

# Mathematik? Spiel!

Der Thaleskreis

[eugenjost@bluewin.ch](mailto:eugenjost@bluewin.ch)

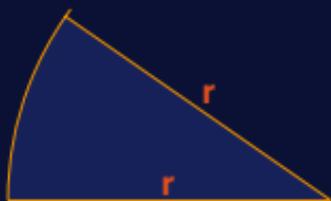


## Der Thaleskreis



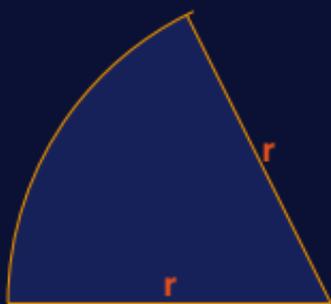


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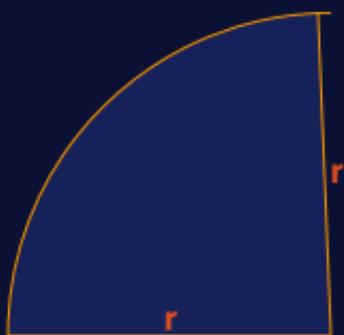


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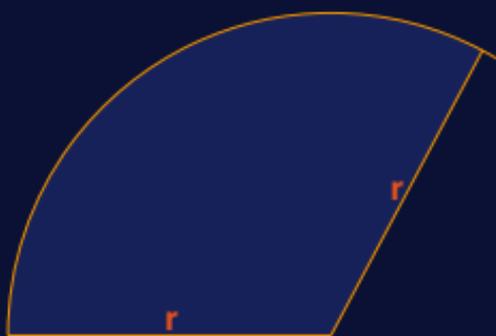


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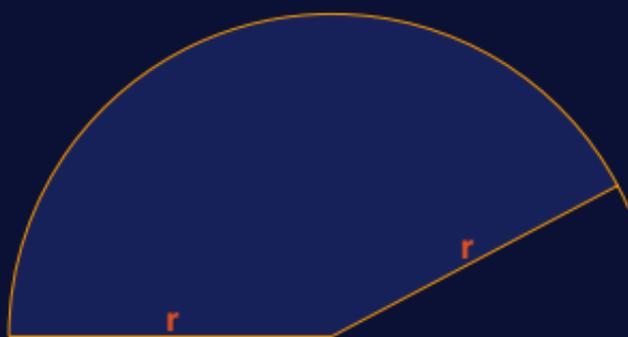


## Der Thaleskreis



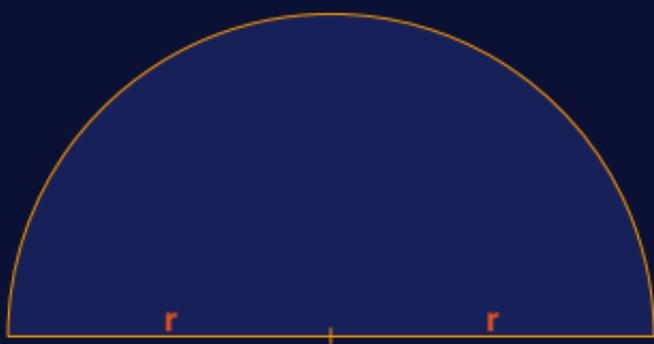


## Der Thaleskreis



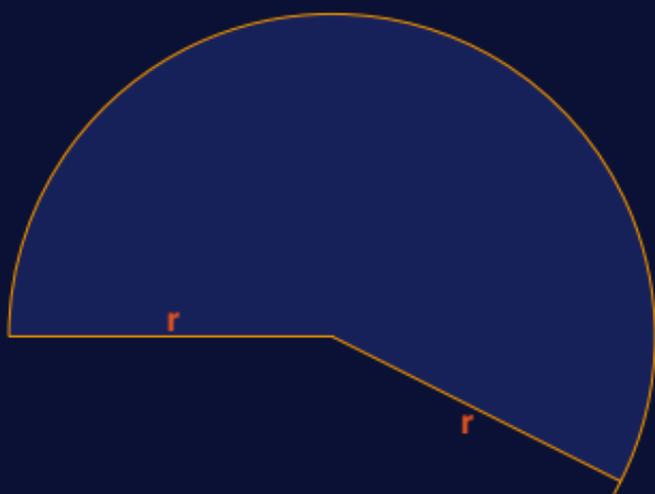


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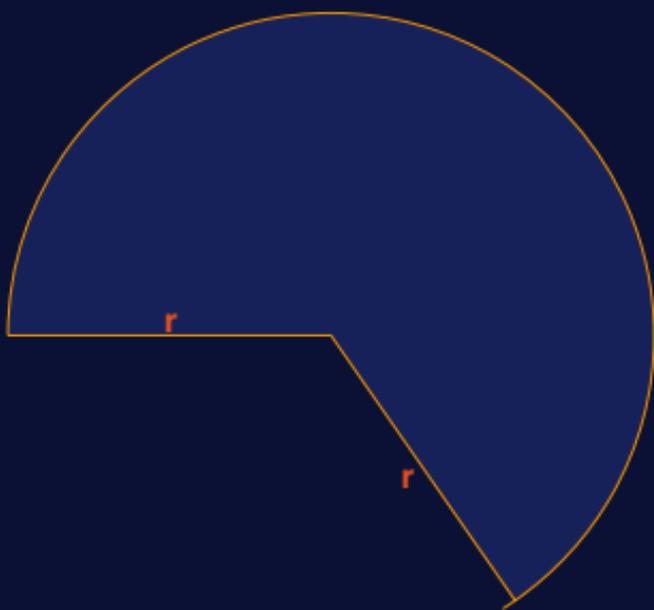


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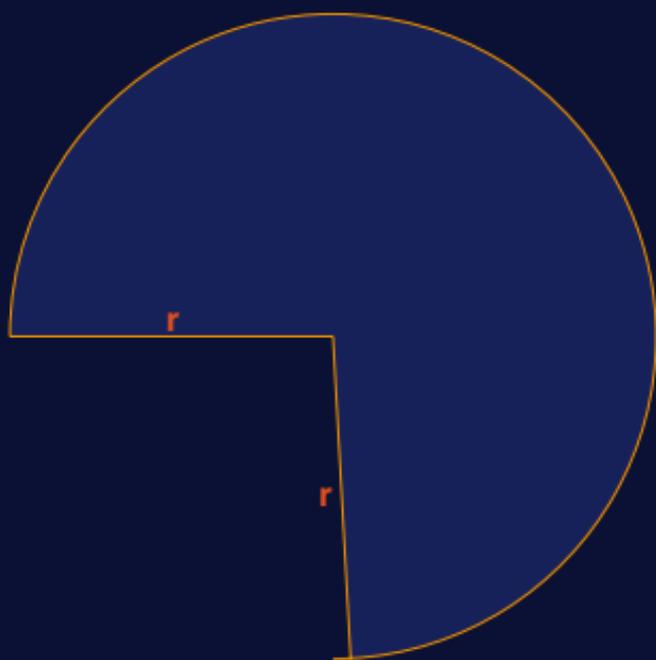


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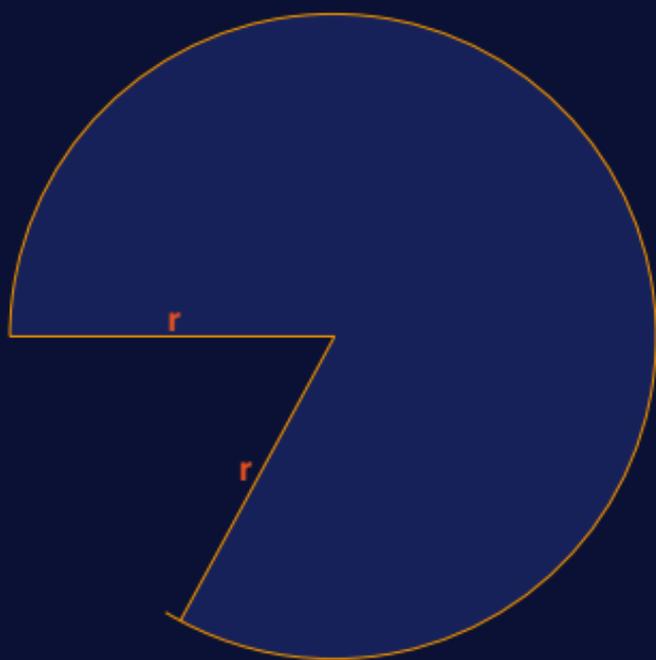


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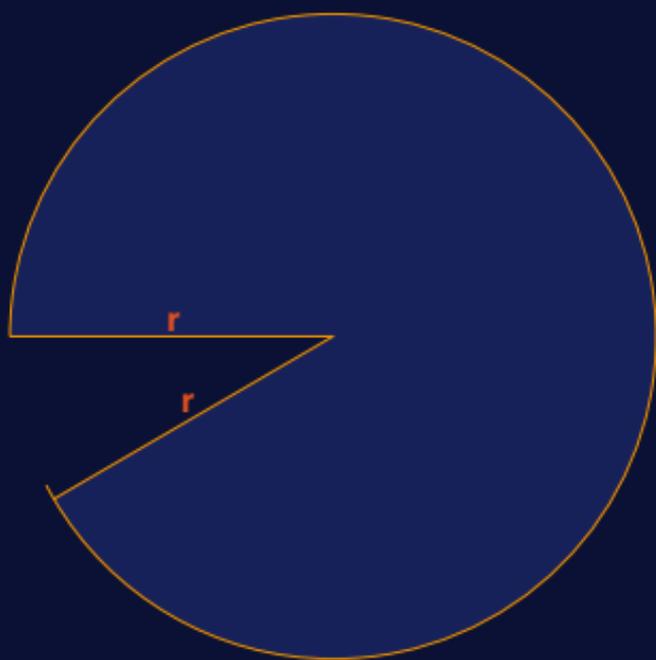


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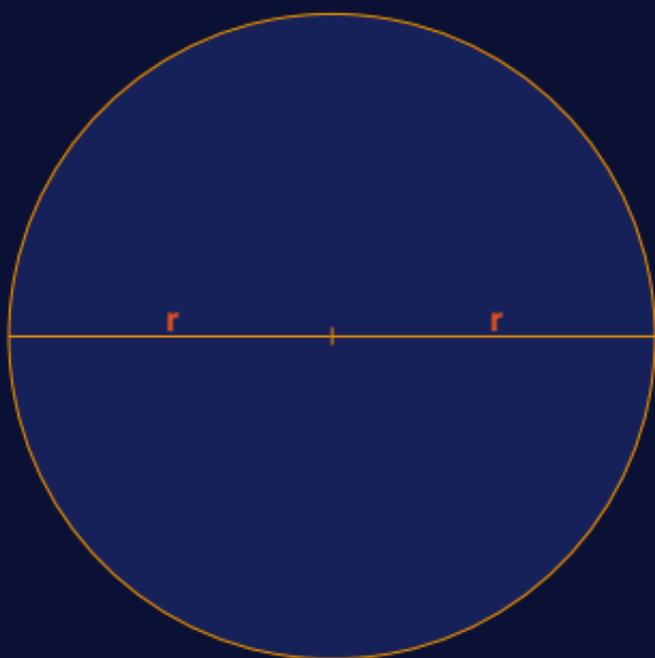


