

PHI 171 – PROBLEMS OF PHILOSOPHY – FALL 2017 – ASGN. #6 – DUE DEC 4

Hand in a paper copy in class and submit an electronic copy on the course website.

This assignment is meant to make you familiar with the axiomatic method by asking you to write down the proof of the first two propositions of Euclid's *Elements* and the proof of proposition 5 of Spinoza's *Ethics*.

The assignment has three parts as follows:

(1) Prove proposition 1 of the Elements: The first proposition (or theorem) of Euclid's *Elements* states that given a straight line a triangle with equal sides can be constructed upon it. Lay out the proof that establishes this proposition. In particular:

- (a) Make sure you number progressively each step in the proof (i.e. STEP1, STEP2, etc.).
- (b) For each step make sure you reference the DEFINITION, POSTULATE, COMMON NOTION, or previous STEP in virtue of which the reasoning step in question holds.
- (c) Provide a picture that illustrates the steps in the proof.

(2) Prove proposition 2 of the Elements: Do the same as above with the second proposition of the *Elements*.

(3) Prove proposition 5 of the Ethics: Do the same as above with proposition 5 of the *Ethics*. Here, of course, definitions and axioms will be different and specific to the *Ethics*.