

**Activity 17****Opposite angles in a cyclic quadrilateral**

1. The opposite angles are supplementary

2.

$$\text{Let } \angle ABC = \alpha$$

$$\angle AOC = 2\alpha$$

$$\text{Reflex } \angle AOC = 360 - 2\alpha$$

$$\angle ADC = 180^\circ - \alpha$$

$$\therefore \angle ABC + \angle ADC = 180^\circ$$

Angle at the centre theorem

Angles at a point sum to  $360^\circ$

Angle at the centre theorem (converse)