## Der Thaleskreis



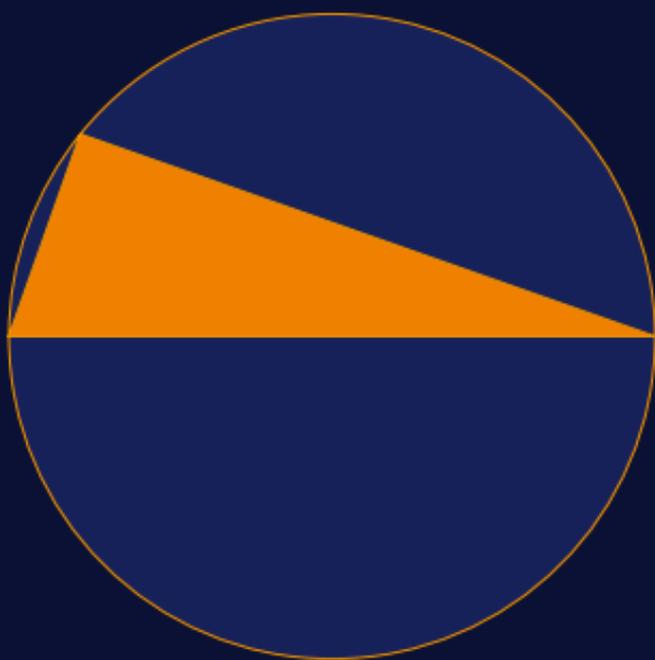


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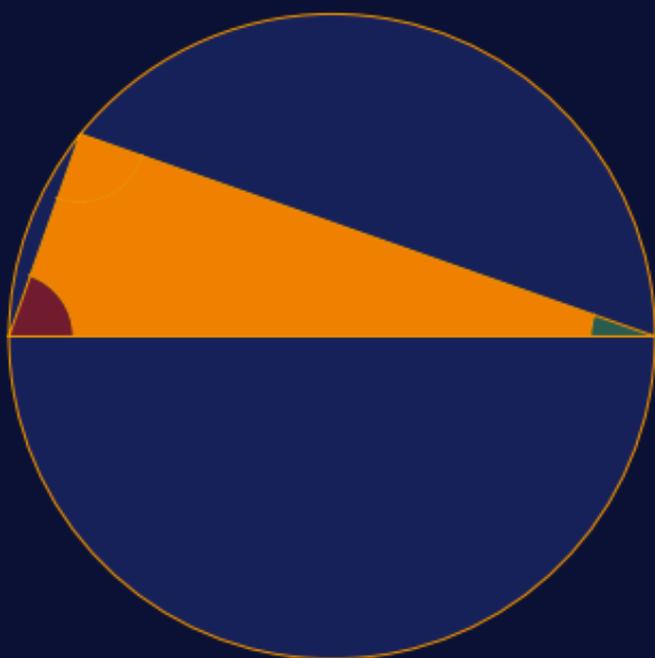


## Der Thaleskreis





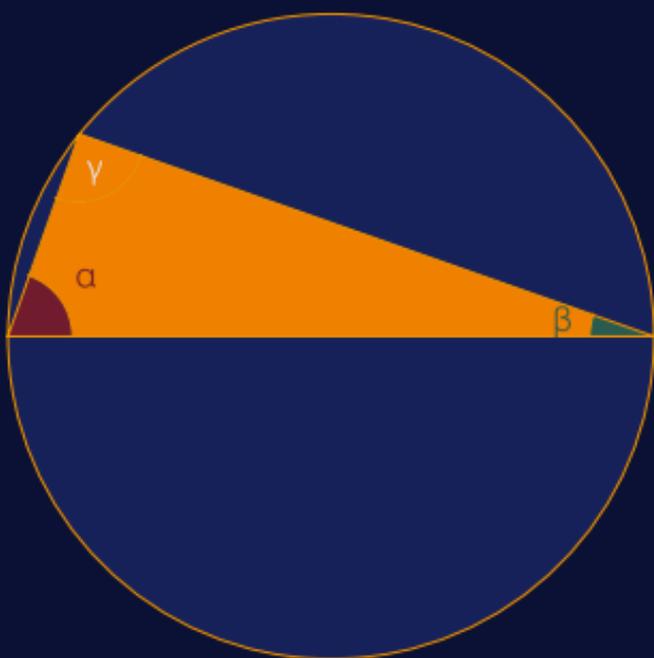
## Der Thaleskreis





## Der Thaleskreis

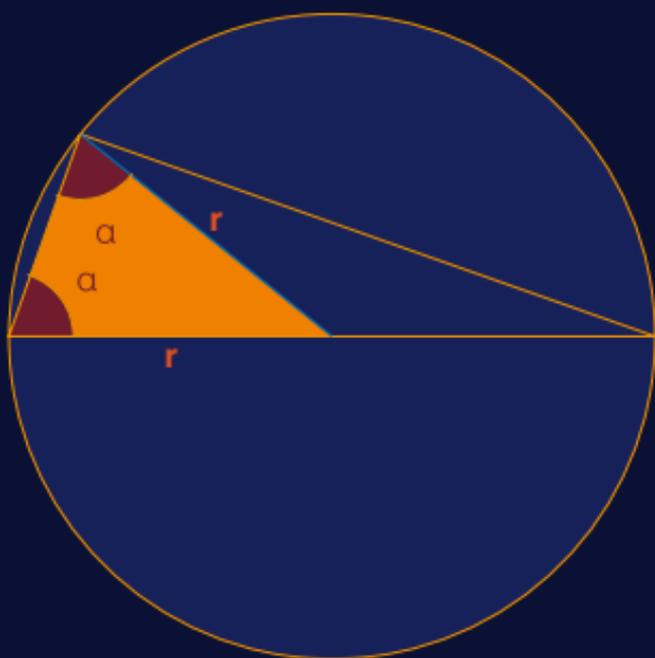
$$\alpha + \beta + \gamma = 180^\circ$$





## Der Thaleskreis

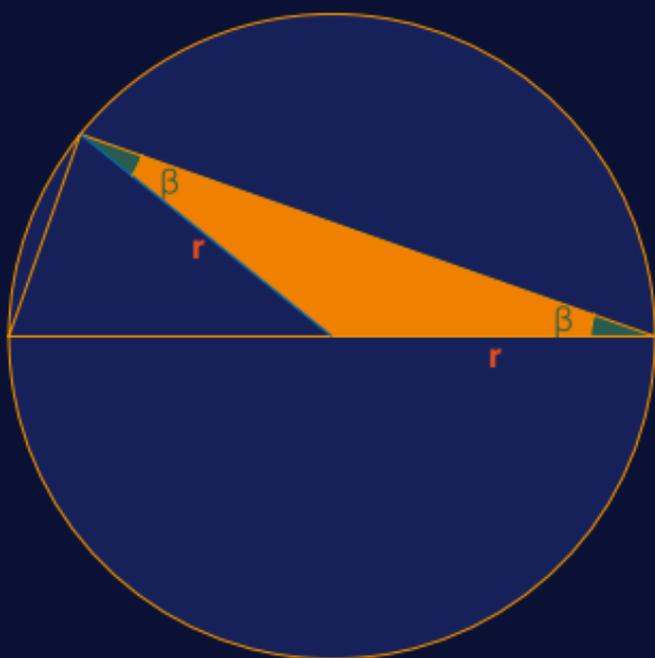
$$\alpha = \alpha$$





## Der Thaleskreis

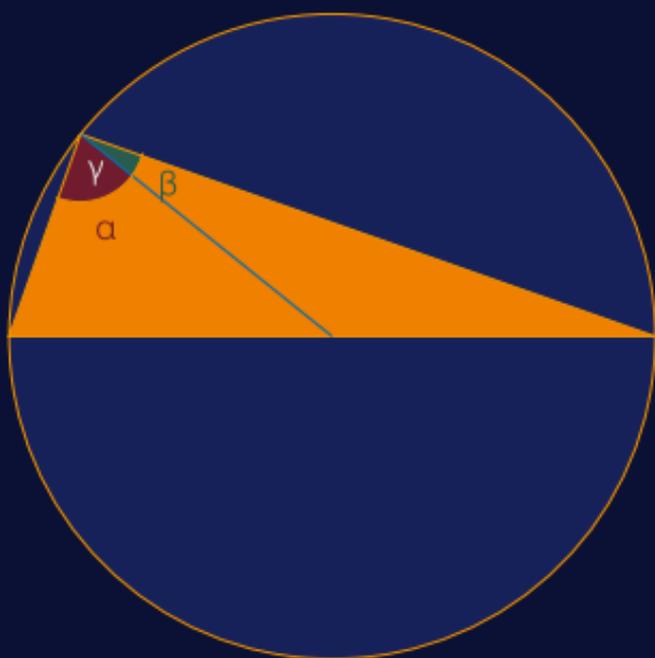
$$\beta = \beta$$





## Der Thaleskreis

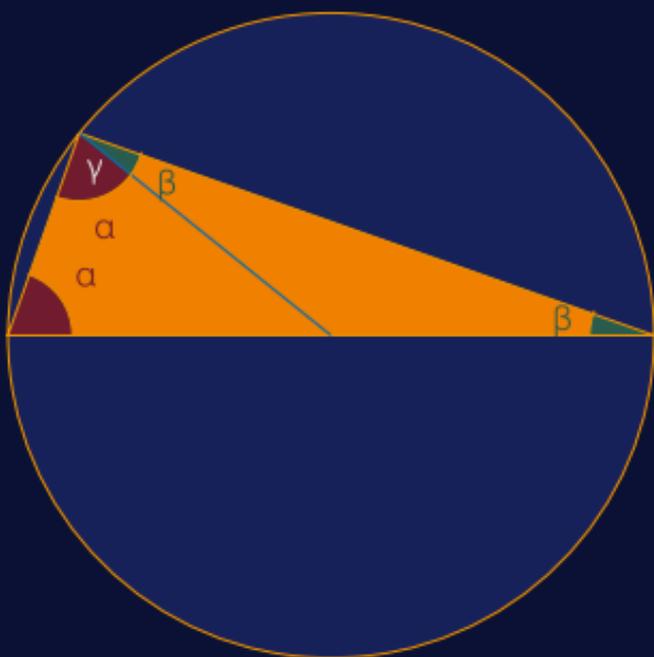
$$\alpha + \beta = \gamma$$





## Der Thaleskreis

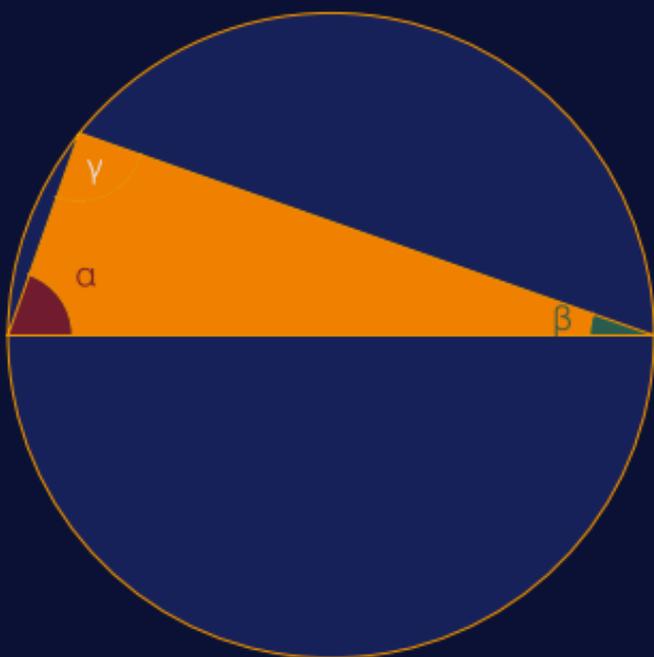
$$\alpha + \beta + \alpha + \beta = 180^\circ$$
$$\alpha + \beta = \gamma = 90^\circ$$





