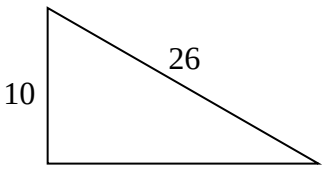
Section 1: Shape, geometrical constructions, circle theorem

Exercise

1. Find the circumference and area of a circle with diameter 12 cm.

2. A cylinder has radius 5 cm and height 8 cm.
   (i) Find the volume of the cylinder.
   (ii) Find the total surface area of the cylinder.

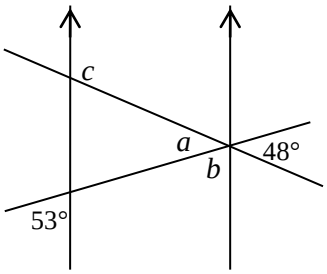
3. Find the perimeter and area of the triangle shown below.



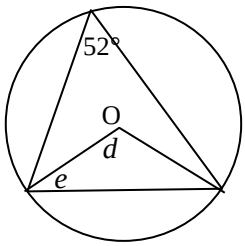
4. Find the internal angle of a regular nonagon (nine sides).

5. Find the angles marked with letters.

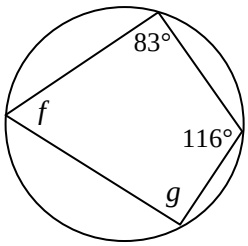
(i)



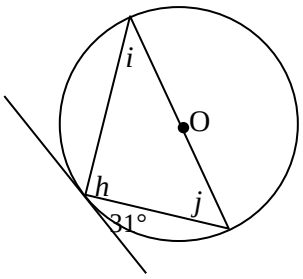
(ii)



(iii)

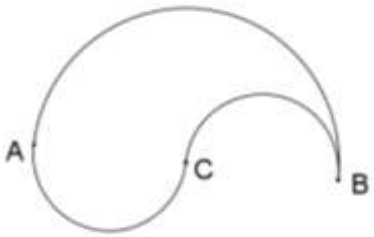


(iv)



AQA FM Geometry I 1 Exercise

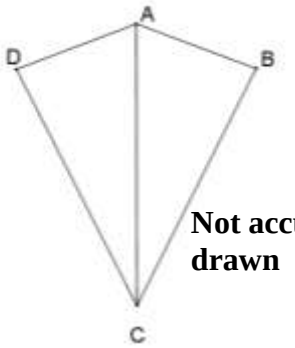
6. In the diagram below, C is the midpoint of AB.
   The shape is made of three semicircles.
   AB = 6 cm.



   Find the area of the shape in terms of π.

7. ABCD is a kite. AB = AD.

   A circle can be drawn, passing through A, B, C and D.
   Prove that AC is a diameter of the circle.



Not accurately drawn