4

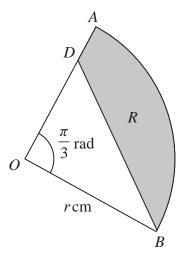


Diagram **NOT** accurately drawn

Figure 1

Figure 1 shows sector OAB of a circle with centre O and radius rcm.

The angle $AOB = \frac{\pi}{3}$ radians.

The point D divides OA in the ratio 3:1

The area of the region R, shown shaded in Figure 1, is $79.5 \,\mathrm{cm}^2$

(a) Calculate the value, to 2 significant figures, of r

(4)

(b) Calculate the perimeter, in cm to 2 significant figures, of the region R

(4)
