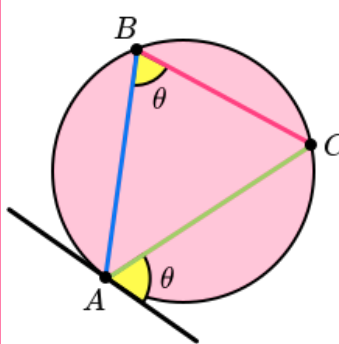


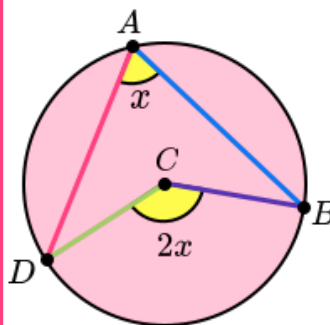
# Circle Theorems

## Alternate segment theorem



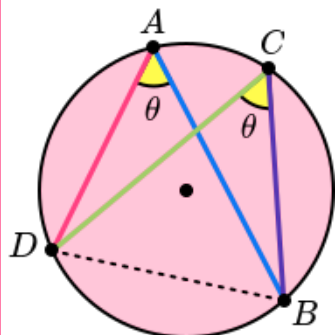
The angle that lies between a tangent and a chord is equal to the angle subtended by the same chord in the alternate segment.

## Angle at the centre theorem



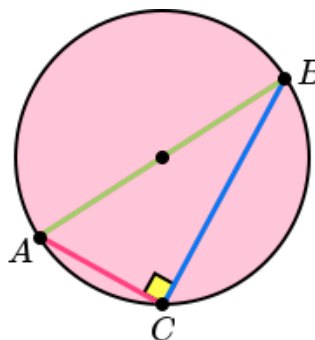
The angle at the centre is twice the angle at the circumference.

## Angles in the same segment theorem



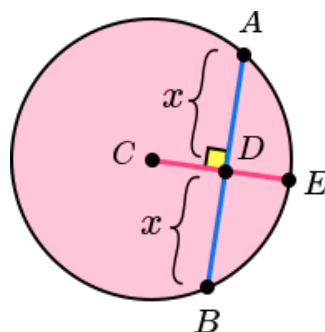
Angles in the same segment are equal.

## Angles in a semicircle



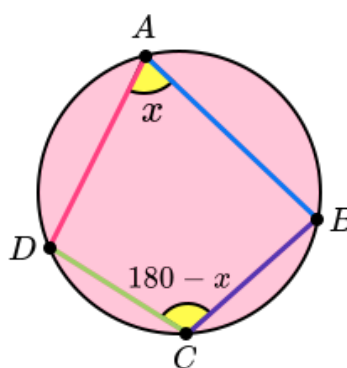
The angle in a semicircle is 90 degrees.

## Chord of a circle



The perpendicular from the centre of a circle to a chord bisects the chord (splits the chord into two equal parts).

## Cyclic quadrilateral



The opposite angles in a cyclic quadrilateral total  $180^\circ$ .

## Tangent of a circle

Diagram A

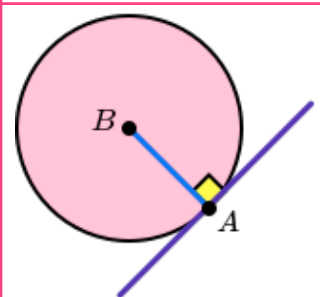
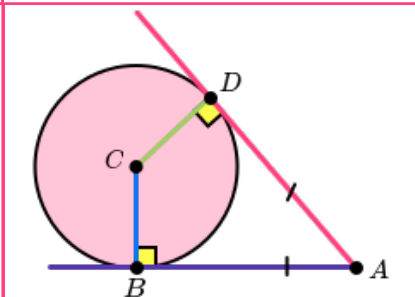


Diagram B



A. The angle between a tangent and radius is 90 degrees.  
B. Tangents which meet at the same point are equal in length.

