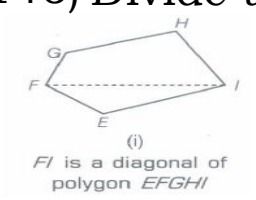
56 x 3 = 168

144) A flooring tile has the shape of a parallelogram whose base is 24 cm and the corresponding height is 10 cm. How many such tiles are required to cover a floor of area 1080 m^2? (If required you can split the tiles in whatever way you want to fill up the corners.)

145) Nazma's sister also has a trapezium shaped plot. Divide it into three parts as shown in the figure. Show that the area of trapezium WXYZ = $h\frac{(a+b)}{2}$

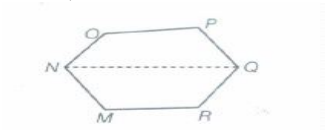


146) Divide the following polygons into parts (triangles and trapezium) to find out its area.



(i)
FI is a diagonal of polygon *EFGHI*

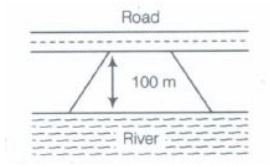
147) Divide the following polygons into parts (triangles and trapezium) to find out its area.



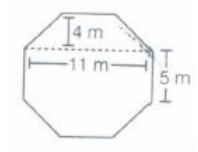
(ii)
NQ is a diagonal of polygon *MNOPQR*

148) Find the area of a rhombus whose side is 5 cm and whose altitude is 4.8 cm. If one of its diagonal is 8 cm long, find the length of the other diagonal.

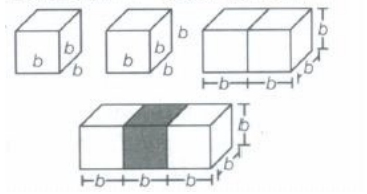
149) The floor of a building consists of 3000 tiles, which are rhombus shaped and each of its diagonals are 45 cm and 30 cm in length. Find the total cost of polishing the floor, if the cost per m^2 is Rs 4.

150) 

Mohan wants to buy a trapezium shaped field. Its side along the river is parallel and twice the side along the road. If the area of this field is 10500 m^2 and the perpendicular distance between the two parallel sides is 100 m, find the length of the side along the river.

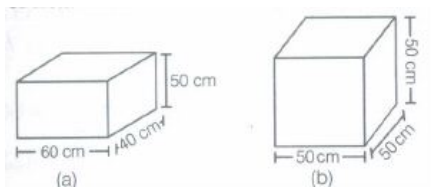
151) 

Top surface of a raised platform is in the shape of a regular octagon as shown in the figure. Find the area of the octagonal surface.

152) 

Two cubes each with side b are joined to form a cuboid (see the figure) .What is the surface area of this cuboid? Is it $12b^2$? Is the surface area of cuboid formed by joining three such cubes, $18b^2$? Why?

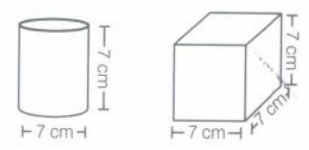
153) There are two cuboidal boxes as shown in the following figures. Which box requires the lesser amount of material to make?

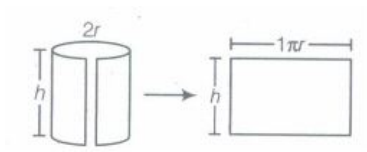


154) A suitcase with measures 80 cm× 48 cm× 24 cm is to be covered with a tarpaulin cloth. How many metres of tarpaulins of width 96 cm is required to cover 100such suitcases?

155) Daniel is painting the walls and ceiling of a cuboidal hall with length, breadth and height of 15 m, 10m and 7 m, respectively. From each can paint of 100 m^2 of area is painted. How many cans of paint will she need to paint the room?

156) Describe how the two figures at the right are alike and how they are different? Which box has larger lateral surface area?

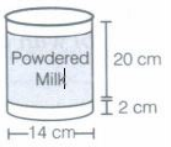


157) 

The lateral surface area of a hollow cylinder is 4224 cm^2 . It is cut along its height and formed a rectangular sheet of width 33 cm. Find the perimeter of rectangular sheet.

