

IG.0607
International Maths

Mensuration
Paper 2 - Exercise

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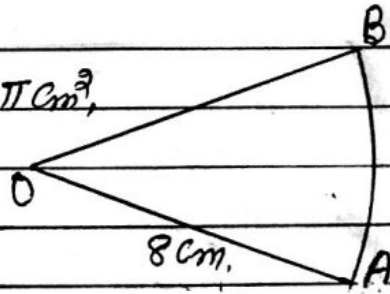
(Director)

Alliance World School,

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(Circle, arc)

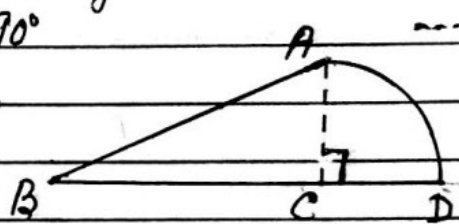
- Q1. The length of arc $AB = \frac{4\pi}{3}$ cm.
The area of sector OAB , $\frac{3}{5}$ is $k\pi$ cm².
Find the value of k .



--- [3]

[S-18/21/Q15]

- Q2. AD is an arc of a circle, and BCD is a straight line.
 $BC = 9$ cm, $CD = 6$ cm, and angle $ACD = 90^\circ$.
Find the total area of the shape $ABCD$.
Give your answer in terms of π .



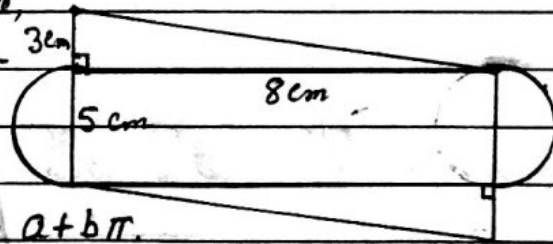
--- [3]

[S-17/22/Q6]

- Q3. The area of a semicircle is 32π cm².
Work out the perimeter of the semicircle, give your answer in terms of π .

[S-16/22/Q13] --- [3]

- Q4. The diagram shows a rectangle,
two semicircles and two right-
angled triangles.



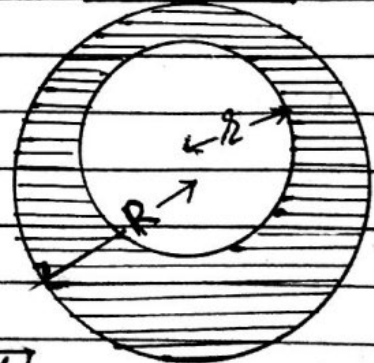
- (a) Find total area of the shape.
Give your answer in the form $a + b\pi$.

--- [3]

- (b) Describe fully the symmetry of the shape.

[S-15/23/Q4] -- [2]

- Q5. The diagram shows a circle of radius r
inside a circle of radius R .



- (a) Find an expression, in terms of π , r and R ,
for the shaded area.

--- [2]

Factorise your expression completely.

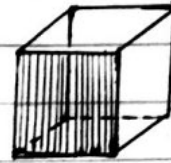
- (b) When $R = r + 3$, the shaded area is 24π .

Find the value of r .

[S-13/22/Q11]

--- [2]

Q1. The volume of a cube is 27 cm^3 .
Find the total surface area.

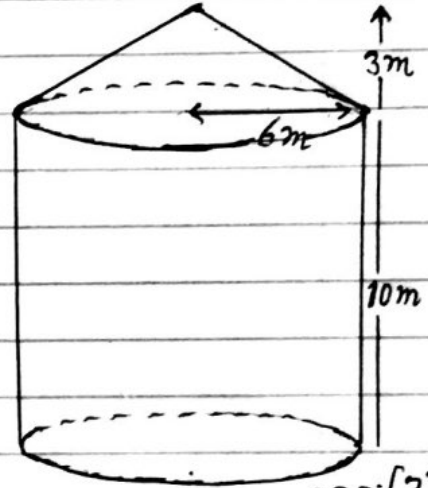


W-17/22/Q2 [2]

Q2. The volume of a sphere is $\frac{32}{3} \pi \text{ cm}^3$.
Find the radius of the sphere.

W-17/23/Q12 [2]

Q3. The diagram shows a shape made from a cylinder and a cone. The cylinder and cone have a common radius of 6 m . The height of the cylinder is 10 m and the height of the cone is 3 m .



Calculate the total volume of the shape.
Leave your answer as a multiple of π .

S-15/22/Q8 [3]

Q1 Change 430 cm^2 into m^2

S-17/21/Q4 [1]

Q2 (a) Change 20 m/s into km/h .

N-17/22/Q7

(b) A train travels at 20 m/s for 45 minutes.

Work out the distance travelled. Give your answer in kilometres. --- [2]



Exc. 1

Answers

Q1. $\frac{64}{12}$

Q2. $27 + 9\pi$

Q3. $8\pi + 16$

Q4 (a) $64 + 6.25\pi$

(b) Rotation, order 2.

Q5 (a) $\pi(R+r)(R-r)$

(b) 2.5

Ex - 2.

Q1. 54

Q2. 2

Q3. 3.96π

Ex - 3

Q1. 0.043

Q2. (a) 72

(b) 54

