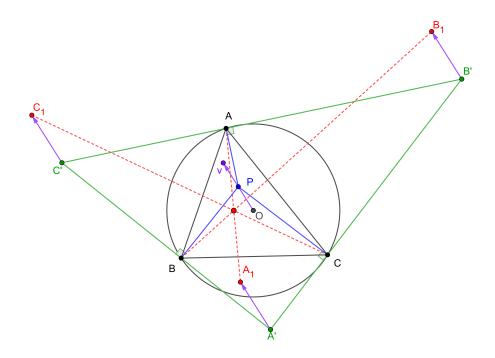
## Vu Thanh Tung

## May 2, 2020

**Theorem.** Let P is a point on the same plane with  $\triangle ABC$  different from the circumcenter O. Let  $\triangle A'B'C'$  be the antipedal triangle of P with respect to  $\triangle ABC$ . Let  $\overrightarrow{v} = 2.\overrightarrow{OP}$ . Let  $A_1, B_1, C_1$  be respectively the points such that  $\overrightarrow{A'A_1} = \overrightarrow{B'B_1} = \overrightarrow{C'C_1} = \overrightarrow{v}$ .

Then three lines  $AA_1, BB_1, CC_1$  are concurrent.



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