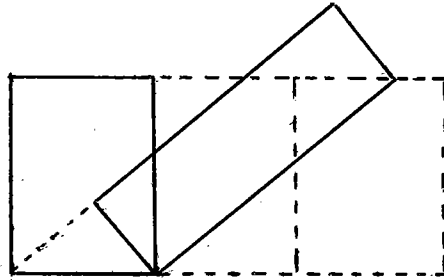
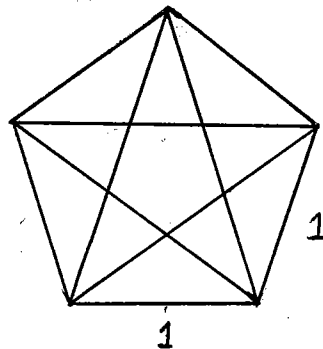


Math 4513
Assignment 3

8. Show that given any triangle, you can cut it into a finite number of pieces and reassemble the pieces to form a rectangle.
9. Show that any rectangle may be cut into a finite number of pieces and the pieces reassembled to form a rectangle with width 1. (Hint: see the figure below.)



- 10.a. Prove that in a regular pentagon with unit side length, the length of the diagonal is $\frac{1 + \sqrt{5}}{2}$. (Hint: use similar triangles.)



- b. Explain how to construct the regular pentagon with compass and straightedge.