## PHI 171 – Problems of Philosophy – Fall 2017 – Asgn. #7 – Due Dec 13

*Submit an electronic copy on the course website. No late assignment will be accepted.*

This assignment asks you to create your own mathematical proof for a controversial claim—say, that God does not exist, or that God exists, or that justice is what benefits the strongest, or any other philosophically controversial claim you are interested in defending. As you create your mathematical proof for your claim, you should use the axiomatic method, following the style of Spinoza's *Ethics* who was in turn inspired by Euclid's *Elements*.

**I.** First, begin by choosing a philosophical topic and identify a well-specified claim which you want to defend. More specifically:

(a) Identify a sufficiently narrow and circumscribed claim which you care about

(b) Write down an informal argument in support of this claim

**II.** The next task is to write a mathematical proof for your claim. In particular:

(c) Lay out your definitions and axioms needed in your proof

(d) For each of the above, explain why they are intuitive or should be taken for granted

(e) Write down the proof, by numbering each step in the proof (STEP1, STEP2, etc.)

(f) For each step in the proof, make sure you reference the definition, axioms or previous steps in virtue of which the step in question holds

**III.** The final task is to reflect on what you have done. Please answer the following:

(g) How does your informal argument in (b) differ from your mathematical proof in (e)?

(h) Do you think your mathematical proof is better than your informal argument?

(i) What do you think the limitations of your proof are? How could it be improved?

*Desiderata for this assignment*:

- Formulate a well-specified philosophical claim to be proven
- Clearly formulate the definitions and axioms needed for the proof
- Competently use the axiomatic method
- Original, creative, clear and well-written