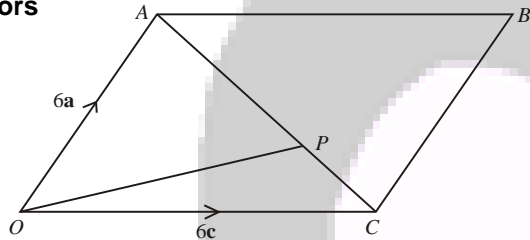


Shape, Space and Measure Revision Mat

Vectors



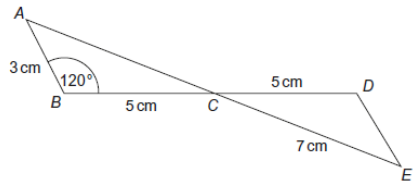
OACB is a parallelogram. P is the point on AC such that $AP = \frac{2}{3}AC$. $\vec{OA} = 6a$, $\vec{OC} = 6c$.

1) Find the vector \vec{OP} . Give your answer in terms of a and c.

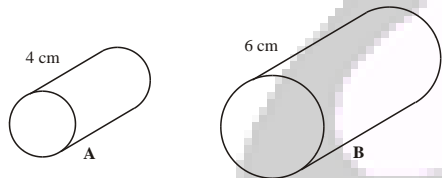
The midpoint of CB is M.

2) Prove that OPM is a straight line.

Similarity and Congruence

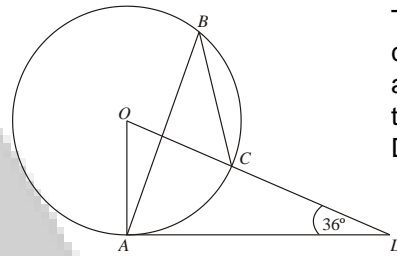


The straight lines AE and BD intersect at C. Prove that triangles ABC and EDC are congruent.



Cylinder A and cylinder B are mathematically similar. The volume of cylinder A is 80 cm^3 . Calculate the volume of cylinder B.

Circle Theorems

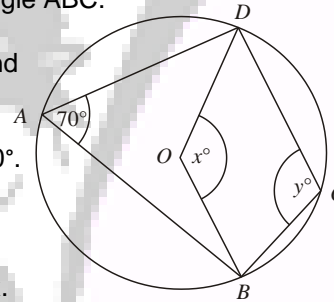


The diagram shows a circle centre O. A, B and C are points on the circumference. DCO is a straight line. DA is a tangent to the circle. Angle $ADO = 36^\circ$

1) Work out the size of angle AOD.

2) Work out the size of angle ABC.

In the diagram, A, B, C and D are points on the circumference of a circle, centre O. Angle $BAD = 70^\circ$. Angle $BOD = x^\circ$. Angle $BCD = y^\circ$.

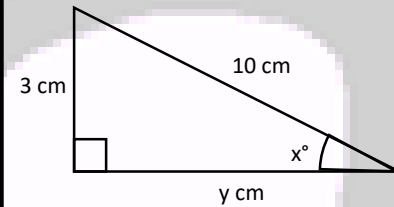


3) Work out the value of x.

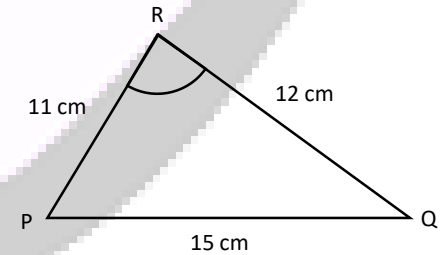
4) Work out the value of y.

Pythagoras' Theorem and Trigonometry

- 1) Work out the value of x.
- 2) Work out the value of y.



- 3) Use the cosine rule to calculate angle x.
- 4) Find the area of triangle PQR.



Volume of Pyramids and Spheres

Calculate the volume and surface area:

