Due April 15

1. Final draft of Assignment 7 SAS
2. First draft of Assignment 8:
    a. Show that, if you assume the Archimedean Postulate (p167), then on a plane every parallelogram is equivalent by dissection to a rectangle with the same base and height. (The base is predetermined – you don't get to pick it.)
    b. Show on the plane every parallelogram is equivalent by subtraction to a rectangle with the same base and height without assuming the Archimedean Postulate.

To think about today:
Show that on the plane, every rectangle is equivalent by dissection to a square.

Things that might help:

1) A triangle with all vertices on the circumference of a circle and one side a diameter of the circle is a right triangle. (Prove this.)
2) You'll need to construct geometric mean of a and b, $\sqrt{ab}$, where a and b are the lengths of the sides of the given rectangle. See pp 182-183 for three constructions of $\sqrt{ab}$. (Justify these.)
3) Once you can construct $\sqrt{ab}$, find a way to dissect the rectangle into the square with sides of length $\sqrt{ab}$.