

Circle Theorems

10th Grade

Six results that solve almost every circle question.

Angles and lines in circles follow fixed relationships determined by the centre and the arcs they subtend.

central angle = $2 \times$ inscribed angle

Angle in a semicircle

90°

Any triangle on the diameter is right-angled.

Central vs inscribed

central is double

Both standing on the same arc.

Same arc

inscribed angles equal

Wherever the vertex sits on the major arc.

Tangent and radius

perpendicular

A tangent meets the radius at 90° .

Opposite angles in a cyclic quadrilateral add to 180° . That one gets forgotten most often.