

Lengths of arcs

86a

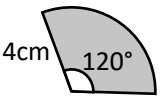
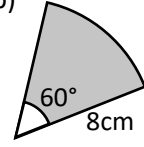
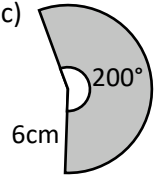
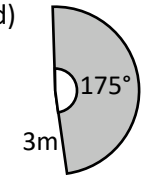
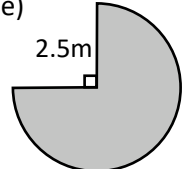
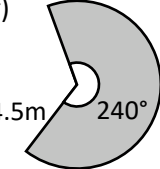
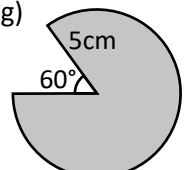
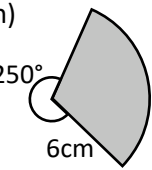


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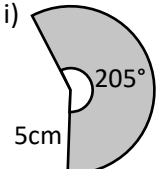
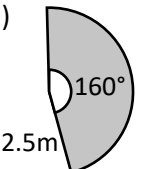
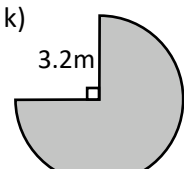
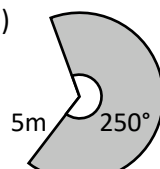
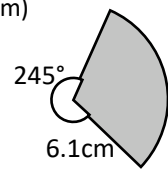
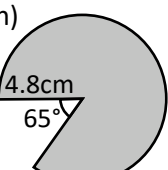
Name: _____



Calculate the arc length of these sectors (leave your answer correct to 2 decimal places):

a)  8.38cm	b)  8.38cm
c)  20.94cm	d)  9.16m
e)  11.78m	f)  18.85m
g)  26.18cm	h)  11.52cm

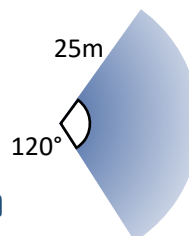
Calculate the **perimeter** of the sectors (leave your answer correct to 2 decimal places):

i)  27.89cm	j)  11.98m
k)  21.48m	l)  31.82m
m)  24.44cm	n)  34.31cm

Exam question:

Farmer Collins fertilises his field. He uses an industrial spray which rotates around an angle of 120° at a distance of 25m. He cordons off the area being sprayed with rope. What is the length of the rope needed to the nearest metre.

102m

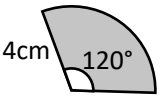
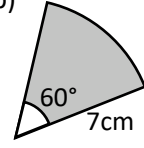
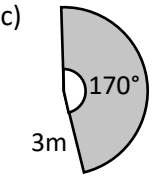
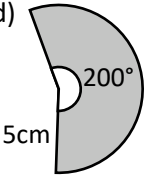
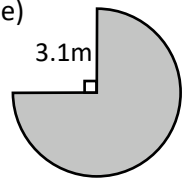
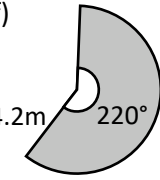
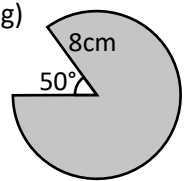
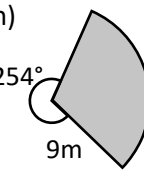
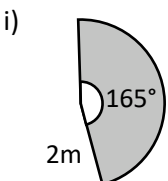
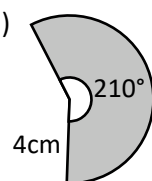
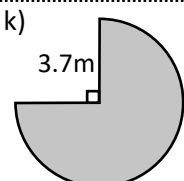
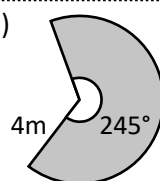
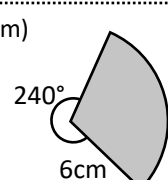
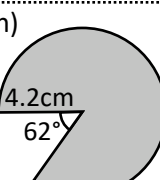




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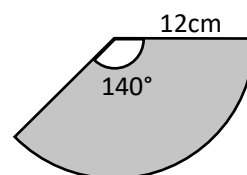


Calculate the area of these sectors (leave your answer correct to 2 decimal places):

<p>a)</p>  <p>4cm 120°</p> <p>16.76cm²</p>	<p>b)</p>  <p>60° 7cm</p> <p>25.66cm²</p>
<p>c)</p>  <p>3m 170°</p> <p>13.35m²</p>	<p>d)</p>  <p>5cm 200°</p> <p>43.63cm²</p>
<p>e)</p>  <p>3.1m 90°</p> <p>22.64m²</p>	<p>f)</p>  <p>4.2m 220°</p> <p>33.87m²</p>
<p>g)</p>  <p>8cm 50°</p> <p>173.14cm²</p>	<p>h)</p>  <p>254° 9m</p> <p>74.93m²</p>
<p>i)</p>  <p>2m 165°</p> <p>5.76m²</p>	<p>j)</p>  <p>4cm 210°</p> <p>29.32cm²</p>
<p>k)</p>  <p>3.7m 90°</p> <p>32.26m²</p>	<p>l)</p>  <p>4m 245°</p> <p>34.21m²</p>
<p>m)</p>  <p>240° 6cm</p> <p>37.70cm²</p>	<p>n)</p>  <p>4.2cm 62°</p> <p>45.87cm²</p>

Exam question:

The diagram shows a sector of a circle, centre O.
 The radius of the circle is 12 cm.
 The angle of the sector is 140°.
 Calculate the area of the sector.
 Give your answer correct to 3 significant figures



176cm²

