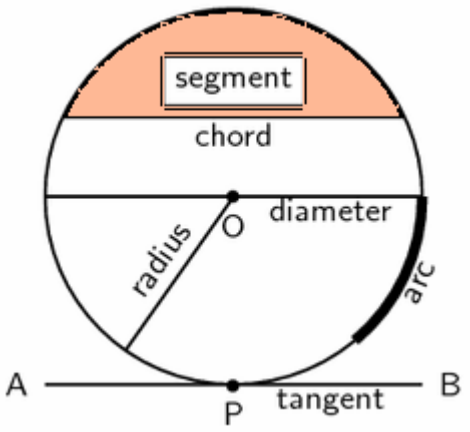
RIPASSO della circonferenza

tramite il sito http://m.everythingmaths.co.za

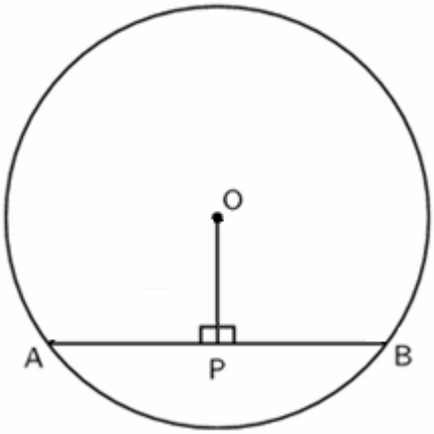
- **arc:** an arc is a part of the circumference of a circle.
  [*Circumference* si pronuncia *sə'kʌmfərəns*, con accento dopo l'apostrofo ossia sulla 2ª sillaba]
- **chord:** a straight line joining the ends of an arc.
- **radius:** a radius, r, is any straight line from the centre of the circle to a point on the circumference.
- **diameter:** a diameter, ∅ , is a special chord that passes through the centre of the circle.
  [Pronuncia *dai ˈæmitə,* accento dopo l'apostrofo]
- **segment:** a segment is the part of the circle that is cut off by a chord.
  A chord divides a circle into two segments.
- **tangent:** a tangent is a line that makes contact with a circle at one point on the circumference
  (AB is a tangent to the circle at point P)

Quali sono i termini corrispondenti in Italiano?



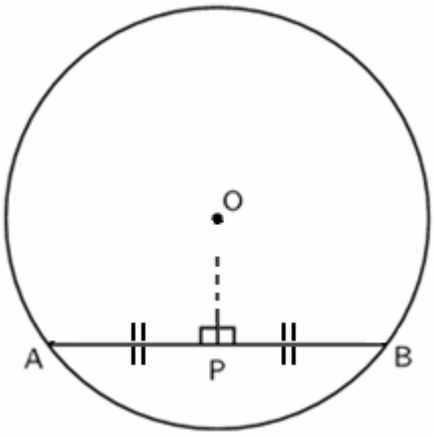
The line drawn from the centre of a circle,
perpendicular to a chord,
bisects the chord.

Come si dimostra? Si tracciano …



The perpendicular bisector of a chord
passes through the centre of the circle.

Che parola italiana usiamo di norma al posto dell'espressione inglese "perpendicular bisector"?
Come si dimostra l'enunciato?



RIPASSO della circonferenza

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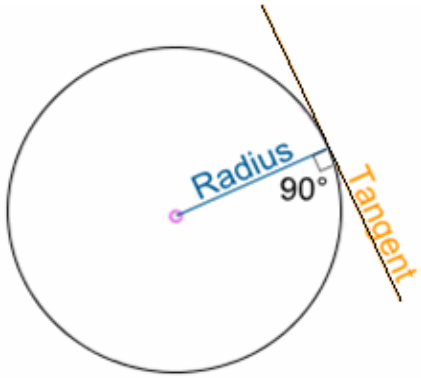
Tangent Angle

A tangent is a line that just touches a circle at one point.

It always forms a **right angle**
with the circle's radius as shown here.

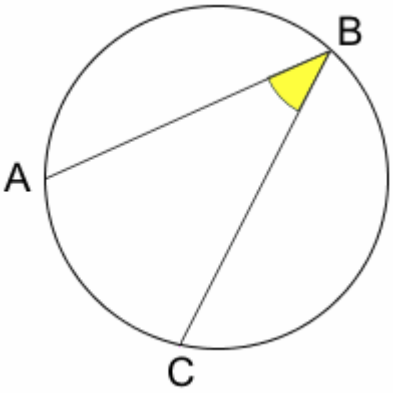
Ti ricordi la dimostrazione (per assurdo)?