## Der Thaleskreis

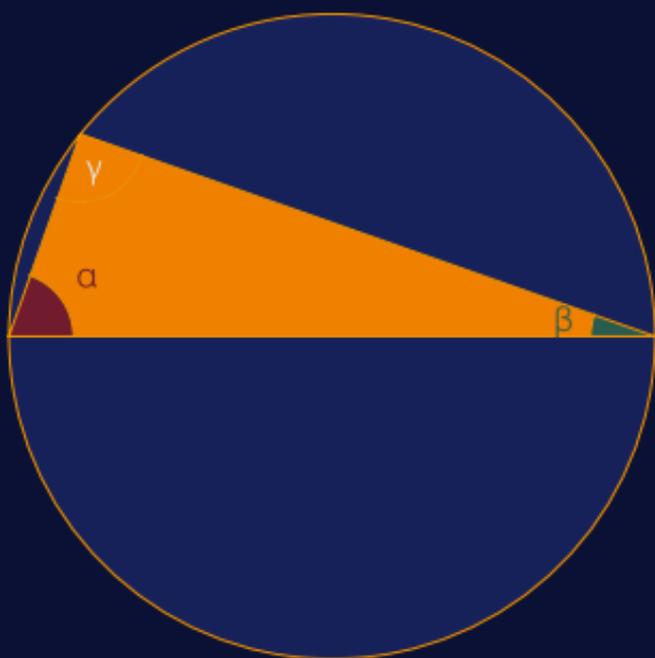
$$\alpha + \beta = \gamma = 90^\circ$$





## Der Thaleskreis

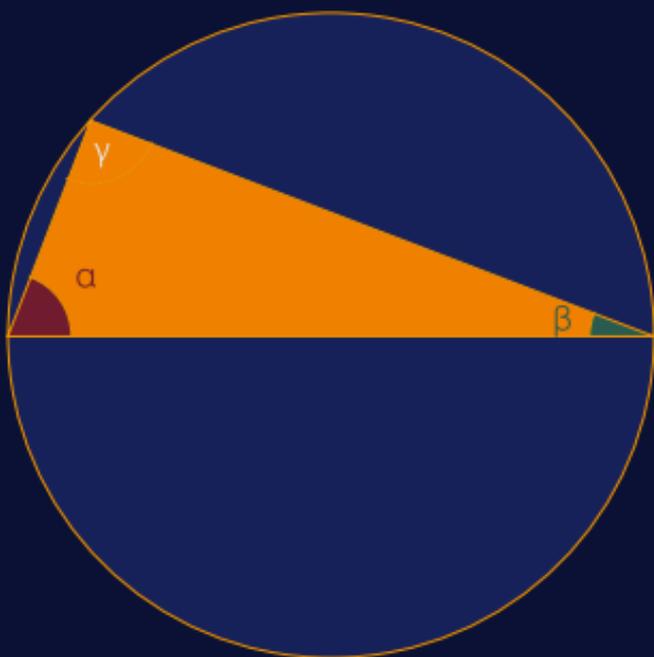
$$\gamma = 90^\circ$$





## Der Thaleskreis

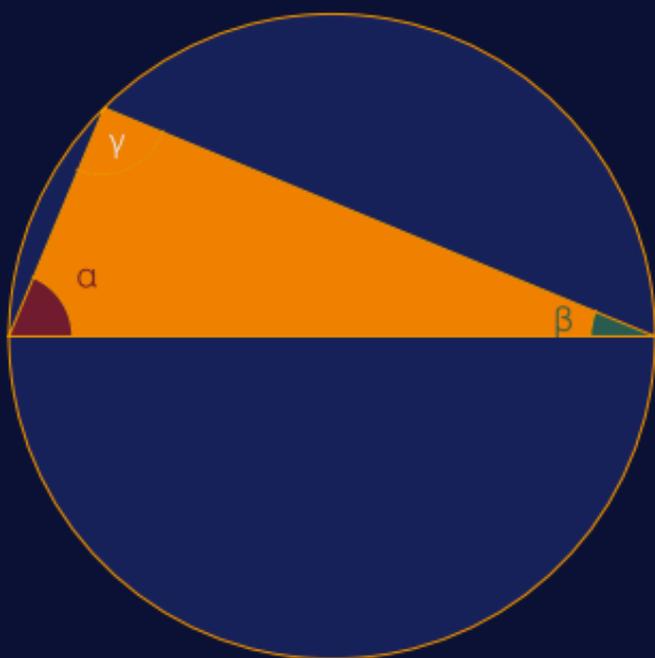
$$\gamma = 90^\circ$$





## Der Thaleskreis

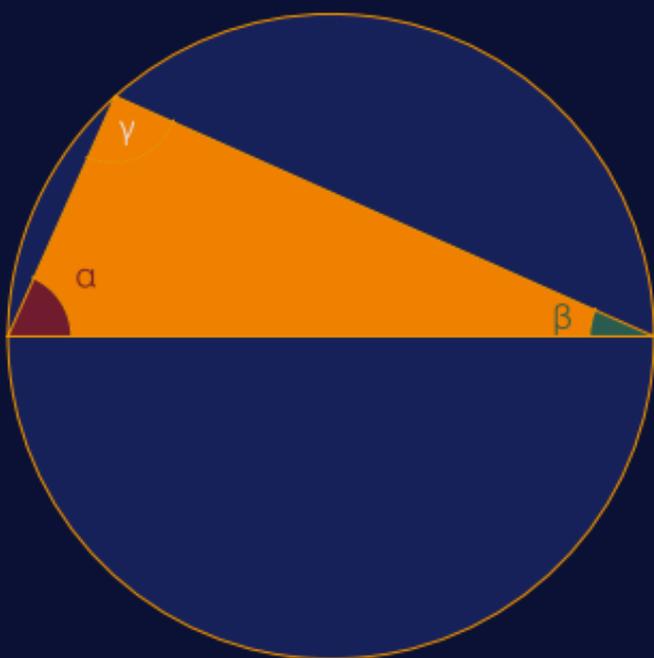
$$\gamma = 90^\circ$$





## Der Thaleskreis

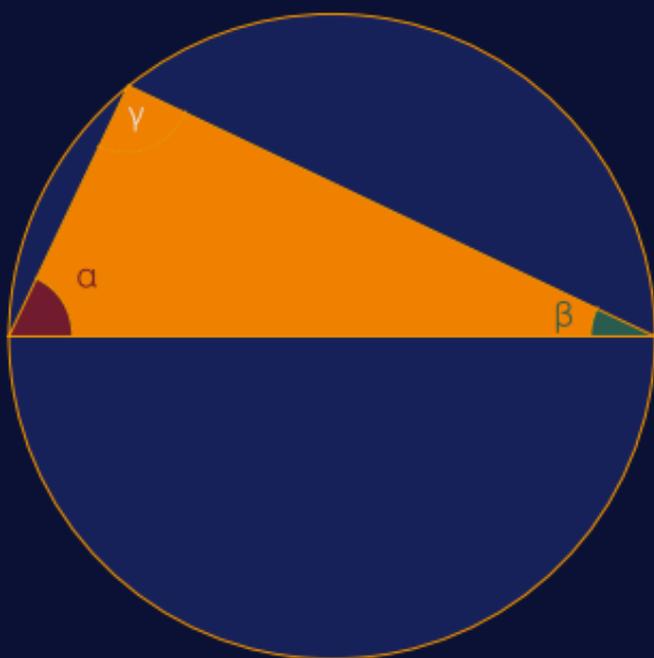
$$\gamma = 90^\circ$$





## Der Thaleskreis

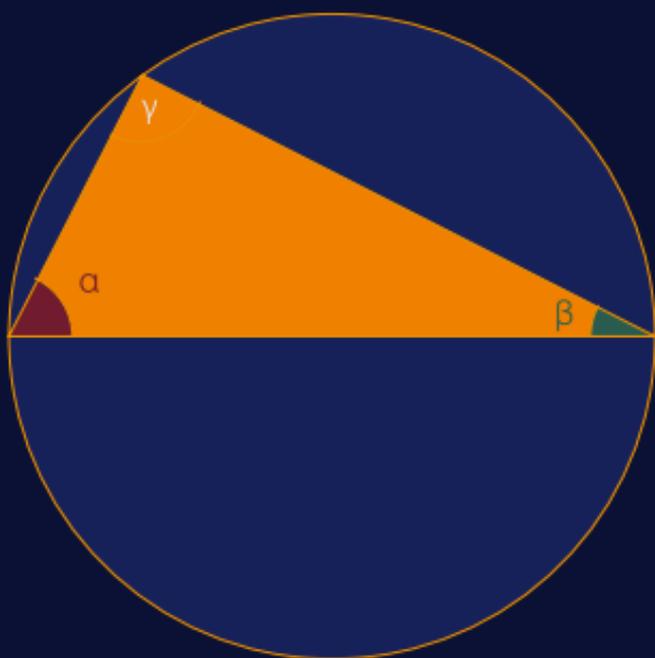
$$\gamma = 90^\circ$$





## Der Thaleskreis

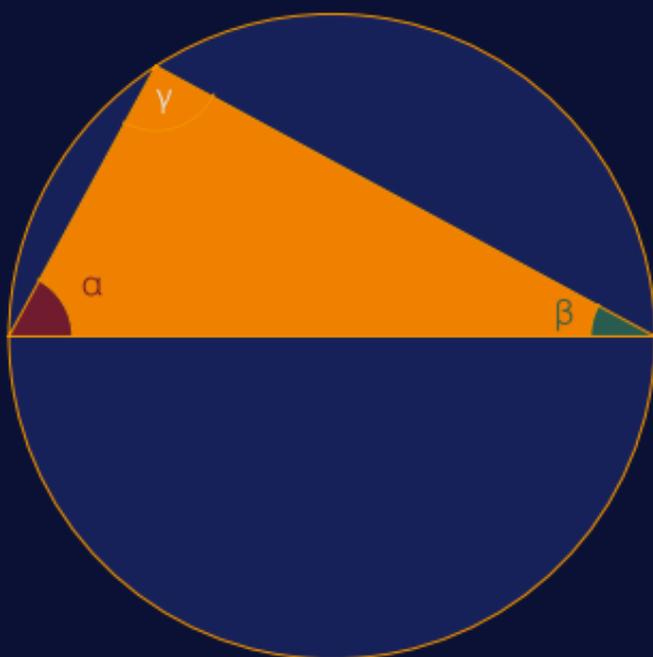
$$\gamma = 90^\circ$$





## Der Thaleskreis

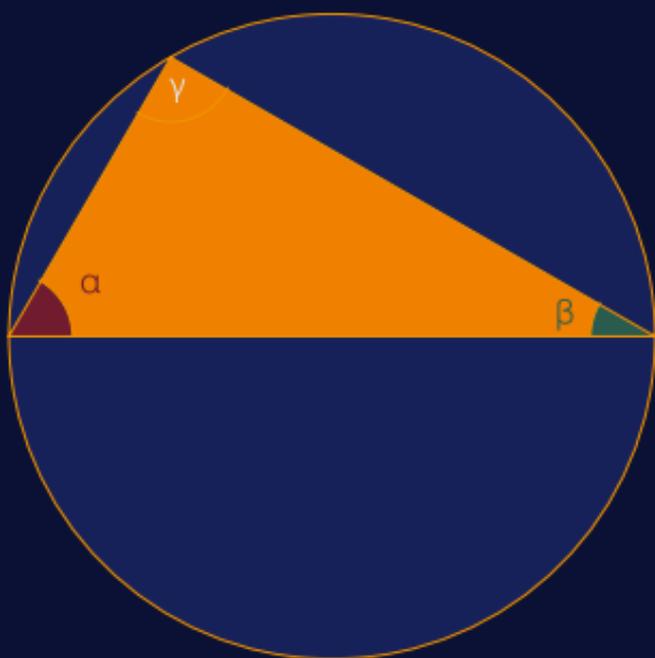