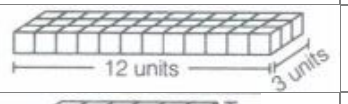
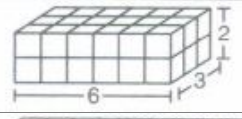
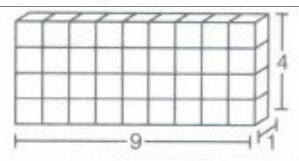
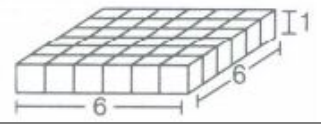
158) 

A road roller takes 750 complete revolutions to move once over to level a road. Find the area of the road, if the diameter of a road roller is 84 cm and length is 1m.

159) 

A company packages its milk powder in cylindrical container whose base has a diameter of 14 cm and height 20 cm. Company places a label around the surface of the container(as shown in the figure). If the label is placed 2 cm from top and bottom, what is the area of the label?

160) Observe the following table and fill in the blanks.

	Cuboid	**Length**	**Breadth**	**Height**	**l× b× h=V**
(i)		12	3	1	12× 3× 1=36
(ii)		___	___	___	____
(iii)		____	____	____	____
(iv)		____	____	____	____

161) 

Given a cylindrical tank, in which situation will you find surface area and in which situation volume?

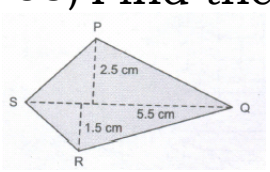
(a) To find how much it can hold.

(b) Number of cement bags required to plaster it.

(c) To find the number of smaller tanks that can be filled with water from it.

162) Find the height of the cylinder whose volume is 1.54 m^3 and diameter of the ball is 140 cm.

163) Find the area of quadrilateral PQRS shown in the figure:

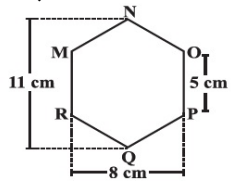


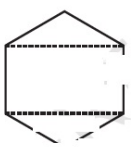
164) Find the area of a rhombus whose diagonals are of lengths 10 cm and 8.2 cm.

165) The area of a trapezium shaped field is 480 m^2, the distance between two parallel sides is 15 m and one of the parallel side is 20 m. Find the other parallel side.

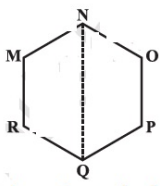
166) The area of the rhombus is 240 cm^2 and one of the diagonals is 16 cm. Find the other diagonal.

167) Find the area of the regular hexagon MNOPQR of side 5 cm.





Ridhima's method



Aman's method

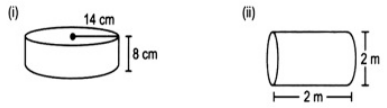
168) An aquarium is in the form of a cuboid whose external measures are 80 cm x 30 cm x 40 cm. The base, side faces and back faces are to be covered with a coloured paper. Find the area of the paper needed.

169) The internal measures of a room are 12 m x 8 m x 4 m. Find the total cost of white washing all four walls of a room if the cost of white washing is Rs 5 per m^2. What will be the cost of white washing if the ceiling is also white washed?

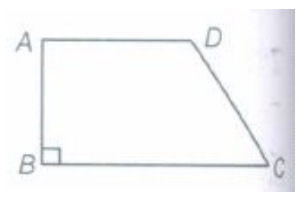
170) In a building there are 24 cylindrical pillars. The radius of each pillar is 28 cm and height is 4 m. Find the total cost of painting the curved surface area of all pillars at the rate of Rs 8 per m^2.

171) Find the height of a cylinder whose radius is 7 cm and the total surface area is 968 cm^2.

