Unit 15: Oblique Triangles- Law of Sines/Cosines

Content Area: **Mathematics**
Course(s): **PreCalc Trig A**
Time Period: **Semester 2**
Length: **3 weeks**
Status: **Published**

Standards

MA.G-SRT.D.10	Prove the Laws of Sines and Cosines and use them to solve problems.
MA.G-SRT.D.11	Understand and apply the Law of Sines and the Law of Cosines to find unknown measurements in right and non-right triangles (e.g., surveying problems, resultant forces).

Enduring Understandings

Students will understand that the Laws of Sines and Cosines could be applied to any type of triangle, not just a right triangle.

They will apply their knowledge of the laws and of bearings to problems where they need to solve for oblique triangles which could represent real-world situations.

Essential Questions

What is an oblique triangle?

How can we solve for the missing pieces of an oblique triangle?

How can we determine when to use the Law of Sines vs. the Law of Cosines?

How can you use bearing measurements to draw a triangle?

Knowledge and Skills

- Solve for oblique triangles using the Law of Sines or the Law of Cosines.
- Apply the concept of a bearing to oblique triangles.

Transfer Goals

Recognize and solve practical or theoretical problems involving mathematics, including those for which the solution approach is not obvious, by using mathematical reasoning and strategic thinking.

Resources

1. Pre-Calculus with Limits - Aufmann
2. Trigonometry 6th edition - Lial
3. Classkick
4. Khan Academy
5. PurpleMath
6. KutaSoftware
7. CK-12
8. Quizlet
9. Albert I/O
10. Desmos
11. Problem Attic