$$\gamma = 90^\circ$$





## Der Thaleskreis

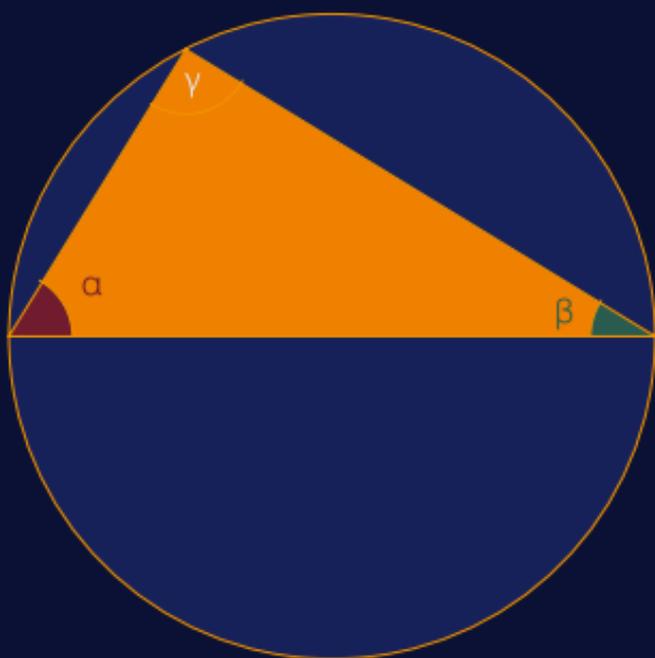
$$\gamma = 90^\circ$$





## Der Thaleskreis

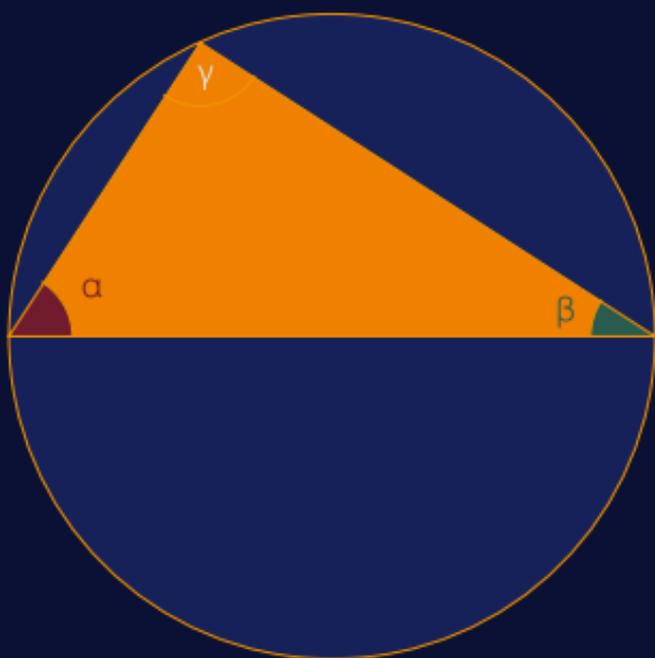
$$\gamma = 90^\circ$$





## Der Thaleskreis

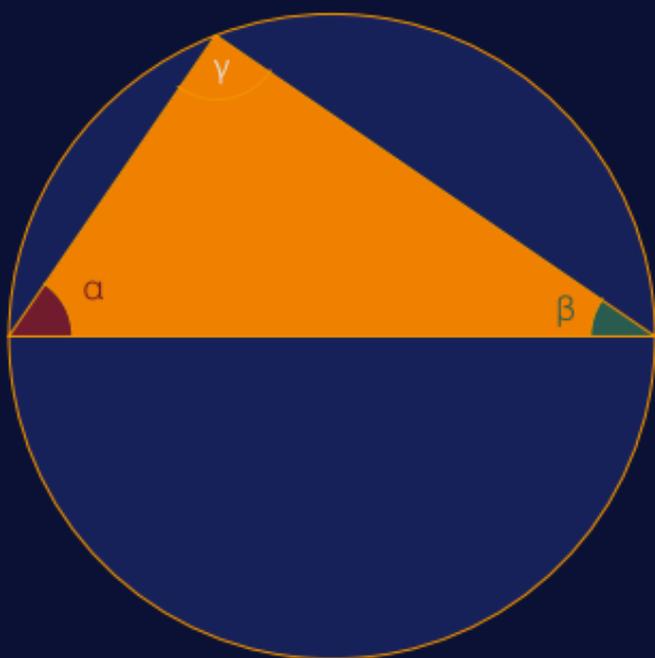
$$\gamma = 90^\circ$$





## Der Thaleskreis

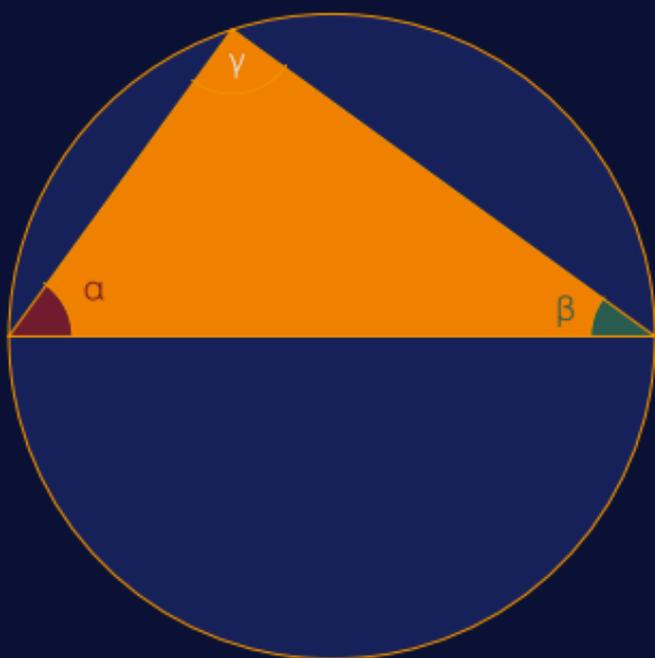
$$\gamma = 90^\circ$$





## Der Thaleskreis

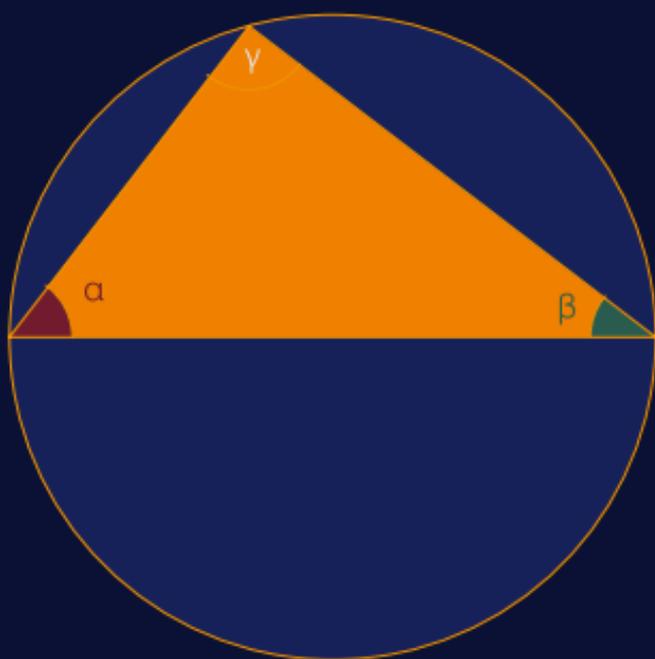
$$\gamma = 90^\circ$$





## Der Thaleskreis

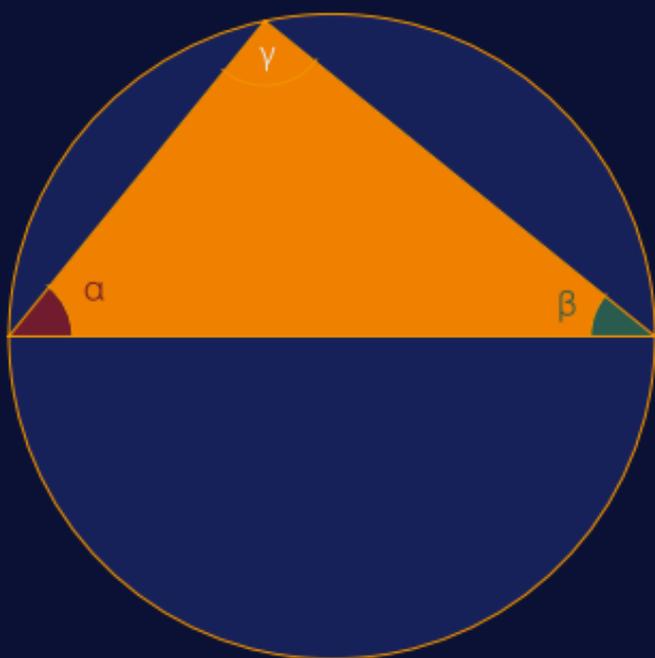
$$\gamma = 90^\circ$$





## Der Thaleskreis

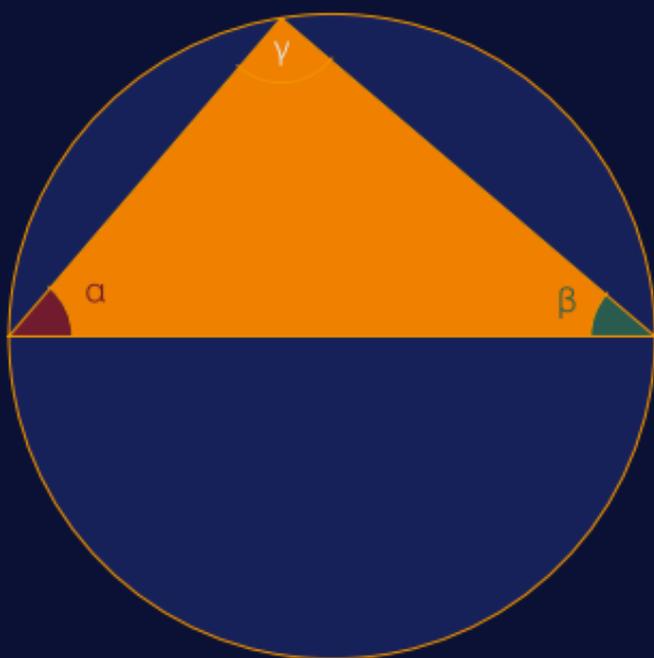
$$\gamma = 90^\circ$$





## Der Thaleskreis

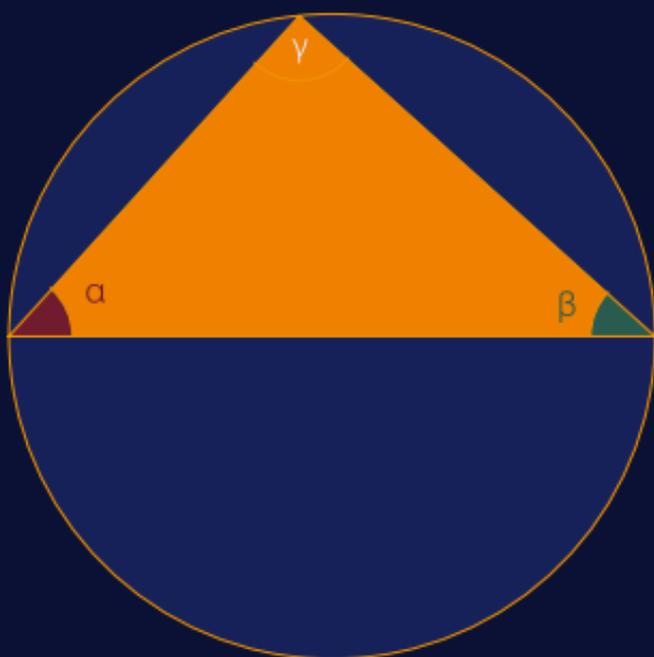