172) Find total surface area of the following cylinders



173) If h = 10 cm, c = 6 cm, b = 12 cm and d = 4 cm, find the values of each of its parts separately and add to find the area WXYZ..Verify, it by putting the values of h, a and b in the expression $\frac{h(a+b)}{2}$

174) 

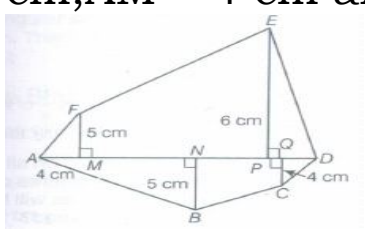
Length of the fence of a trapezium shaped field ABCD is 120 m. If BC = 48 m, CD = 17 m and AD = 40 m, find the area of this field. Side AB is perpendicular to the parallel sides AD and BC

175) How many small cubes with edge of 30 cm each can be just accommodated in a cubical box of 3 m edge?

176) $160m^3$ of water is to be used to irrigate a rectangular field, whose area is 800 m^2. What will be the height of the water level in the field?

177) Find the area of a rhombus whose one side measures 5 cm and one diagonal as 8 cm.

178) Find the area of polygon ABCDEF, if AD = 18 cm, AQ = 14 cm, AP = 12 cm, AN = 8 cm,AM = 4 cm and FM, EP, QC, BN are perpendiculars to diagonal AD.



179) Find the length of the largest pole that can be placed in a room of dimensions 12 m $\times$ 4 m$\times$ 3 m

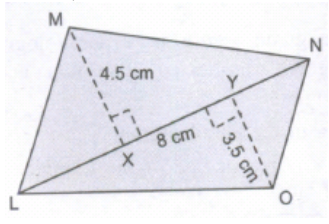
180) A river 2 m deep and 45 m wide is flowing at the rate of 3 km/h. Find the amount of water (in cubic metres) that runs into the sea per minute.

181) The diameter of a roller is 42 cm and its length is 100 cm, It takes 400 complete revolutions moving once over to level a playground. Determine the area of the playground. Also, find the cost of levelling the playground at Rs 150 per 100 sq.m

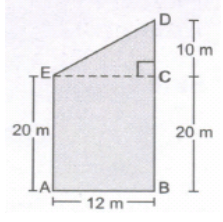
182) How many iron rods each of length 14 m and diameter 4 cm can be made out of 88 m^3 of iron?

183) The difference between two parallel sides of a trapezium is 8 cm. The perpendicular distance between them is 19 cm. While the area of trapezium is $760cm^2$. What will be the length of the parallel sides?

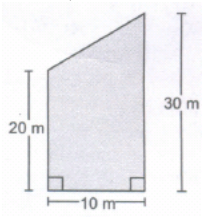
184) Find the area of the quadrilateral LMNO (as shown in the figure).



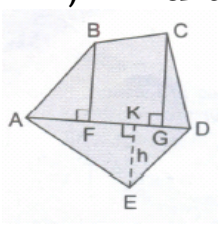
185) Find the area of the following figures.



186) Find the area of the following figures.



187) Find the area of the polygon ABCDE as shown in the figure.

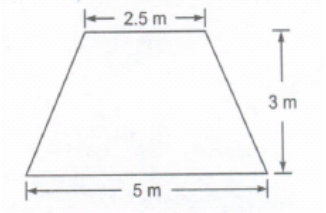


188) The length, breadth and height of a cuboid are 20 cm, 15 cm and 10 cm respectively. Find its total surface area.

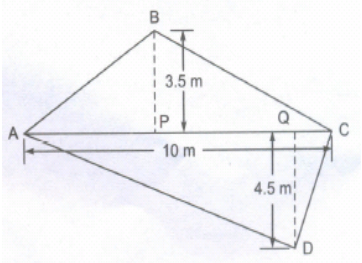
189) A square and a rectangle have same perimeter. If the side of the square is 60 cm and length of the rectangle is 80 m, then whose area is more and how much?

190) Find the perimeter of a semicircular figure, if its diameter is 2.8 cm.

191) Find the area of the trapezium shown below.



192) Find the area of the following quadrilateral.



193) Find the area of a rhombus whose diagonals are 10 cm and 8 cm.

194) The area of a trapezium is 0.88 m^2. If its parallel sides are 1.2 m and 1 m, then find its height.

