

Relationship between different Geometric Figures in Geogebra

Talk to a Teacher

<http://spoken-tutorial.org>

National Mission on Education through ICT

<http://www.sakshat.ac.in>

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Note



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Note

- This tutorial is not to replace the actual compass box



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Note

- ▶ This tutorial is not to replace the actual compass box
- ▶ Construction in GeoGebra is done with a view to understand the properties



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Learning Objectives

- We will learn to construct:



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Learning Objectives

- ▶ **We will learn to construct:**
 - ▶ **Cyclic Quadrilateral**



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Learning Objectives

- ▶ **We will learn to construct:**
 - ▶ **Cyclic Quadrilateral**
 - ▶ **In-circle**



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System Requirement

- ▶ Linux operating system



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System Requirement

- ▶ **Linux operating system**
 - ▶ **Ubuntu Version 10.04 LTS**



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System Requirement

- ▶ **Linux operating system**
 - ▶ **Ubuntu Version 10.04 LTS**
 - ▶ **Geogebra Version 3.2.40.0**



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GeoGebra Tools used



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GeoGebra Tools used

- **compass**



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GeoGebra Tools used

- ▶ **compass**
- ▶ **segment between two points**



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GeoGebra Tools used

- ▶ **compass**
- ▶ **segment between two points**
- ▶ **circle with center through point**



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GeoGebra Tools used

- ▶ **compass**
- ▶ **segment between two points**
- ▶ **circle with center through point**
- ▶ **polygon**



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GeoGebra Tools used

- ▶ **compass**
- ▶ **segment between two points**
- ▶ **circle with center through point**
- ▶ **polygon**
- ▶ **perpendicular bisector**



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GeoGebra Tools used

- ▶ **compass**
- ▶ **segment between two points**
- ▶ **circle with center through point**
- ▶ **polygon**
- ▶ **perpendicular bisector**
- ▶ **angle bisector**



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GeoGebra Tools used

- ▶ compass
- ▶ segment between two points
- ▶ circle with center through point
- ▶ polygon
- ▶ perpendicular bisector
- ▶ angle bisector
- ▶ angle



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Summary

In this tutorial we have learnt



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Summary

In this tutorial we have learnt

- cyclic quadrilateral and



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Summary

In this tutorial we have learnt

- ▶ **cyclic quadrilateral and**
- ▶ **Incircle**



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Assignment



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Assignment

- ▶ Draw triangle ABC. Mark a point D on BC. Join AD



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Assignment

- ▶ Draw triangle ABC. Mark a point D on BC. Join AD
- ▶ Draw in-circles for triangles ABC, ABD and CBD of radii r, r_1, r_2



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Assignment

- ▶ Draw triangle ABC. Mark a point D on BC. Join AD
- ▶ Draw in-circles for triangles ABC, ABD and CBD of radii r, r_1, r_2
- ▶ BE is the height h



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Assignment

- ▶ Draw triangle ABC. Mark a point D on BC. Join AD
- ▶ Draw in-circles for triangles ABC, ABD and CBD of radii r, r_1, r_2
- ▶ BE is the height h
- ▶ Verify the relation



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Assignment

- ▶ Draw triangle ABC. Mark a point D on BC. Join AD
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- ▶ BE is the height h
- ▶ Verify the relation
- ▶ $(1-2r_1/h)(1-2r_2/h) = (1-2r/h)$



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Assignment

- ▶ Draw triangle ABC. Mark a point D on BC. Join AD
- ▶ Draw in-circles for triangles ABC, ABD and CBD of radii r, r_1, r_2
- ▶ BE is the height h
- ▶ Verify the relation
- ▶ $(1 - 2r_1/h)(1 - 2r_2/h) = (1 - 2r/h)$
- ▶ by moving the vertices of the Triangle ABC



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About the Spoken Tutorial Project

- ▶ Watch the video available at http://spoken-tutorial.org/What_is_a_Spoken_Tutorial
- ▶ It summarises the Spoken Tutorial project
- ▶ If you do not have good bandwidth, you can download and watch it



Spoken Tutorial Workshops

The Spoken Tutorial Project Team

- ▶ Conducts workshops using spoken tutorials
- ▶ Gives certificates to those who pass an online test
- ▶ For more details, contact us at contact@spoken-tutorial.org



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Acknowledgements

- ▶ Spoken Tutorial Project is a part of the Talk to a Teacher project
- ▶ It is supported by the National Mission on Education through ICT, MHRD, Government of India
- ▶ More information on this Mission is available at

<http://spoken-tutorial.org/NMEICT-Intro>



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About the contributor

IIT Bombay

- ▶ This is Madhuri Ganapathi signing off
- ▶ Thanks for joining



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