$$\gamma = 90^\circ$$





## Der Thaleskreis

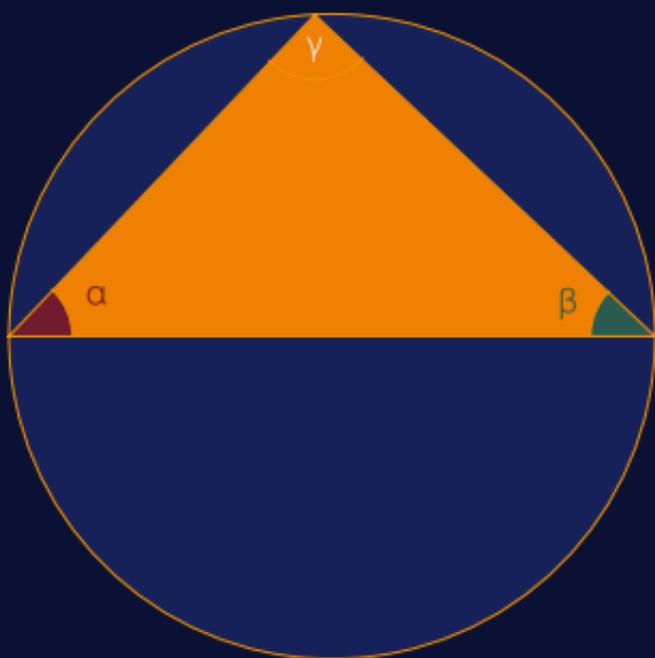
$$\gamma = 90^\circ$$





## Der Thaleskreis

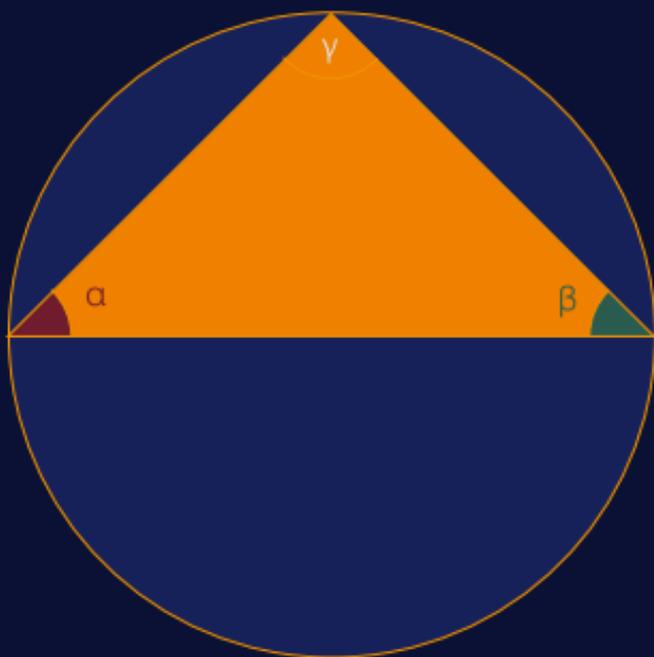
$$\gamma = 90^\circ$$





## Der Thaleskreis

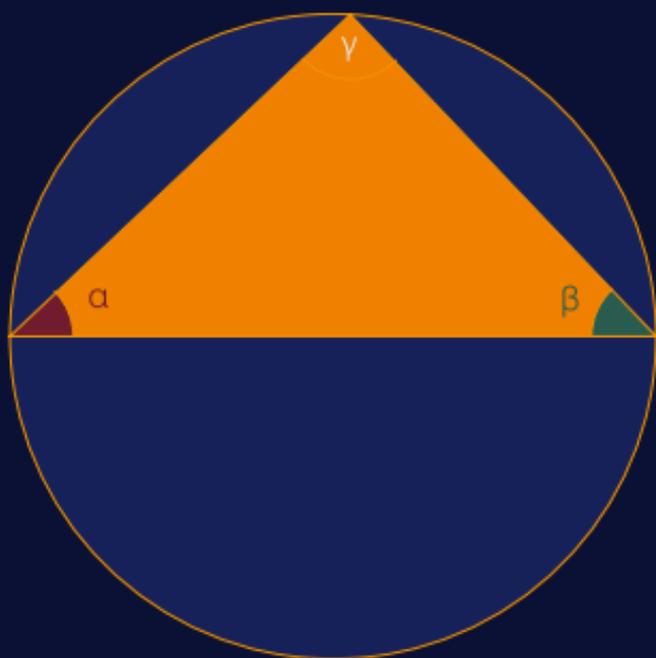
$$\gamma = 90^\circ$$





## Der Thaleskreis

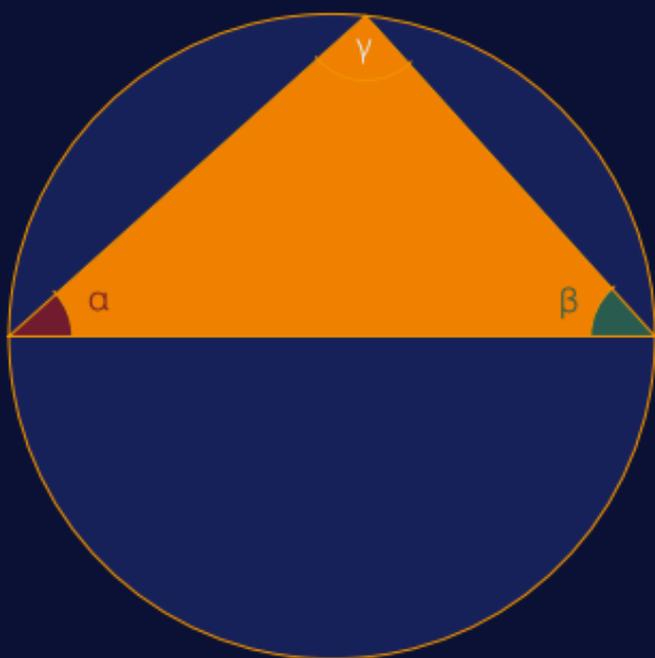
$$\gamma = 90^\circ$$





## Der Thaleskreis

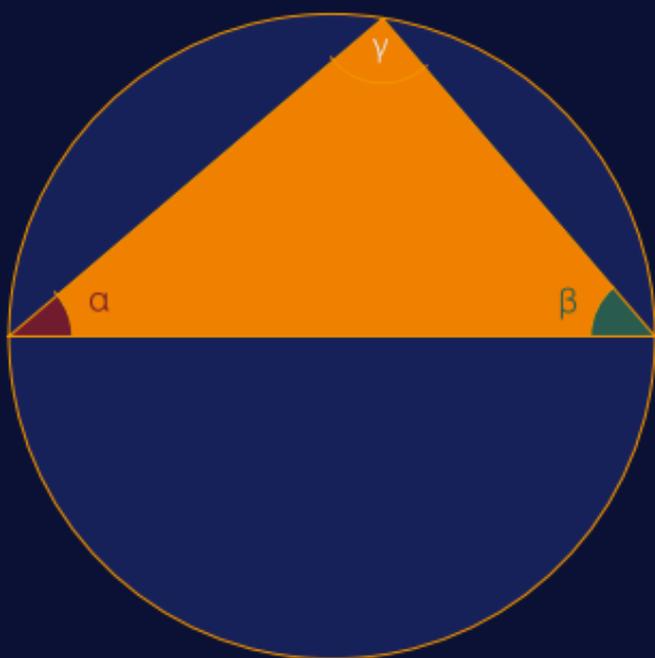
$$\gamma = 90^\circ$$





## Der Thaleskreis

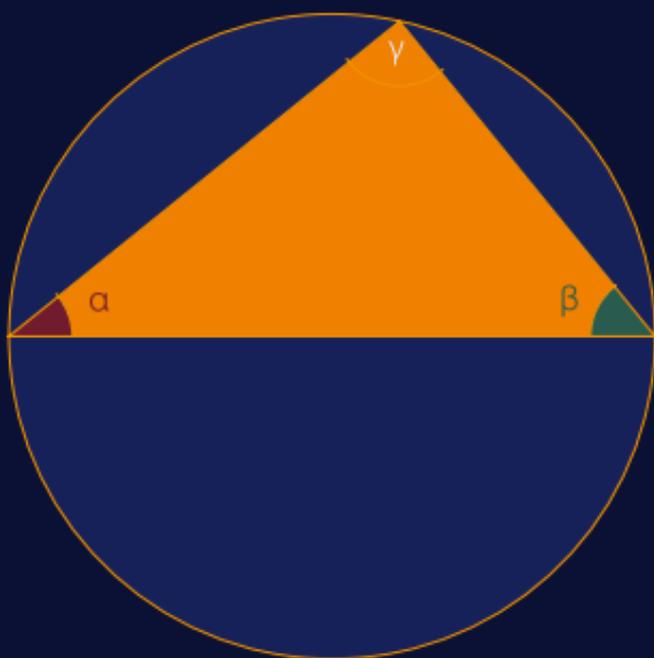
$$\gamma = 90^\circ$$





## Der Thaleskreis

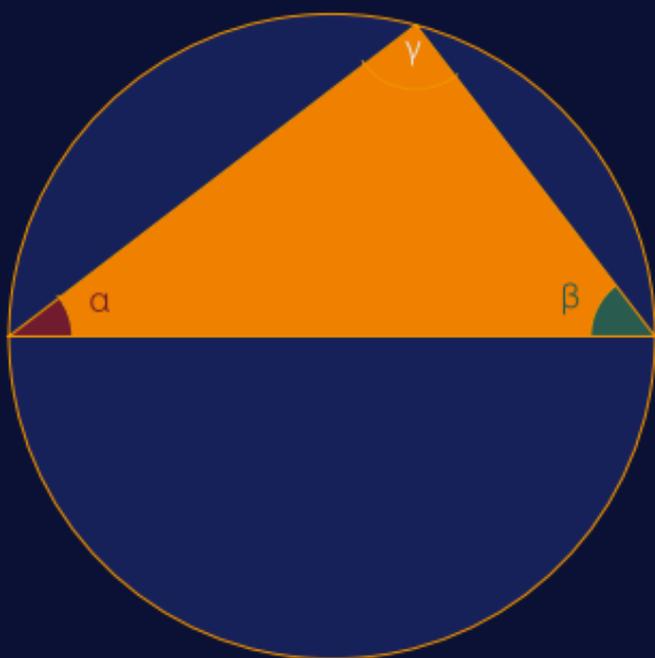
$$\gamma = 90^\circ$$





## Der Thaleskreis

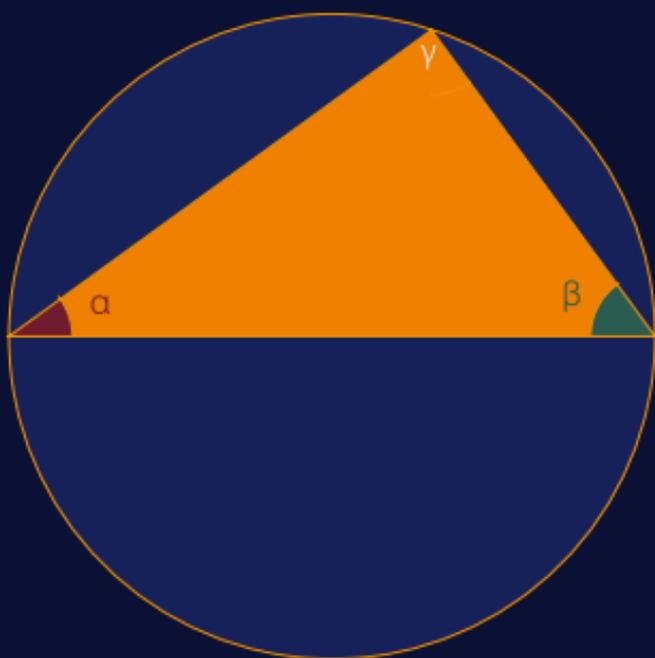
