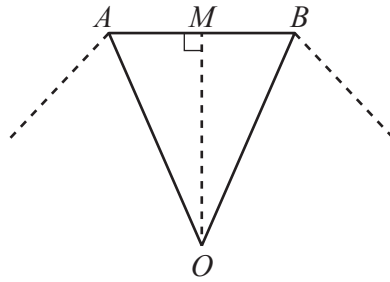


- 5 (a) $ABCDEFGH$ is a regular octagon with sides of length 6 cm.
The diagram shows part of the octagon.
 O is the centre of the octagon and M is the midpoint of AB .



NOT TO
SCALE

- (i) (a) Show that angle OAM is 67.5° .

[2]

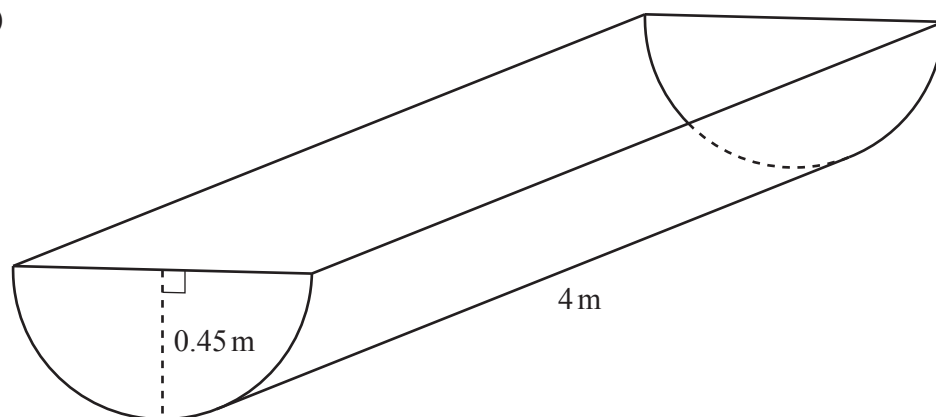
- (b) Calculate the area of the octagon.

..... cm^2 [4]

- (ii) Find the area of the circle that passes through the vertices of the octagon.

..... cm^2 [3]

(b)

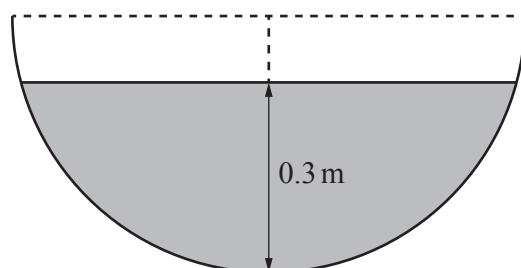
NOT TO
SCALE

The diagram shows a horizontal container for water with a uniform cross-section.
The cross-section is a semicircle.
The radius of the semicircle is 0.45 m and the length of the container is 4 m.

(i) Calculate the volume of the container.

..... m^3 [2]

(ii)

NOT TO
SCALE

The greatest depth of the water in the container is 0.3 m.
The diagram shows the cross-section.

Calculate the number of litres of water in the container.
Give your answer correct to the nearest integer.

..... litres [6]
[Turn over]