

Properties of Circles

Spoken Tutorial Project

<https://spoken-tutorial.org>

National Mission on Education through ICT

<http://sakshat.ac.in>

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Learning Objectives



Learning Objectives

We will learn about the properties of,



Learning Objectives

We will learn about the properties of,

- Chords



Learning Objectives

We will learn about the properties of,

- Chords
- Arcs and Sectors



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We will learn about the properties of,

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- Arcs and Sectors
- **Tangents**



System Requirement



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- **Ubuntu Linux OS v 18.04**



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- **GeoGebra v 5.0.660.0-d**



Pre-requisites



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- **Learner should be familiar with GeoGebra interface**



Pre-requisites

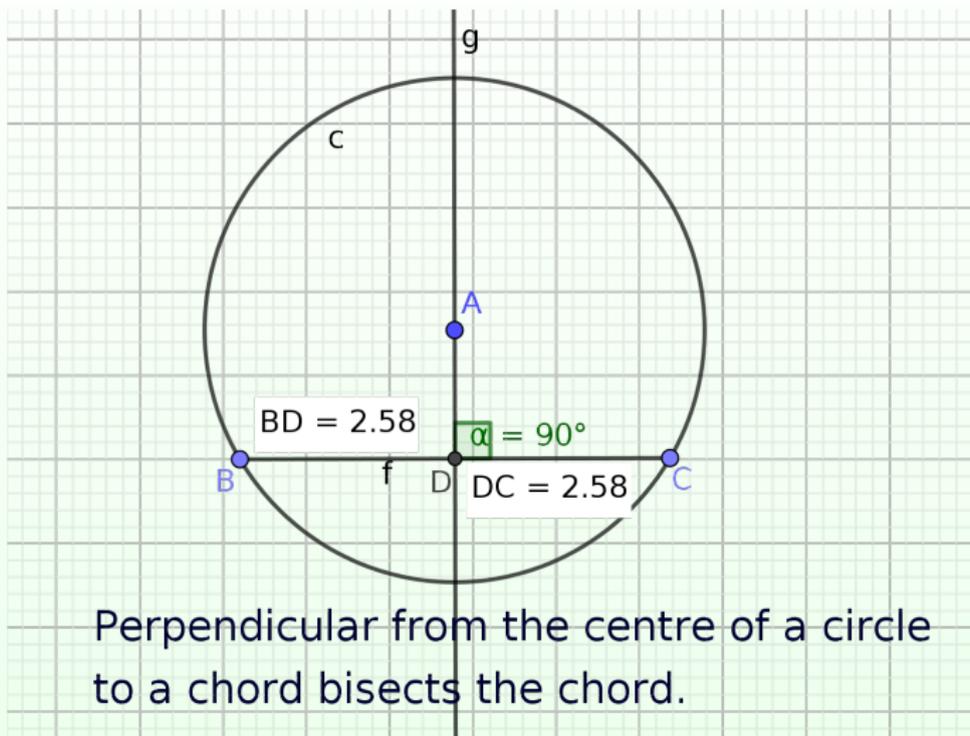
- **Learner should be familiar with **GeoGebra** interface**
- **For the prerequisite **GeoGebra** tutorials, please visit <https://spoken-tutorial.org>**



Properties of Chords



Properties of Chords



Perpendicular from the centre of a circle to a chord bisects the chord.



Assignment I

- 1 **Open a new GeoGebra window**
- 2 **Draw a circle**
- 3 **Draw two chords of equal size to the circle**
- 4 **Draw perpendicular lines from the centre to the chords**



Assignment II

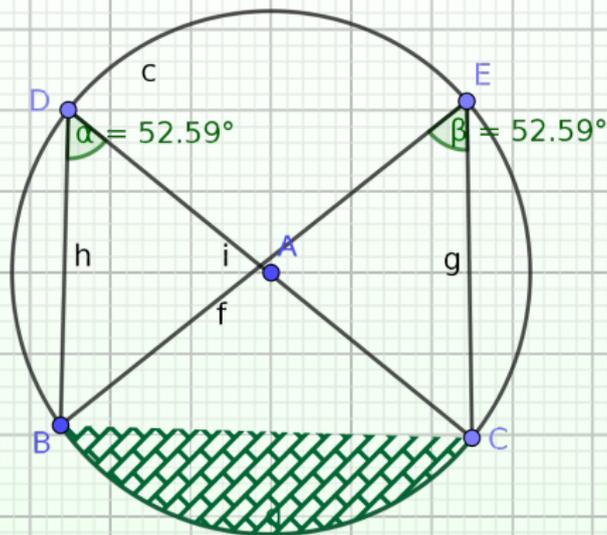
- 5 Mark points of intersection
- 6 Measure the perpendicular distances
- 7 What do you observe?



Properties of Arcs



Properties of Arcs



Inscribed angles BDC and BEC subtended by the same arc BC are equal.



Assignment

- **Verify if point C is the midpoint of segment $f(AB)$?**



Summary

We have learnt about the properties of,

- **Chords**
- **Arcs and Sectors**
- **Tangents**



Assignment I

- 1 **Open a new GeoGebra window**
- 2 **Draw a circle**
- 3 **Draw tangents from an external point**
- 4 **Mark points of intersection of the tangents**
- 5 **Join the centre of the circle to intersection points**



Assignment II

- 6 Measure angle at the centre and measure angle between the tangents
- 7 What is the sum of the two angles?
- 8 Join the centre and the external point
- 9 Does the line-segment bisect the angle at the centre?



About the Spoken Tutorial Project

- Watch the video available at https://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, please write to contact@spoken-tutorial.org



Answers for THIS Spoken Tutorial

- Questions in THIS Spoken Tutorial?
- Visit <https://forums.spoken-tutorial.org>
- Choose the minute and second where you have the question
- Explain your question briefly
- The Spoken Tutorial project will ensure an answer

You will have to register to ask questions



Acknowledgements

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