195) The area of a quadrilateral shaped field is 252 m^2. The perpendiculars droped on it from the opposite comers on a diagonal are 8 m and 13 m. Find the length of the diagonal.

196) If the length of the side of a cube is 6 cm. Find its surface area.

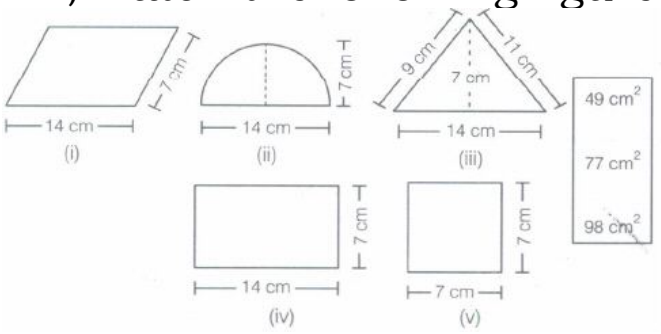
197) Find the radius of the base of a cylinder whose volume and height are 1.54 m^2 and 1 m respectively.

198) Find the base area of a cuboid whose volume and height are 900 $cm^3$and 5 em respectively.

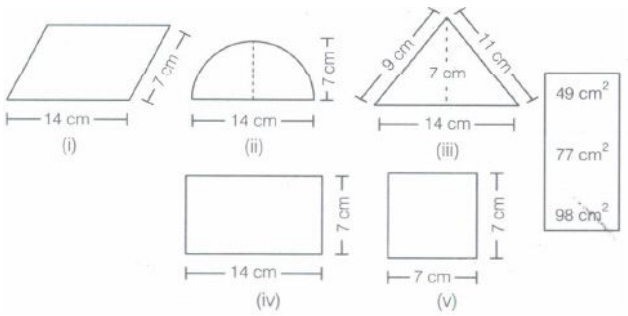
199) 1 cubic cm
= 1 cm x 1 cm x 1cm
= 1 cm^3
= 10mm x 10mm x 10m
= .....mm^3
1 cubic m = 1 m x 1 m x 1 m = 1 m^3
=..... cm^3
1 cubic mm= 1 mm x 1 mm x 1 mm
= 1rnm3
= 0.1 cm x 0.1 cm x 0.1 cm
= ..... cm^3

37 x 5 = 185

200) Match the following figures with their respective areas in the box

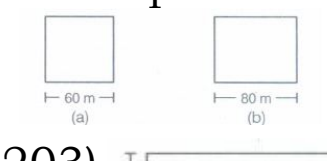


201)

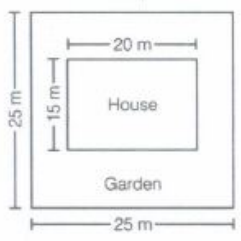


Write the perimeter of each shape of the above figures

202) A square and a rectangular field with measurements as given in the figure have the same perimeter. Which field has a larger area?

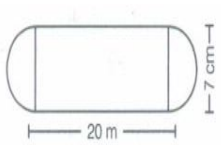


203)



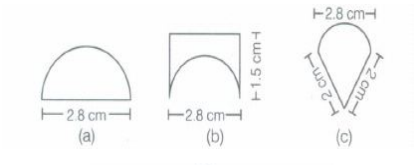
Mrs. Kaushik has a square plot with the measurement as shown in the figure. She wants to construct a house in the middle of the plot. A gardenis developed around the house. Find the total cost of developing a garden around the house at the rate of Rs.55 per m^2

204)

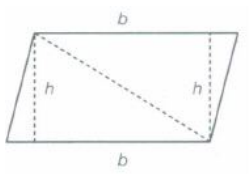


The shape of a garden is rectangular in the middle and semi-circular at the ends as shown in the diagram. Find the area and the perimeter of this garden. Length of rectangle is 20- (3.5+ 3.5) m.

205) An ant is moving around a few food-pieces of different shapes scattered on the floor. For which food-piece would the ant have to take a longer round? Remember, circumference of a circle can be obtained by using the expression C = 2π r,where r is the radius of the circle.

