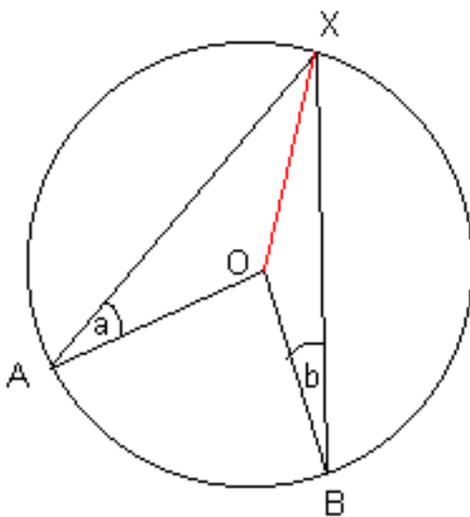# Angles at centre = 2 x angle on circumference Proof

Work through this sheet, adding to the diagram and explaining your reasoning as you go.

OA, OB and OX are all radii hence we can label angles AXO and BXO.
AXO = a   BXO = b

We can therefore label angles AOX and BOX.
AOX = 180 - 2a
BOX = 180 - 2b

Angles around a point equal 360°, so we can form an equation involving our values for AOX and BOX to find the angle subtended at the centre in terms of a and b.

360 - (180 - 2a) - (180 - 2b) = 2a + 2b
                              = 2(a + b)

Angle subtended at the centre = 2(a + b)

Angle subtended on the circumference = a + b

So… Angle subtended at the centre = 2 x angle subtended at the circumference.