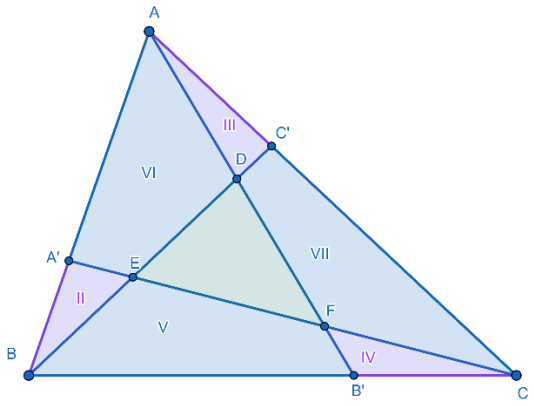
Exploration 2 – Other Components of the Inner Triangle Construction

In this exploration, we investigate components of triangle BAC.

In the construction shown below, A', B' and C' are trisection points.
Triangle ΔEDF is formed by connecting each vertex of triangle ΔBAC with a trisection point on the opposite side.

- The corner triangles, labeled as II, III, and IV, share a vertex with the inner triangle.
- The quadrilaterals, labeled as V, VI and VII, share a side with the inner triangle.

Complete the tasks below. Submit documentation (ggb file, screen shots or text) as directed by your instructor.



Task 1
Measure the area of each quadrilateral. Calculate the ratio of the area of each of the quadrilaterals to the area of the outer triangle ΔBAC. What do you notice? Justify your hypothesis with evidence from your sketch.

Task 2
Measure the area of each corner triangle. Calculate the ratio of the area of each of the triangles to the area of the outer triangle ΔBAC. What do you notice? Justify your hypotheses with evidence from your sketch.