Activity 14 Angle at the centre

1. The angle at the centre is twice the angle at the circumference.
2. The angle at the centre of a circle is twice the angle at the circumference subtended by the same arc.
3.

Statement	Reason
Let $\angle CBO = \alpha$ and $\angle DBO = \beta$	
$OB = OC = OD$	(i) Radii of the circle
$\angle BCO = \alpha$	(ii) Base angles of an isosceles triangle
$\angle COB = 180° - 2\alpha$	(iii) Angles in a triangle sum to 180°
$\angle COE = 2\alpha$	(iv) Angles on a straight line
$\angle BDO = \beta$	(v) Base angles of an isosceles triangle
$\angle DOB = 180° - 2\beta$	(vi) Angles in a triangle sum to 180°
$\angle DOE = 2\beta$	(vii) Angles on a straight line
$\angle COD = 2\alpha + 2\beta$	(viii) $\angle AOC = \angle AOD + \angle DOC$
$= 2(\alpha + \beta)$	
$= 2\angle ABC$	

4. When the centre angle exceeds $180°$, ClassPad displays the smaller angle.

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