

The Common Denominator

A family math newsletter

Geometry Unit 11: Circles

Unit at a Glance



In this unit, students study the relationships between circles and lines. The relationships between chords and their subtended arcs are studied. Tangent lines, secant lines, and chords are used to measure the degree measures of arcs and angles indirectly. Students determine the areas of sectors and circle segments. The following topics will be studied:

Topic	Length	Geometry Text Section(s)
Topic A: Lines That Intersect Circles	Academic: 0.5 (90-minute) lesson Honors: 0.5 (90-minute) lesson	11.1
Topic B: Arcs and Chords; Inscribed Angles	Academic: 1 (90-minute) lessons Honors: 1 (90-minute) lessons	11.2, 11.4
Topic C: Sector Areas and Arc Length	Academic: 0.5 (90-minute) lessons Honors: 0.5 (90-minute) lessons	11.3
Topic D: Angle Relationships in Circles	Academic: 1.5 (90-minute) lessons Honors: 1.5 (90-minute) lessons	11.5
Topic E: Segment Relationships in Circles	Academic: 1 (90-minute) lesson Honors: 1 (90-minute) lesson	11.6
Topic F: Circles in the Coordinate Plane	Academic: 1 (90-minute) lesson Honors: 1 (90-minute) lesson	11.7

Resource Toolkit

Homework Help

Digital resources exist in the HMH online textbook that can support student learning outside of the classroom. To access these resources, students can log into HMH through BCPSone Digital Content, then select “Student Resources”. The “Homework Helper” resource has a mini-lesson, then guided practice problems for students to complete that can help reinforce concepts that were learned in class. Also, check the “Videos & Activities” section where other beneficial resources can be found.

Khan Academy Videos

- Topic A: [Tangents of a Circle](#)
- Topic B: [Inscribed Angles, Arc Measures](#)
- Topic C: [Arc Length from a Subtended Angle, Area of a Sector](#)
- Topic D: [Inscribed Shapes: Find Inscribed Angle](#)
- Topic F: [Features of a Circle From Its Equation](#)



Exploring Mathematics

Real World Connections

Discuss the following questions with your student:

Where do you see circles or parts of a circle in your everyday life?

Can you think of an example from nature? From architecture? From household objects?

Careers

Circles, along with triangles, form the basis of a branch of math called Trigonometry, which our class went over in Unit 9. Trigonometry has a wide variety of applications used by scientists, electricians, engineers, construction workers, and game designers.



“The eye is the first circle; the horizon which it forms is the second; and throughout nature this primary figure is repeated without end .”

– **Ralph Waldo Emerson**