Inscribed Angle:

an angle made from points sitting
on the circle's circumference

A and C are "end points"; B is the "apex point"



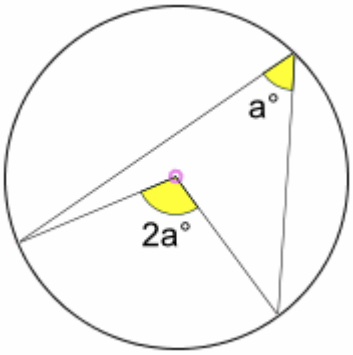
Inscribed Angle Theorems

An inscribed angle a°
is half of the central angle 2a°

(called the **Angle at the Center Theorem**)

Sapresti fare la dimostrazione
con riferimento alla figura qui a fianco?

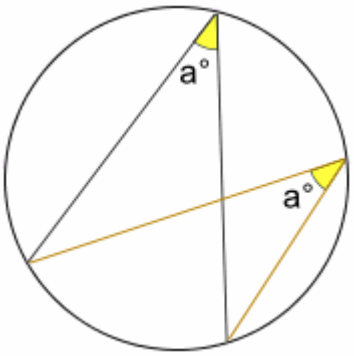
Ti ricordi quali sono gli angoli alla circonferenza
"di seconda specie"?
Vale anche per essi il teorema?



And (keeping the endpoints fixed)
the angle a° is always the same,
no matter where it is on the circumference

(**Angles Subtended by Same Arc Theorem**)

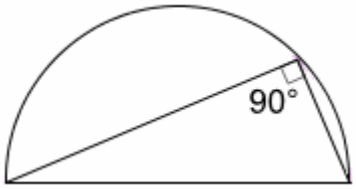
Perché questo teorema è un corollario del precedente?



Angle in a Semicircle

An angle **inscribed** in a **semicircle**
is always a right angle
(the end points are either end of a circle's diameter,
the apex point can be anywhere on the circumference)

Ti ricordi come si dimostra?



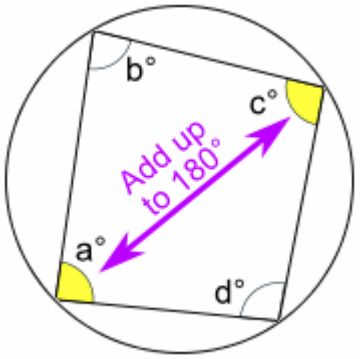
Cyclic Quadrilateral

A "Cyclic" Quadrilateral
has every vertex on a circle's circumference

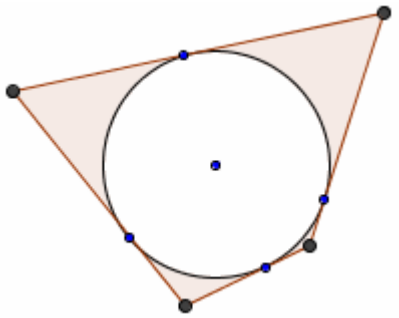
A Cyclic Quadrilateral's opposite angles add to 180°:

a° + c° = 180°; b° + d° = 180° [gradi = degrees]

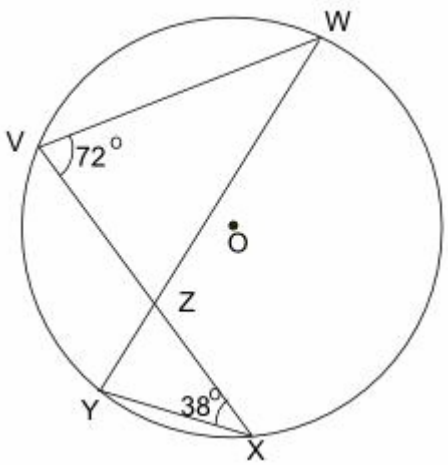
Ti ricordi come si dimostra?



E qual è, invece, la proprietà caratteristica
dei quadrilateri CIRCOscritti?
Dimostrala, utilizzando la figura qui a destra →



V, W, X and Y → are points on the circumference.
Chords VX and WY intersect at the point Z.
^ XVW = 72°
and ^VXY = 38°.
What is the size of ^VZW?



Le RISPOSTE
sono le soluzioni
delle seguenti equazioni:

$(x+12)^2 = x^2 + 4(5x+106)$ ↑

$3(x+1)+64 = 5(x-1)$ →

→
RS and RT are tangents to the circle center O.
^SUT = 72°
What is the size of ^SRT?