Assignment #11 – Not Morley's Theorem
Due on Friday, 9 April.
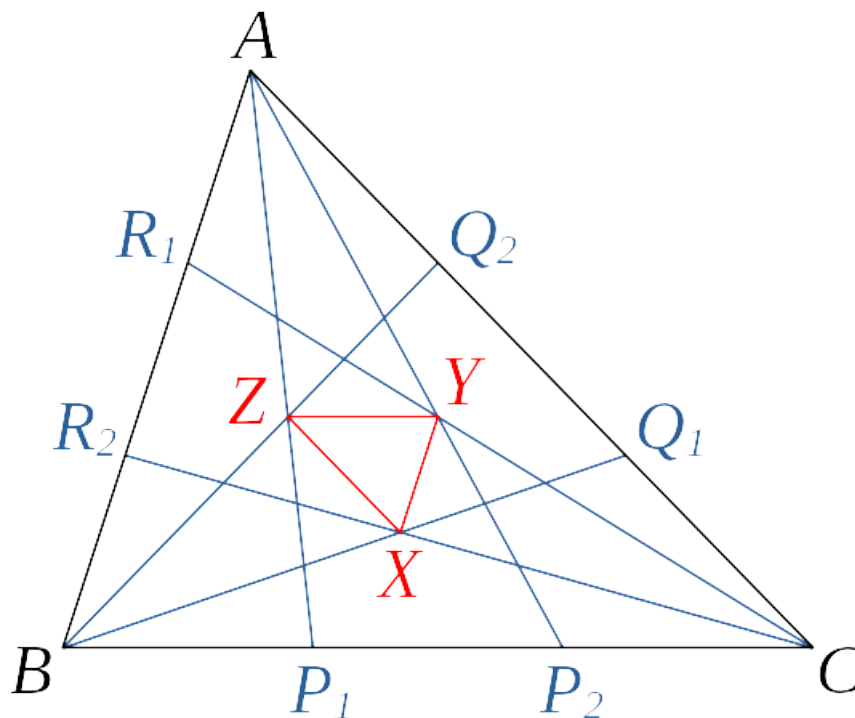
1. Suppose the points R_1 and R_2, P_1 and P_2, and Q_1 and Q_2 divide up the sides AB, BC, and CA of $\triangle ABC$ into equal thirds*, respectively, as in the diagram above. Let X be the intersection of BQ_1 and CR_2, Y be the intersection of CR_1 and AP_2, and Z be the intersection of AP_1 and BQ_2. Show that $\triangle XYZ \sim \triangle ABC$. *[10]*

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* There seems to be no name for such points. Should we call them the "thirdspoints" of the sides?