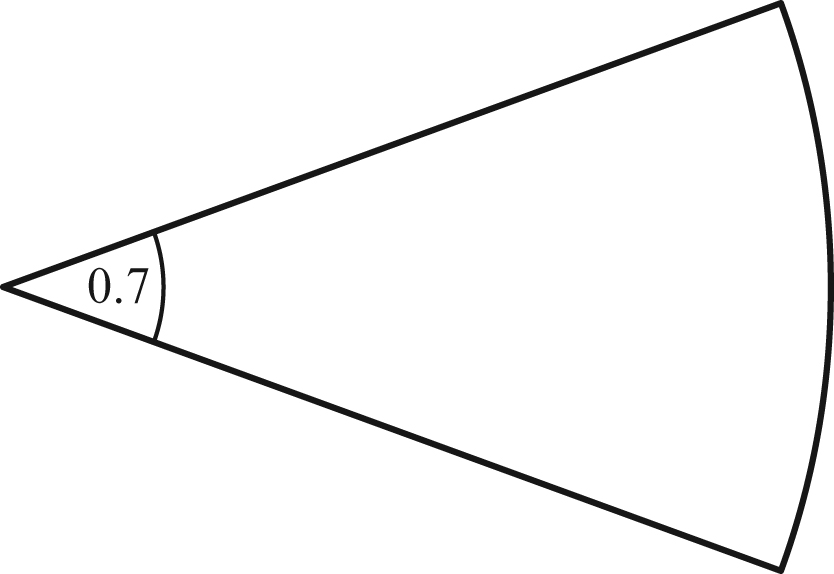
**Self-assessment: 11 Geometry of triangles and circles**

**1.** The diagram shows a sector of a circle. The angle at the centre is 0.7 radians, and the area of the sector is 96 cm2.



(a) Find the radius of the circle.

(b) Find the perimeter of the sector.

*(accessible to students on the path to grade 3 or 4) [7 marks]*

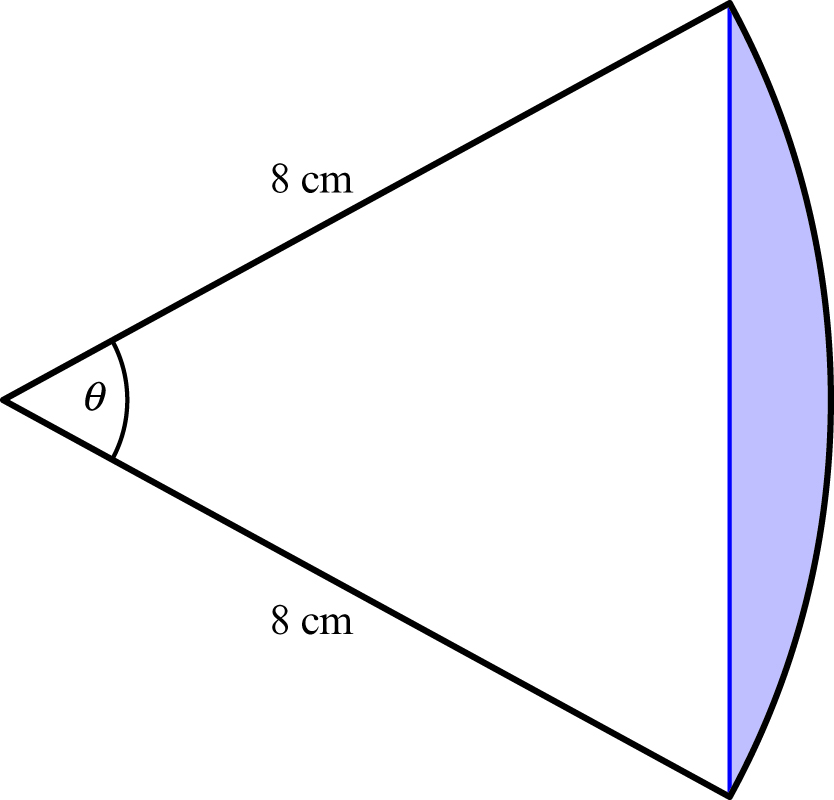
**2.** In triangle ABC, AB = 7 cm, BC = 9 cm, and  = 136°.

(a) Calculate the perimeter of the triangle.

(b) Find the size of angle 

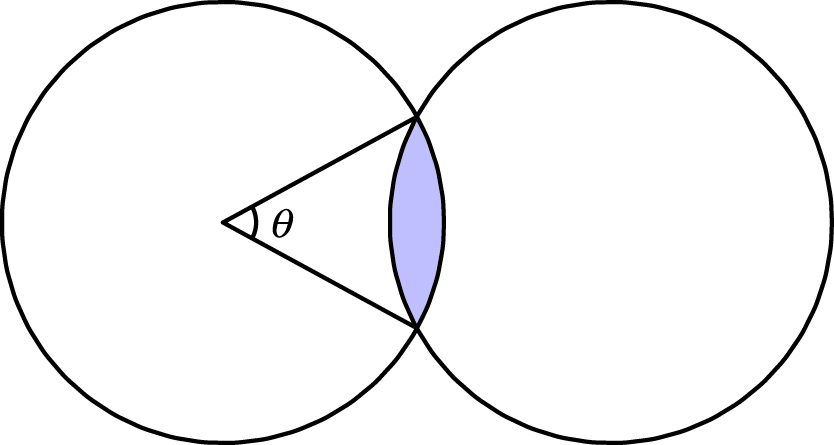
*(accessible to students on the path to grade 3 or 4) [9 marks]*

**3.** (a) The diagram shows a sector of a circle with radius 8 cm. The shaded region has perimeter 9.5 cm.



Find the size of the angle marked *θ*.

(b) In the second diagram, both circles have radius 8 cm and the angle *θ* has the value found above.



Find the area of the shaded region.

*(accessible to students on the path to grade 5 or 6) [14 marks]*