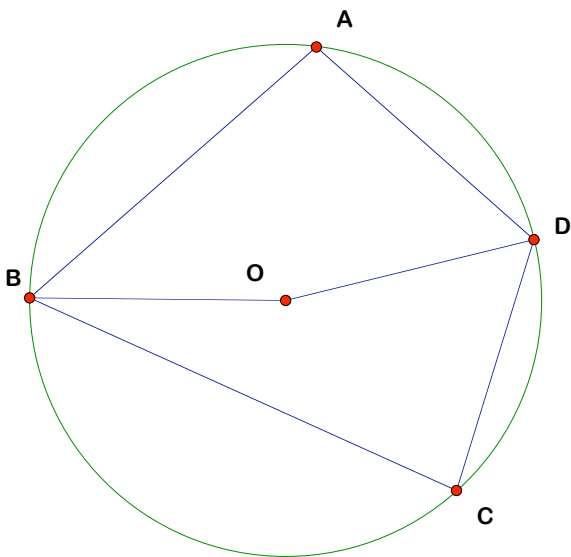


Theorem 32. If a quadrilateral is inscribed to a circle then the sum of opposite angles is  $180^\circ$ .

Proof:



1.  $\angle A$  and  $\angle BOD$  (bigger one) are based on the same arc.

2.  $\angle C$  and  $\angle DOB$  (smaller one) are based on the same arc

3.  $\angle A + \angle C = \frac{1}{2} 360^\circ = 180^\circ$ .

1. Given.

2. Given.

3. Follows from 1 and 2.