Precalculus Daily Lessons 6.1-2: Law of Sines and Cosines

January 2020

Monday, January 21, 2020

Objective: I can derive and apply area formula for any triangle using sine and the Law of Sines.

* Partner discuss answers to HW #3. Do you agree?
* Take a grade – 4 pts
* Share answers. Questions. Go through proofs in Geometry text. How does it address the SSA issue?
* Model with compass and straightedge: how you can be given S, S, and angle not between and get two different triangles; no triangle; only 1 triangle.
* Notes and Practice 6.1 using examples like the textbook.
* HW #4 – start in class: pp 406-7: 1-5, 8, 11, 23, 24, 27, 28, 30, 32, 37, 39, 41, 45, 47, 48
* Return quizzes.

Next time: Worksheet 5.5 and intro Law of Cosines. Quiz on Law of Sines and area on Monday, January 28, 2020.

Wednesday, January 23, 2020

Objective: I can apply the Law of Sines to solve for unknowns in oblique triangles and know when it will be helpful. I can use the formula for area based on sine and altitude (height) of the triangle.

* Go over HW in detail.
* Questions answered.
* How to set up problems with bearings: look for extra right triangles, parallel or perpendicular lines to get complementary or alternate interior angles.
* What cases work?
* How important is the table with 6 sketches in the textbook on p 402? Would you have done better if you had used it more?
* Take a grade on HW #4.
* Pass out Worksheet 6.1; work in class; this is HW #5.
* Check answers and discuss.

Quiz Monday, 6.1, with formula sheet.

Monday, January 27, 2020

I can demonstrate mastery over Law of Sines, including the ambiguous case.

* Answers to worksheet on screen. Please note that SAS does not work on #1 because you need a side opposite the given angle in the proportion.
* Read 6.2 information about Law of Cosines, Heron’s Formula, and examples. Try a couple.
* Note the proof on p 462.
* Quiz 6.1 – 25 pts
* HW #6 – pp 413-4: 5,7,9,11, 37, 39, 45, 47, 52, 53, 61, 62.

6.2 Quiz is Friday, Jan 31. Test over 6.1-2 is Monday, Feb 3. ACTM CONTEST INFO SOON!

Wednesday, January 29, 2020

I can determine whether to apply Law of Sines or Cosines to find missing information in an oblique triangle. I can find area of any triangle by either Heron’s or .5ab sin C or using Law of Sines first.

* Warm-up: Which would be better – Law of Sines or Cosines? How would you most easily find area?
* Go over HW #6. Bearings can be assumed to be E of North. Questions.
* ACT problems
* Notes on 6.2 – view (available online)
* HW #7 – Worksheet 6.2 (quiz next time like this)
* HW #8 – Unit Review (passed out today, not due til Monday)

Quiz Friday – Law of Cosines; Test Monday – Law of Sines, Cosines, areas, which to use, etc.