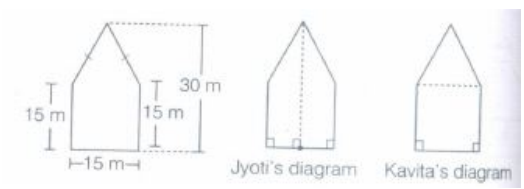


206)



We know that parallelogram is also a quadrilateral. Let us also split such a quadrilateral into two triangles, find their areas and hence that of the parallelogram. Does this agree with the formula that you know already?

207) There is a pentagonal shaped park as shown. the figure. For finding its area, Jyoti and Kavita divided it in two different ways.



Find the area of this park using both ways. Can you suggest some other way of finding its area?

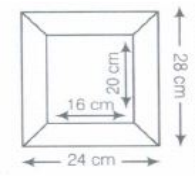
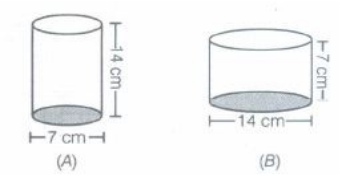
208) 

Diagram of the adjacent picture frame has outer dimensions 24 cm × 28 cm and inner dimensions 16 cm × 20 cm.Find the area of each section of the frame, it the width of each section is same.

209) How will you arrange 12 cubes of equal length to form a cuboid of smallest surface area?

210) A company sells biscuits. For packing purpose, they are using cuboidal boxes: box A⟶ 3 cm× 8 cm× 20 cm and box B ⟶ 4 cm× 12 cm× 10 cm. What size of the box will be economical for the company? Why? Can you suggest any other size (dimensions) which has the same volume but is more economical than these?

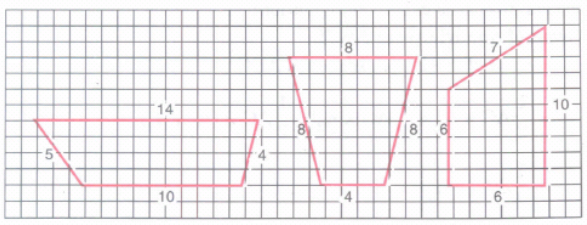
211) 

Diameter of cylinder A is 7 cm and the height is 14 cm. Diameter of cylinder B is 14 cm and height is 7 cm. Without doing any calculations, can you suggests whose volume is greater? Verify it by finding the volume of both the cylinders. Check whether the cylinder with grater volume also has greater surface area?

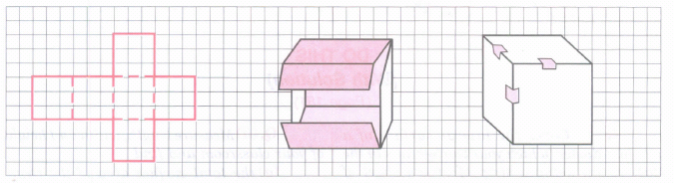
212) 

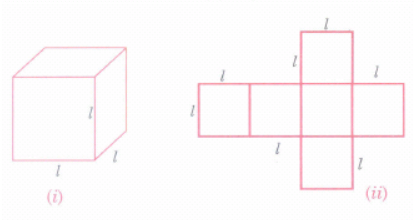
A milk tank is in the form of cylinder whose radius is 1.5 m and length is 7 m. Find the quantity of milk (in litres) that can be stored in the tank.

213) In class VII we learnt to draw parallelograms of equal areas with different perimeters. Can it be done for trapeziums?



214) Draw the pattern shown on a squared paper and cut it out [Fig. (i)]. (You know that this pattern is a net of a cube). Fold it along the lines [Fig. a(ii)] and tape the edges to form a cube [(Fig. a(iii)].





(a) What is the length, width and height of the cube? Observe that all the faces of a cube are square in shape. This makes length, height and width of a cube equal [Fig. b(i)].
(b) Write the area of each of the face. Are they equal?
(c) Write the total surface area of this cube.
(d) If each side of the cube is l , what will be the area of each face? [Fig. b(ii)]
Can we say that the total surface are of a cube of side l,is $6l^2$?

