

**COLLEGE GEOMETRY
HOMEWORK 1**

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- (1) Imagine a world where Euclid did not axiomatize geometry. Do you think that someone else would have done so at some point? Without Euclid, would math be the same today? Please write a one page essay with your thoughts on these questions and anything else you may think of if we didn't have Euclid's *Elements*. [This problem will be graded and will be worth 8 points of this assignment.]
- (2) Comment on how you learned geometry in your K-12 schooling.
- (3) Identify the fallacy that invalidates the proof of the "fake theorem" that says every triangle has two equal sides. Justify your analysis with a picture that represents that this step is actually incorrect.
- (4) Comment on how our physical world can be described by different types of geometries.
- (5) Pick one of Euclid's Propositions with analysis in Chapter 1 of Lee's text. In your own words, explain where the gaps lie for the Proposition you chose.
- (6) Pick a second of Euclid's Propositions with analysis in Chapter 1 of Lee's text. In your own words, explain where the gaps lie for the Proposition you chose.