## $\mathbf{X}(37747)=$ THE ISOGONAL CONJUGATE OF X(22900)



## Geometrical construction of $X(37747)$ :

Let ABC be an arbitrary triangle, $\mathrm{A}^{\prime}$ be the reflection of A with respect to side BC , similarly construct $\mathrm{B}^{\prime}, \mathrm{C}^{\prime}$. Erect equilateral triangles $\mathrm{AC}_{A} \mathrm{C}^{\prime}, \mathrm{BC}_{\mathrm{B}} \mathrm{C}^{\prime}$ on the sides of $\mathrm{AC}^{\prime}, \mathrm{BC}^{\prime}$ with apex as $\mathrm{C}_{\mathrm{A}}, \mathrm{C}_{\mathrm{B}}$ respectively, similarly Erect equilateral triangles $\mathrm{BA}_{\mathrm{B}} \mathrm{A}^{\prime}, \mathrm{CA}_{C} \mathrm{~A}^{\prime}$ and $\mathrm{CB}_{C} \mathrm{~B}^{\prime}, \mathrm{AB}_{\mathrm{A}} \mathrm{B}^{\prime}$ on the sides $\mathrm{BA}^{\prime}$, $\mathrm{CA}^{\prime}$ and $\mathrm{CB}^{\prime}$, AB ' respectively.

Let $F_{A}=C_{A} C_{B} \cap B_{A} B_{C}, F_{B}=C_{A} C_{B} \cap A_{B} A_{C}$ and $F_{C}=B_{A} B_{C} \cap A_{B} A_{C}$

The triangle $F_{A} F_{B} F_{C}$ is perspective with the triangle $A B C$ and perspector is " $X(37747)$ "
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The barycentric coordinates of this point is as follows
$a^{\wedge} 2 /\left(a^{\wedge} 2\left(2 S+S q r t[3] b^{\wedge} 2\right)\left(2 S+S q r t[3] c^{\wedge} 2\right)-\right.$ Sqrt[3] (Sqrt[3] S + SB) (Sqrt[3] S + SC) $((2 S+S q r t[3] a \wedge 2)))::$

Search number of 6-9-13 triangle for this point is
1.752285613002971681007479615312675410585528944448367....

