

2.

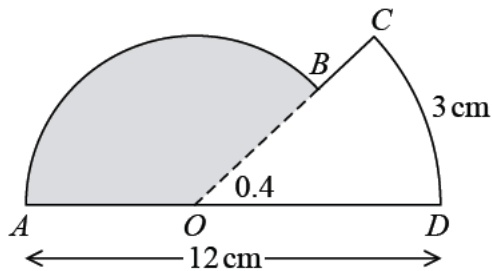


Figure 1

The shape  $ABCDOA$ , as shown in Figure 1, consists of a sector  $COD$  of a circle centre  $O$  joined to a sector  $AOB$  of a different circle, also centre  $O$ .

Given that arc length  $CD = 3\text{ cm}$ ,  $\angle COD = 0.4$  radians and  $AOD$  is a straight line of length  $12\text{ cm}$ ,

(a) find the length of  $OD$ ,

(2)

(b) find the area of the shaded sector  $AOB$ .

(3)