$$\gamma = 90^\circ$$





## Der Thaleskreis

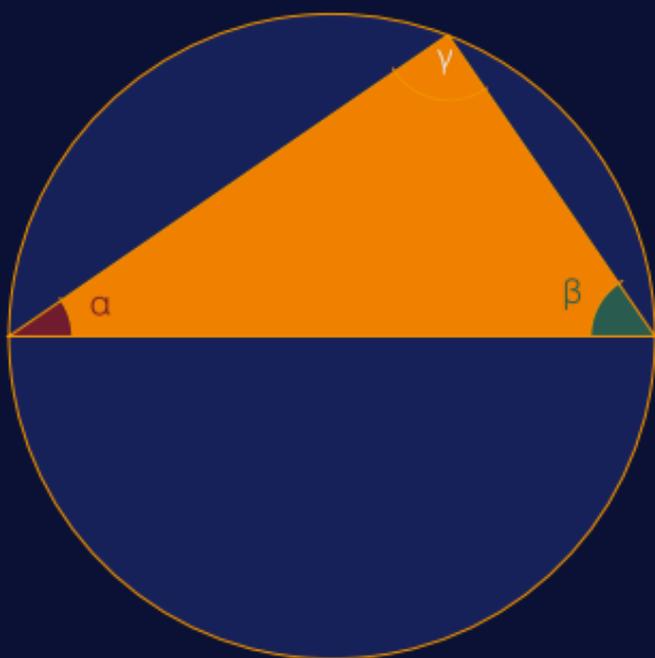
$$\gamma = 90^\circ$$





## Der Thaleskreis

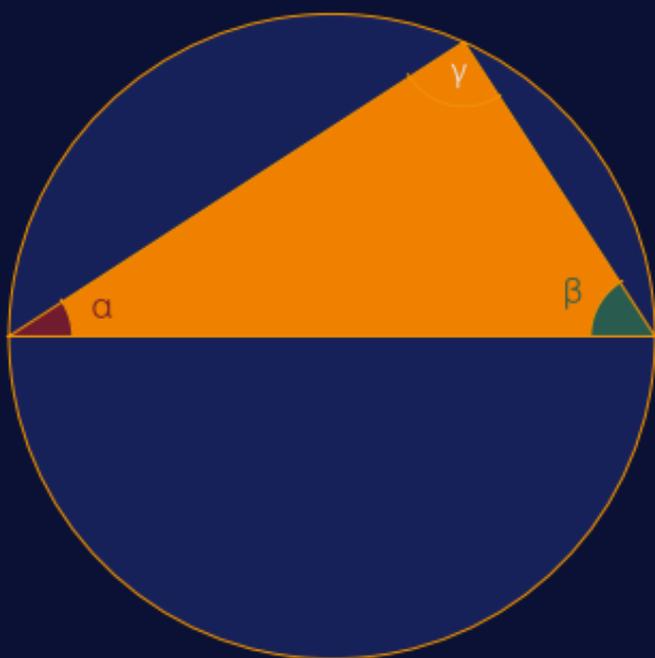
$$\gamma = 90^\circ$$





## Der Thaleskreis

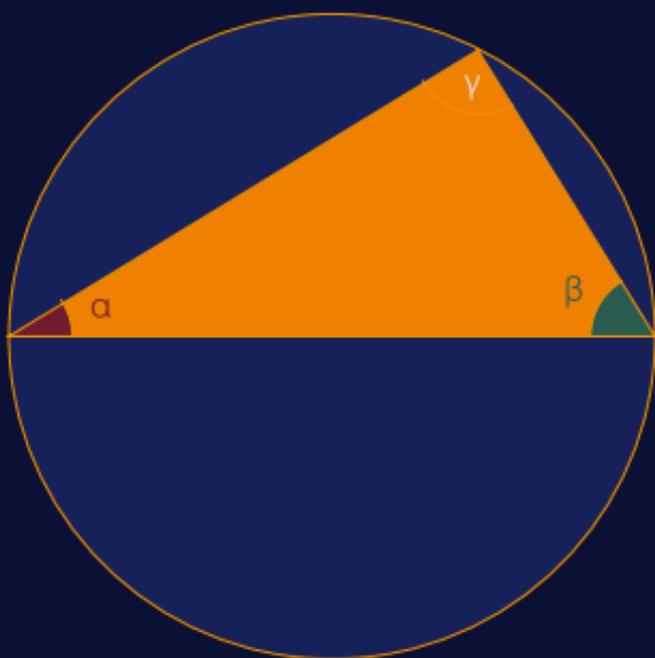
$$\gamma = 90^\circ$$





## Der Thaleskreis

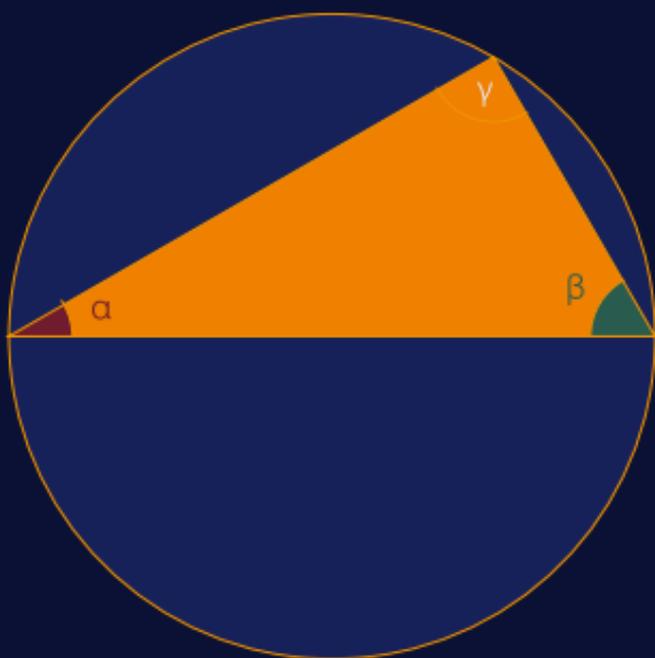
$$\gamma = 90^\circ$$





## Der Thaleskreis

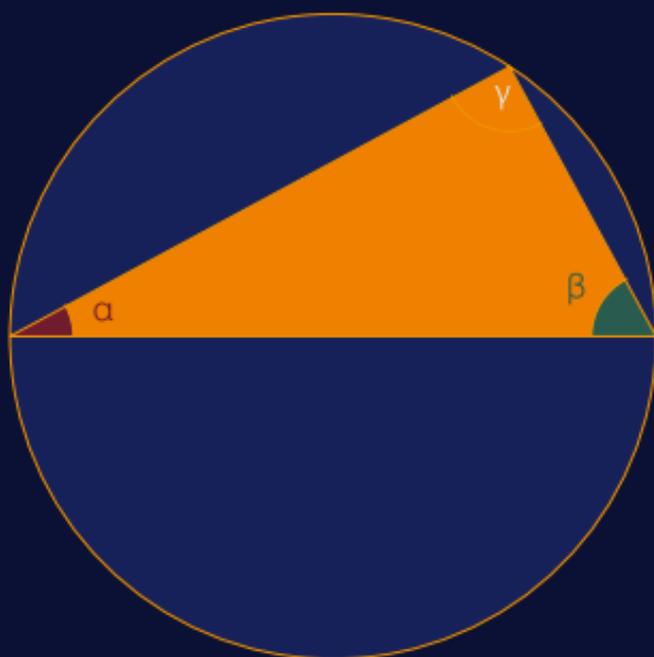
$$\gamma = 90^\circ$$





## Der Thaleskreis

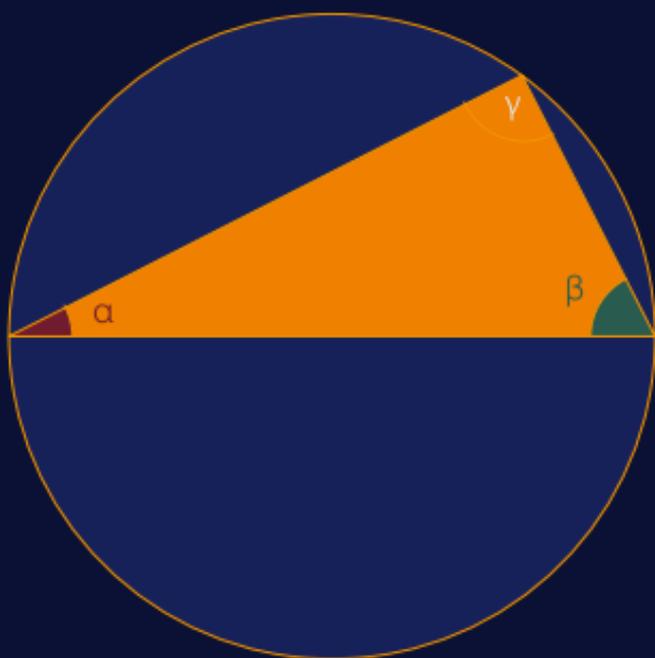
$$\gamma = 90^\circ$$





## Der Thaleskreis

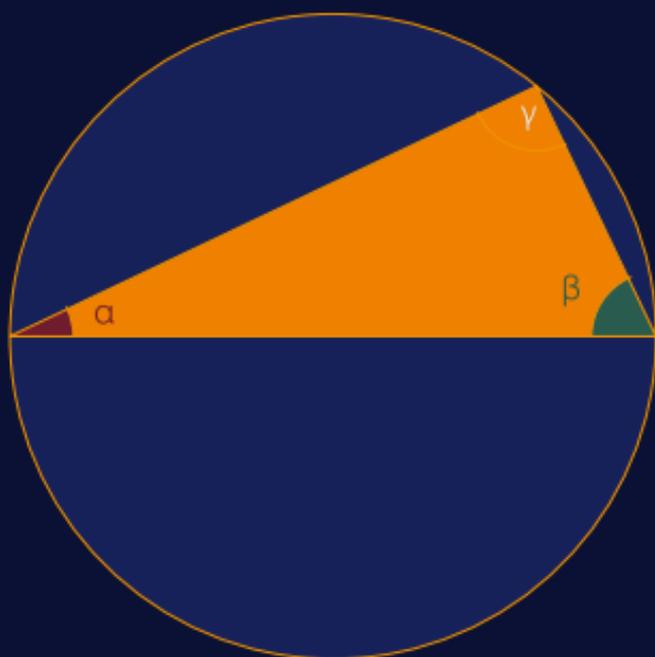
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## Der Thaleskreis

