

Geometry Revision

5

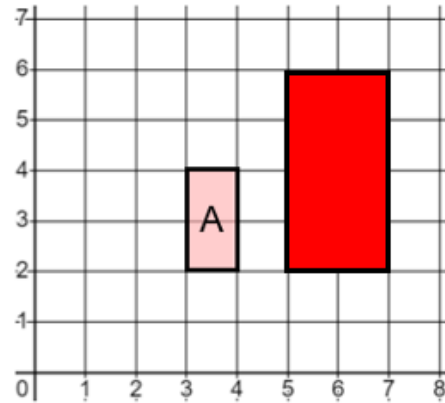
(a)

A metal cube of side length 8 cm . The density of the metal is 7.48 g/cm^3 . Find the mass of the metal cube.

3.83 kg

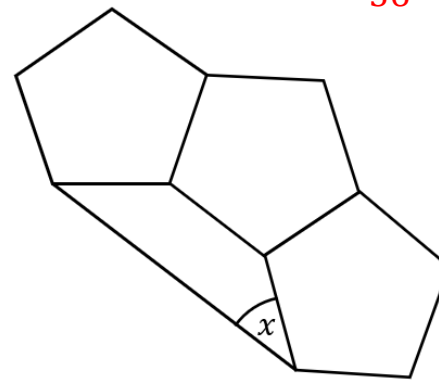
(b)

On the grid, enlarge shape A by a scale factor of 2 about centre $(1, 2)$



(c)

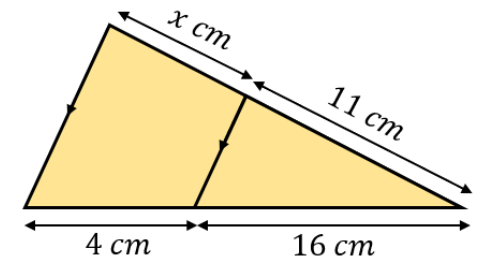
The diagram shows three regular pentagons joined together. Work out the value of angle x .



36°

(d)

Work out the missing length x .



2.75 cm

(e)

(i) Convert 4500 cm^2 into m^2

0.45 m^2

(ii) Convert 0.085 cm^3 into mm^3

85 mm^3

(f)

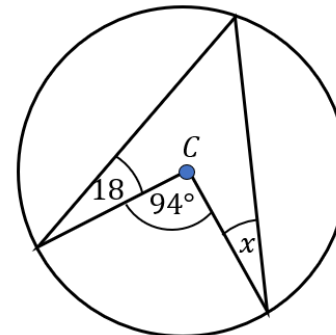
$$\vec{OA} = \begin{pmatrix} 4 \\ 3 \end{pmatrix} \quad \vec{OB} = \begin{pmatrix} -2 \\ 7 \end{pmatrix}$$

Find \vec{AB} as a column vector

$\begin{pmatrix} -6 \\ 4 \end{pmatrix}$

(g)

Work out the size of angle x . Give reasons for your answer.

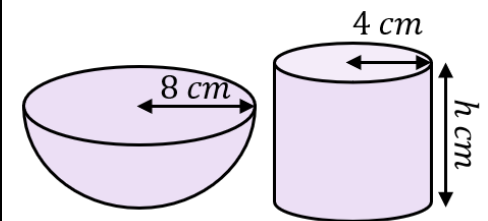


29°

angle at centre is twice angle at circumference

(h)

The total surface area of the hemisphere is equal to the total surface area of the cylinder. Find the height h .



12 cm