215) Arrange 64 cubes of equal size in as many ways as you can to form a cuboid. Find the surface area of each arrangement. Can solid shapes of same volume have same surface area?

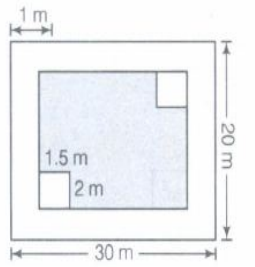
216) A rectangular park, whose length is 30 m and width is 20 m is shown in the following figure

(i) What is the total length of the fence surrounding it?

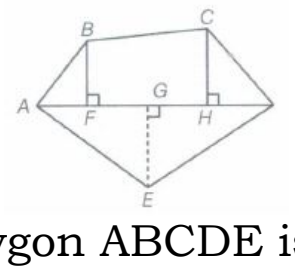
(ii) How much land is occupied by the park?

(iii) A path of 1 m width running inside along the perimeter of the park has to be cemented. How many bags of cement would be required to construct the cemented path, if 1 bag of cement is required to cement 4 m^2area?

(iv) There are two rectangular flower beds of size 1.5 m $\times$ 2 m each in the park as shown in the given figure and the rest has grass on it. Find the area covered by grass.



217)



Polygon ABCDE is divided into parts as shown Find its area, if AD = 8 cm, AH=6cm, AG = 4cm, AF= 3cm and perpendiculars BF = 2 cm, CH= 3 cm, EG = 2. 5cm Areaof polygon ABCD = Area of ΔAFB+...

Area of $\Delta AFB = \frac{1}{2} \times AF \times BF = \frac{1}{2} \times 3 \times 2$ = ..

Area of trapezium FBCH = $FH \times \frac{(BF+CH)}{2}$

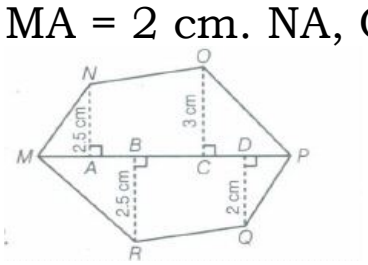
= $3 \times \frac{(2+3)}{2}$ +.... [∵ FH=AH-AF]

Area of $\Delta CHD = \frac{1}{2} \times HD \times CH$

Area of $\Delta ADE = \frac{1}{2} \times AD \times GE$ = ...

So,the area of polygon ABCDE =...

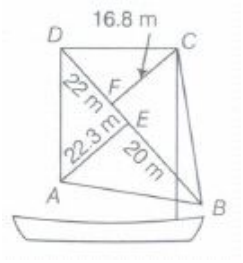
218) Find the area of polygon MNOPQR, if MP = 9 cm, MD = 7 cm, MC =6cm, MB = 4 cm, MA = 2 cm. NA, OC, QD and RBare perpendiculars to diagonal MP.



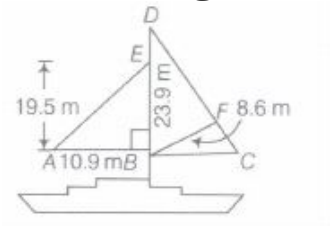
219) The parallel sides of a trapezium are 40 cm and 20 cm. If its non-parallel sides are both equal, each being 26 cm, find the area of the trapezium.

220) Horse stable is in the form of a cuboid, whose external dimensions are 70 m$\times$ 35 m $\times$ 40 m, surrounded by a cylinder halved vertically through diameter 35 m and it is open from one rectangular face 70 m$\times$ 40 m. Find the cost of painting the exterior of the stable at the rate of Rs 2 per m^2. Also, verify your answer.

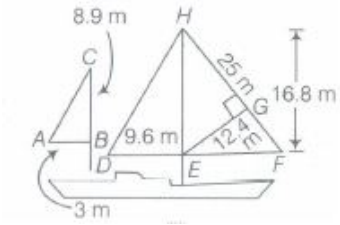
221) Most of the sailboats have two sails, the jib and the mainsail. Assume that the sails are triangles. Find the total area of each sail of the sailboats to the nearest tenth.



