

Review questions for Geometry Quam 1

Wednesday, August 26

Quam 1 will be next Monday, August 31; 80% of it will be very much like something you see here.

Presentations will start next Wednesday, September 2. There will be three a day for the whole class. For the first few, the presenter will simply demonstrate the next few constructions from Euclid's elements. Recall that these are the propositions shown in red in David Joyce's edition. I'll accept volunteers to go early by this Friday. If none are forthcoming, the order will be determined by a random number generator.

1. State Euclid's five postulates.
2. Perform the following constructions with straightedge and compass.
 - (a) Euclid Book I, Proposition 1 (Yes, you have to know it.)
 - (b) Bisection of an angle
 - (c) Center of a circle, given a circumference
 - (d) Line parallel to a given line and through a given point not on the given line
3. Referring to the previous exercise, what implicit assumptions did you use that are missing from Euclid's postulates?
4. Describe how you might use a compass and straightedge to construct a square on a given line segment.
5. What is the theoretical significance of postulate 2?