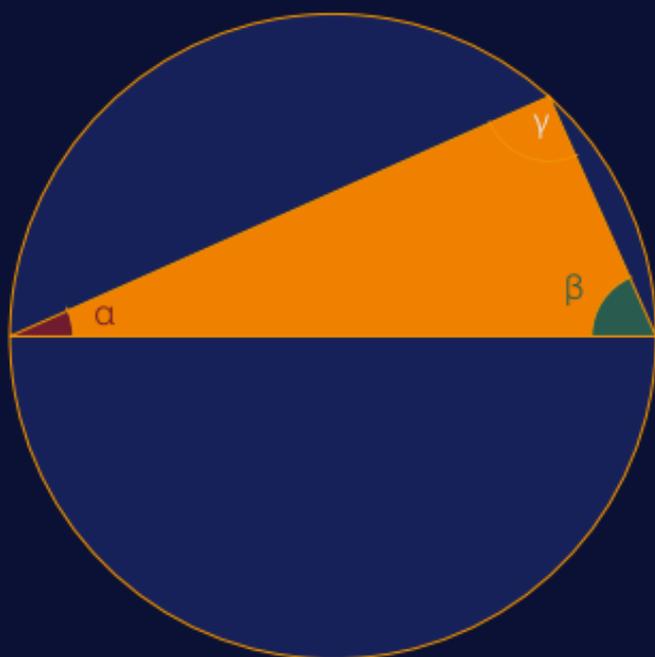
$$\gamma = 90^\circ$$





## Der Thaleskreis

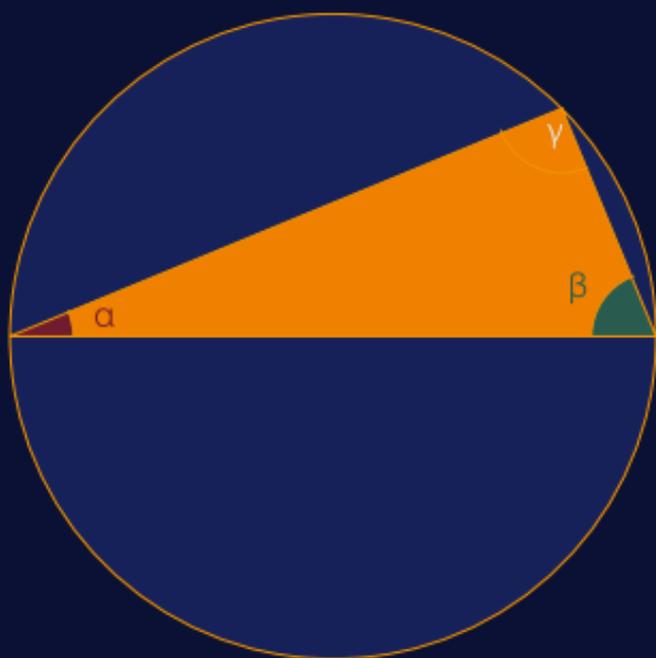
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## Der Thaleskreis

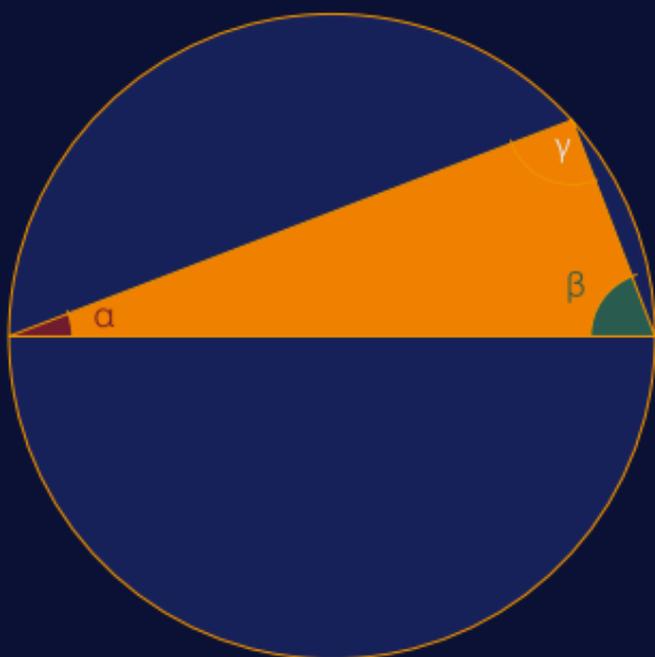
$$\gamma = 90^\circ$$





## Der Thaleskreis

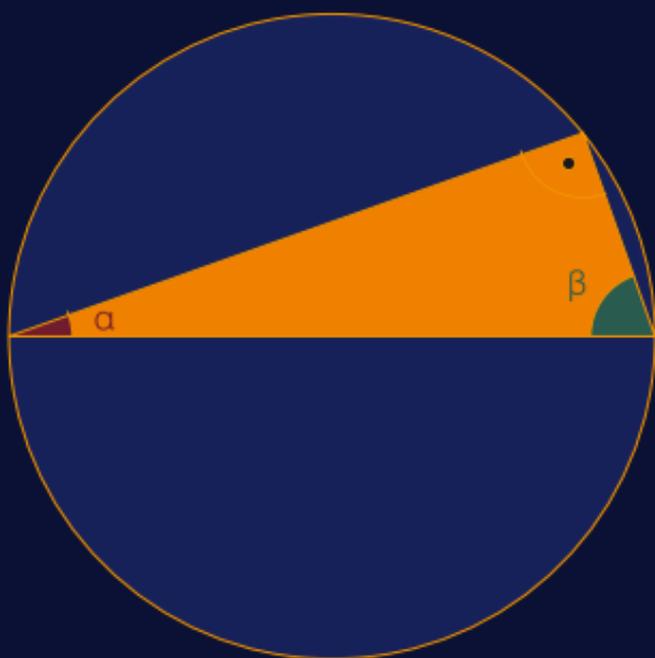
$$\gamma = 90^\circ$$





## Der Thaleskreis

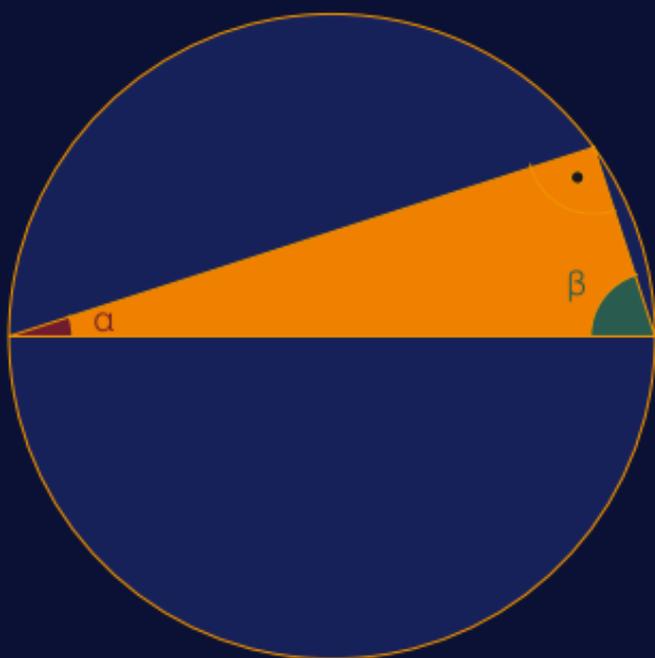
$$\gamma = 90^\circ$$





## Der Thaleskreis

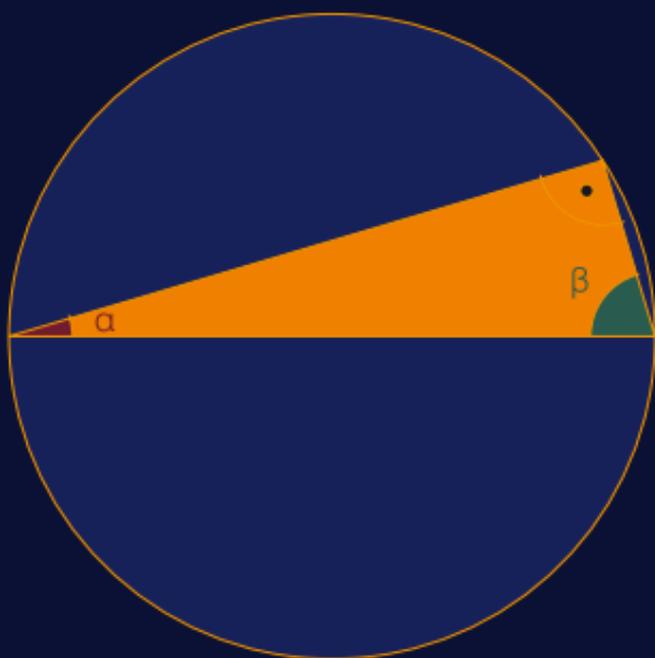
$$\gamma = 90^\circ$$





## Der Thaleskreis

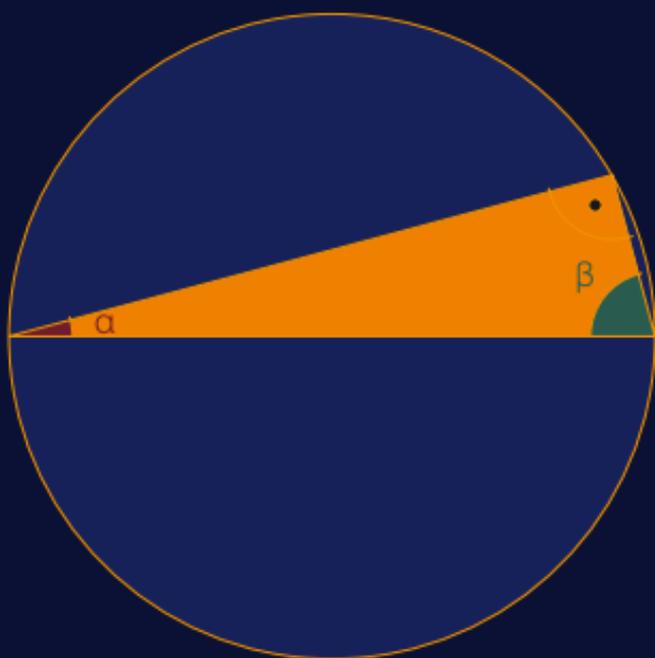
$$\gamma = 90^\circ$$





## Der Thaleskreis

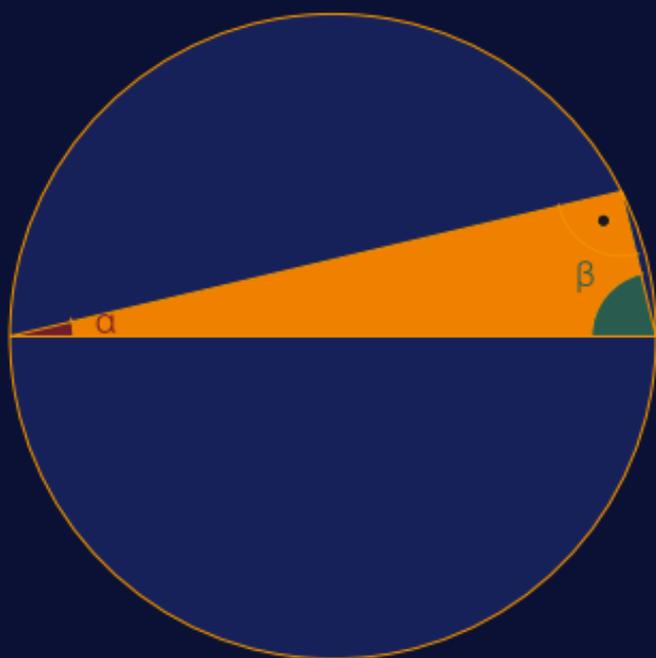
$$\gamma = 90^\circ$$





## Der Thaleskreis

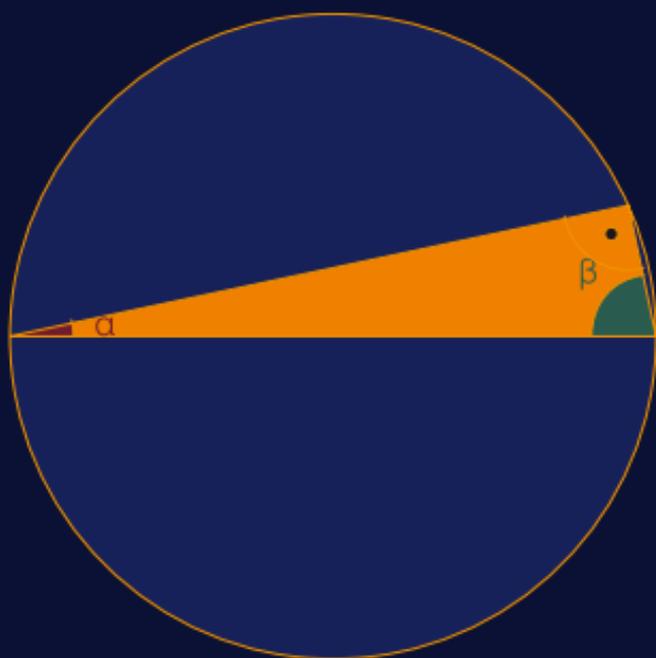
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## Der Thaleskreis

