DISCUSSION FOR NINTH TUTORIAL

Start with a triangle ABC with area 1 and divide one side (segment AC) of that triangle into 4 equal spaced segments and label the endpoint of the segments closest to A by the label F. Now on an adjacent side of the triangle say (segment AB) split it into 5 equal spaced segments and label the endpoint of the segment closest to A by D. Let E be the intersection of the line CD and BF as in the diagram below.
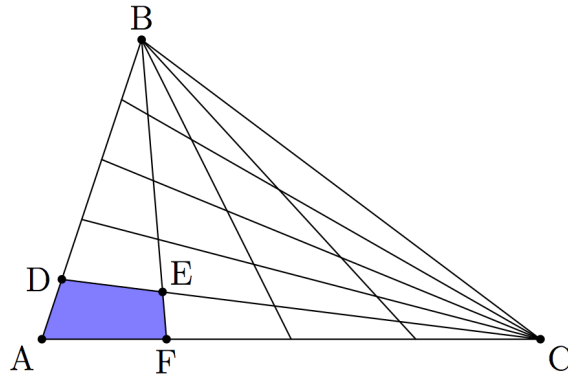
Show that $ADEF$ is a quadrilateral whose area is independent of the triangle that you started with. Next find the area of $ADEF$.