

Diagram **NOT**
accurately drawn

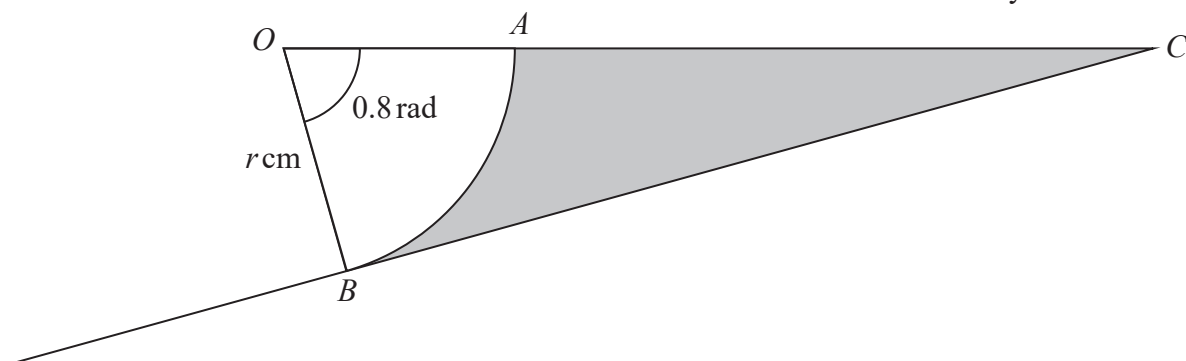


Figure 1

Figure 1 shows a sector AOB of a circle with centre O and radius r cm and a triangle BOC . The angle of sector AOB is 0.8 radians. The points O , A and C lie on a straight line so that CB is the tangent to the circle at B .

Given that the area of the shaded region in Figure 1 is 101 cm^2 , find the value of r . Give your answer correct to 3 significant figures.

(6)

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