Math 411: Advanced Euclidean Geometry

Contact Information

Office hours or T: 4-5 or Th at 3-5,after class if desired or by appointment in 327 SEO. (Subject to change)

Feel free to e-mail me at jbaldwin@uic.edu or phone to make an appointment to discuss any difficulties that arise.

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Unit 5: Congruence

Due Tuesday April 8

1. Do problem 12.67 – all 9 parts.

Several of us see how to solve many parts of this using AAS. If a two triangles have two corresponding angles congruent and one one pair of corresponding sides congruent then the triangles are congruent.

You can use this theorem only if you prove it. The proof may use lengths or may just follow by using results about alternate interior angles. You can quote from the book up through chapter 12. Anything from later in the book, must be proved in the homework.

This problem seems to be fundamentally related to the 'fact' in Euclidean geometry that the sum of the angles of a triangle is 180^o. But so far we don't have degrees.

I will be at conferences from Thursday March 27 until April 6. But more most of this time I expect reasonable computer access will be happy to try to answer by computer.

2. Please also see if you can decipher the last paragraph of the proof of 12.65 (incenter). In particular, draw some pictures to see why there is a problem. E.G. it certainly fails that Γ_{t_A} maps $\overleftrightarrow{AB}$ to $\overleftrightarrow{AC}$.