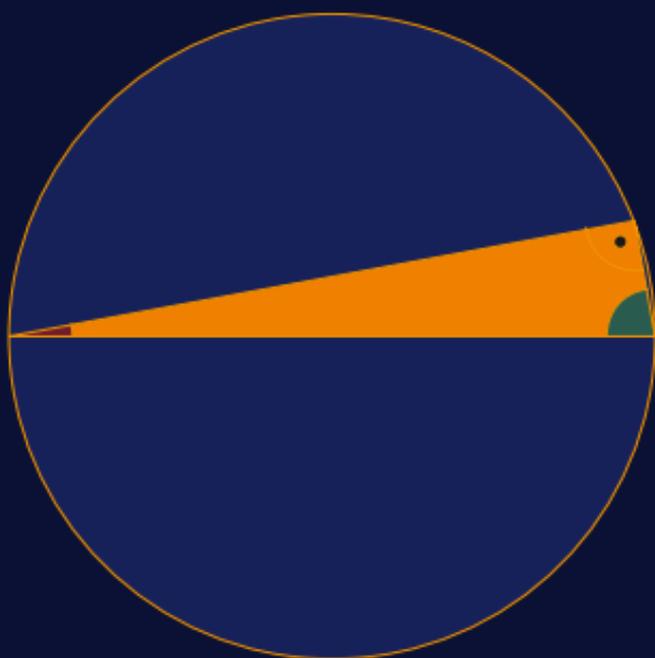
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## Der Thaleskreis

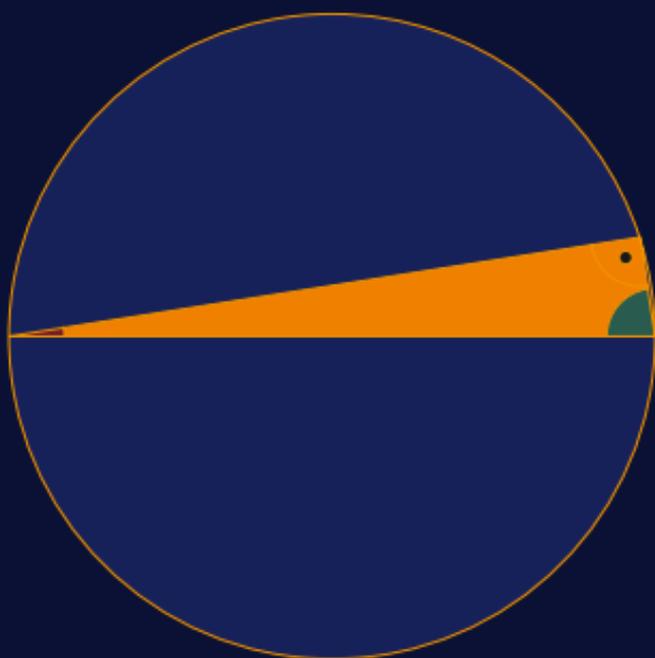
$$\gamma = 90^\circ$$





## Der Thaleskreis

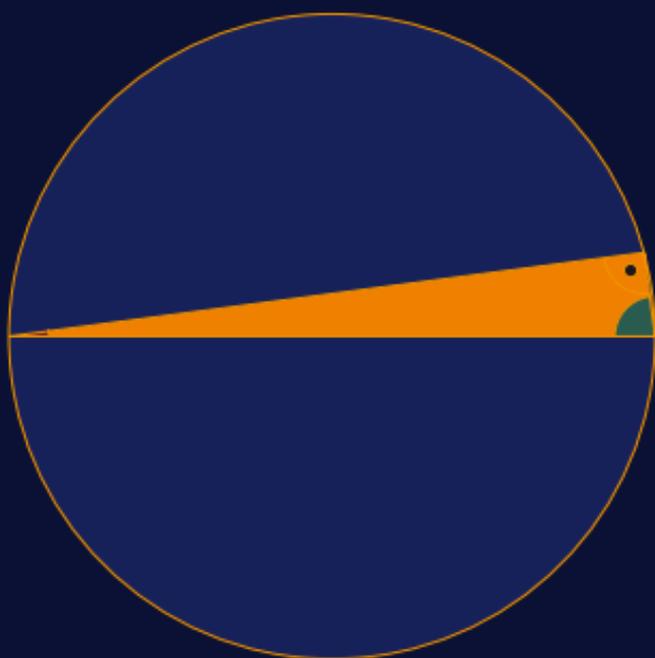
$$\gamma = 90^\circ$$





## Der Thaleskreis

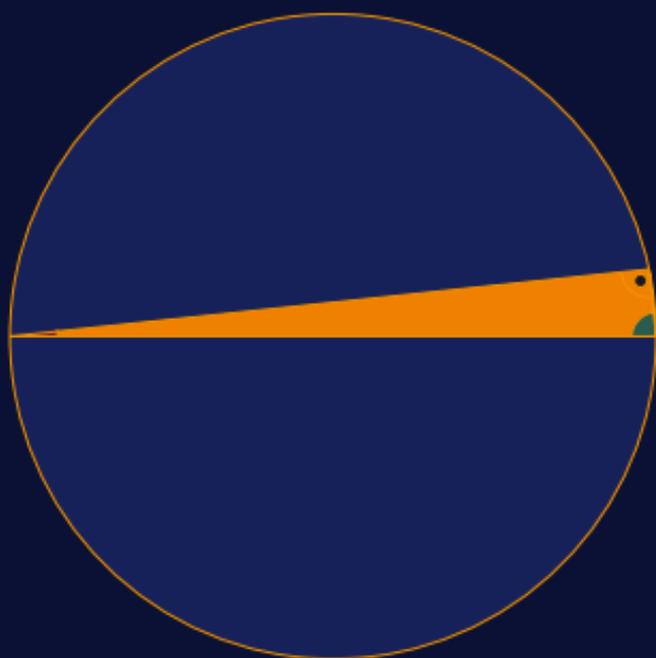
$$\gamma = 90^\circ$$





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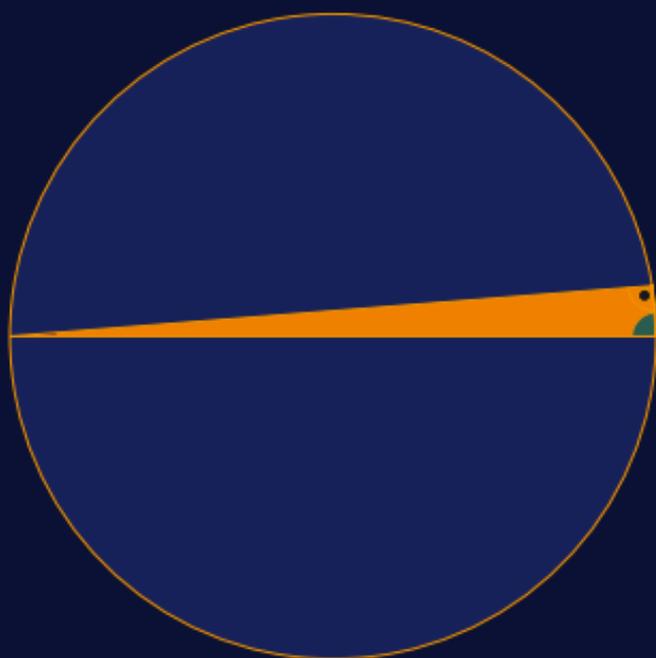
$$\gamma = 90^\circ$$





## Der Thaleskreis

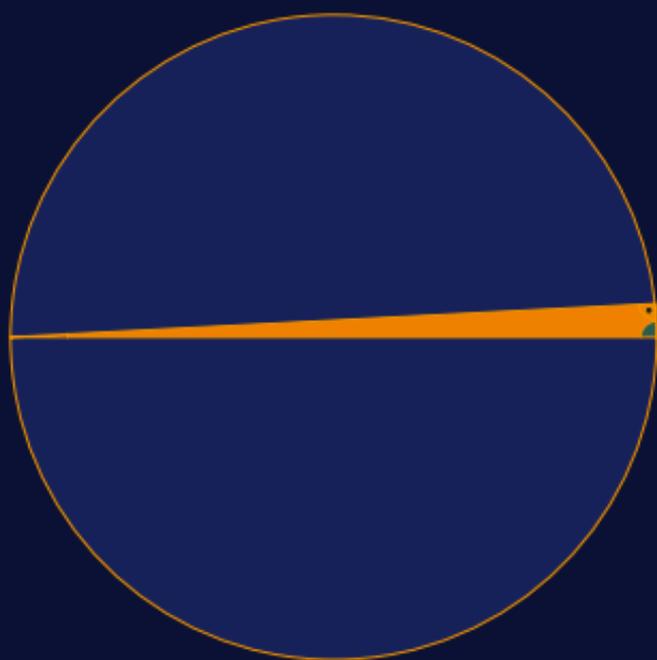
$$\gamma = 90^\circ$$





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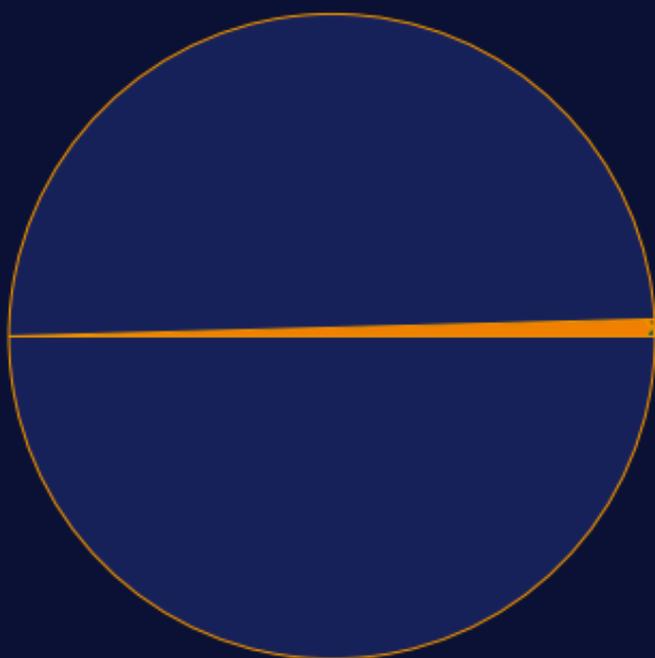
$$\gamma = 90^\circ$$





## Der Thaleskreis

$$\gamma = 90^\circ$$





Alle Winkel  
am Halbkreisbogen  
sind rechte Winkel.

# Mathematik?

## Spiel!

### realisierte Daumenkinos

- Scheitel-, Neben-, Wechsel-, Stufen-, Basiswinkel
- Winkelsumme im Dreieck
- Thaleskreis (Euklid, Elemente, Buch III)
- Pythagoras, Zerlegung (Euklid, Elemente, Buch I)
- Kathetensatz (Euklid, Elemente, Buch I)
- Höhensatz (Euklid, Elemente, Buch VI u. Buch II)
- Schnitte durch den Würfel
- Verfolgungskurve
- Mönchchen des Hippokrates von Chios
- Ellipse im Kreis
- $(a + b + c + \dots)^2$
- Hinged Tessellation

### Daumenkinos in Planung

- Ellipse, Parabel, Hyperbel
- Hexe der Agnesi
- Satz von Morley
- Sinus
- Satz von Ceva
- Dreiecksgeometrie, Eulergerade
- von der Sekante zur Tangente
- Riemannsches Integral
- Flächenverwandlung
- Sprachspiele
- von 0 bis 100
- ...