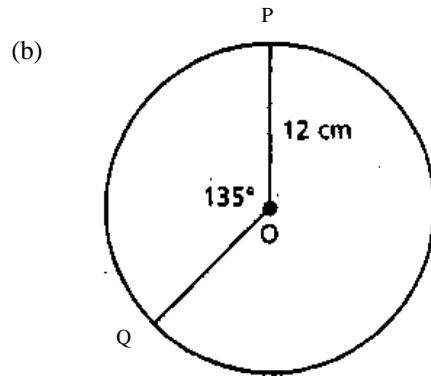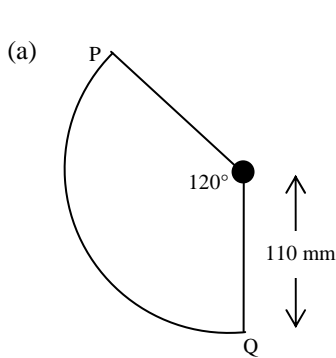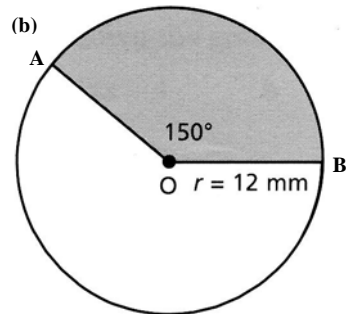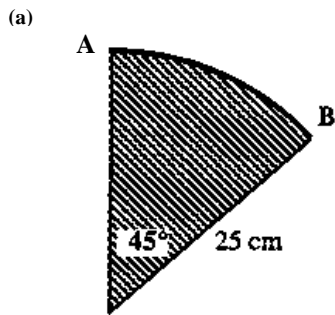## National 5 Homework : 1 year course
Arcs & Sectors of Circles

1   Calculate the length of ,minor , arc PQ in each sector. Give your answer to 3 sig figs.
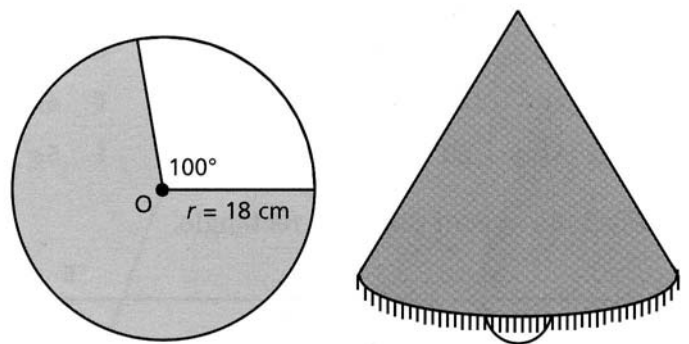
(a)

120°

110 mm

(b)

P

12 cm

135°

O

Q

2   Calculate the area of each shaded sector AB.

(a)

A

B

45°   25 cm

(b)

A

150°

O $r = 12$ mm

B

3.   A lampshade is made using a sector of a circle.

a   Calculate the total area of material used for the lampshade.

b   What length of fringing is needed for the lower edge of the lampshade?

100°

O $r = 18$ cm

4.

A pet shop manufactures protective dog collars.

In the diagram below the shaded area represents one of these collars.

AB and CD are arcs of the circle with centre O.
The radius, OA, is 10 inches and the radius, OC is 18 inches.
Angle AOB is 160°.

Calculate the area of the collar.

O

160°

A   B

C   D