222) Most of the sailboats have two sails, the jib and the mainsail. Assume that the sails are triangles. Find the total area of each sail of the sailboats to the nearest tenth



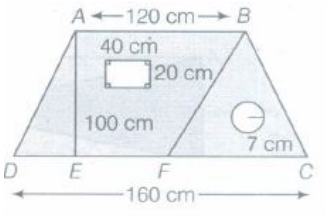
223) Most of the sailboats have two sails, the jib and the mainsail. Assume that the sails are triangles. Find the total area of each sail of the sailboats to the nearest tenth



224) (a) A swimming pool is 200 m by 50 m and has an average depth of 2 m. By the end of a summer day, the water level drops by 2 cm. How many cubic meters of water is lost on that day?
(b) What is the value depicted from swimming?

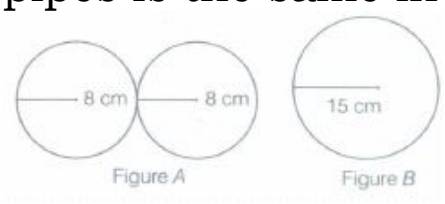
225) A rectangular sheet of a paper is rolled in two different ways to form two different cylinders. Find the volume of cylinders in each case, if the sheet measures 44 cm $\times$ 33 cm.

226) Find the area of the shaded portion in the following figure.

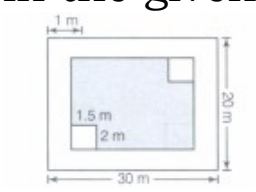


227) A housing society consisting of 5500 people needs 100 L of water per person per day. Due to shortage of drinking water in city, the city Jal Board advice to residence of housing society for their reducing daily consumption of water the cylindrical supply tank which is send by Jal, Board, is 7 m high and has a diameter 10 m. For how many days will the tank last for the society?

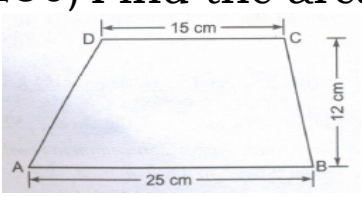
228) Below are the drawing two of cross-sections of two different pipes used to fill the swimming pools. Figure A is combination of 2 pipes each having radius of 8 cm. Figure B is a pipe having a radius of 15 cm. If the force of the flow of water coming out of the pipes is the same in both the cases, which will fill the swimming pool faster?



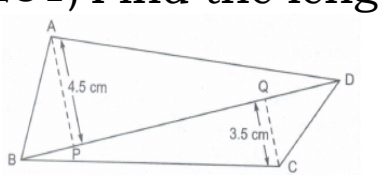
229) A rectangular park, whose length is 30 m and width is 20 m is shown in the following figure.
(i) What is the total length of the fence surrounding it?
(ii) How much land is occupied by the park?
(iii) A path of 1 m width running inside along the perimeter of the park has to be cemented. How many bags of cement would be required to construct the cemented path, if 1 bag of cement is required to cement 4 m^2area?
(iv) There are two rectangular flower beds of size 1.5 m x 2 m each in the park as shown in the given figure and the rest has grass on it. Find the area covered by grass.



230) Find the area of the following trapezium.



231) Find the length of the diagonal BD when, the area of the quadrilateral is 32 cm^2.



232) The area of a rhombus and that of a square are equal. The side of the square is 6 cm. If one of the diagonal of the rhombus is 4 cm, then find the length of its other diagonal.

233) The edge of a cube is 2 cm. Find the total surface area of the cuboid formed by three such cubes joined edge to edge.

234) A closed cylindrical tank of radius 7 cm and height 5 m is made from a sheet of metal. If the breadth of the rectangular sheet is 10 m, then find the length of the sheet.

235) A road roller makes 250 complete revolution to move once over to level a road. Find the area of the road levelled if the diameter of the road roller is 84 cm and length is 1 m.

236) cuboid is of dimensions 50 cm x 45 cm x 30 cm. How many small cubes with sides 5 cm can be places in the given cuboid?

****