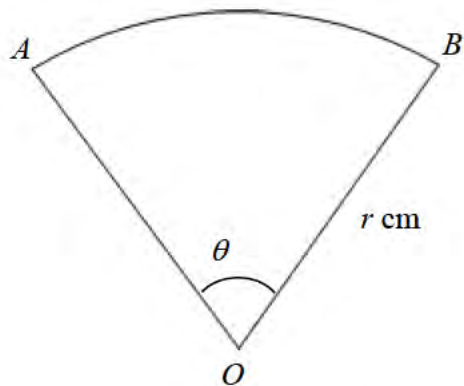


- 4 The diagram shows a sector  $AOB$  of a circle with centre  $O$  and radius  $r$  cm.



The angle  $AOB$  is  $\theta$  radians. The arc length  $AB$  is 15 cm and the area of the sector is  $45 \text{ cm}^2$ .

- (a) Find the values of  $r$  and  $\theta$ . [4]
- (b) Find the area of the segment bounded by the arc  $AB$  and the chord  $AB$ . [3]