In right triangle AFP: FH bisects angle AFP, \( AP = 1 \), and \( AG = HP = 0.382 \).
Determine all angle and sides.

(This problem stems from research for my May 2008 guest editorial, "Astro-Archeo-Surveying.")

Triangle ABC is any triangle. AdeB is any parallelogram constructed on side AB, and BfgC is any parallelogram constructed on side BC. Aj and Ck are equal in bearing and length to Bh, which is found by intersecting de and gf.

What are the areas of the parallelograms? What is the pattern?