

The diagram shows points A, B and C lying on a circle with centre O and radius r. Angle AOB is 2.8 radians. The shaded region is bounded by two arcs. The upper arc is part of the circle with centre O and radius r. The lower arc is part of a circle with centre C and radius R.

(a)	State the size of angle ACO in radians.	[1]
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(b)	Find R in terms of r .	[1]
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Find the area of the shaded region in terms of r .	[7