In teaching College Geometry, I have been using James Smart's *Modern Geometries* text for the most part, and I particularly like the way the text begins with a chapter on Finite Geometries. I have found this chapter to be ideal in helping students to write geometric proofs. For each geometry under study (e.g., Fano, Young, Pappus, Desargues), there is only a relatively small number of points and lines involved. Since there are only a few “objects” under discussion, students are forced to consider how to introduce each new object into the proof at the proper moment in the correct manner. I have the students write their proofs in a “two-column” format, one for statements and the other for reasons. Since most of the students are mathematics-education majors who will eventually undergo a semester of student-teaching, I believe this helps them greatly.

Other proofs that I have found especially worthwhile are:

Proof that the only isometries of the plane are translations, rotations, reflections, and glide reflections.

Proof that every triangle has a unique circumcenter, a unique orthocenter, a unique incenter, a unique centroid, and three excenters.

Proof that the Nine-Point Circle and the Euler Line exist for any triangle.

Proof that a quadrilateral is inscribed in a circle if and only if its opposite angles are supplementary.

Proof of Heron's Theorem (for triangles) and Ptolemy's Theorem (for cyclic quadrilaterals).

Proof that the Circle of Apollonius exists for a given line segment and a given ratio.

Proofs showing that various Euclidean constructions (with straightedge and compass) are valid, including: the construction of a tangent to a circle from a point outside the circle, the partitioning of a segment into any desired number of congruent segments, the partitioning of a segment into a given (rational) ratio, and the construction of the product or quotient of two given lengths, as well as the square root of a given length.

Finally, I would like to “second” Pat Toumey’s comment about Euclid’s *Elements*. I believe that having geometry students (and math-education students in general) work their way through some parts of Euclid is a very valuable experience, especially a good deal of Book I of the *Elements*. They get to appreciate Euclid's cleverness and his organizational skills, since every result is proven just before it is needed in order to move forward. However, since I also teach our History of Mathematics course, I have the good fortune of being able to devote more time to Euclid’s *Elements* there (rather than having to squeeze it into the College Geometry course at the expense of other important topics, such as non-Euclidean geometry).

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