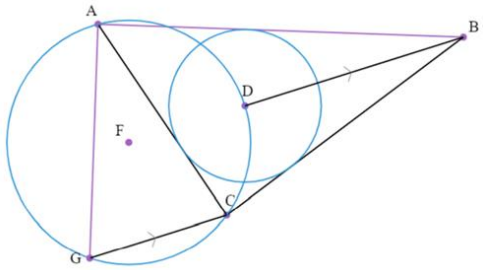

Example 1 82 : As shown in Figure 1, D is the center of $\triangle ABC$, G is a point on the circumcircle of $\triangle ADC$, and $CG \parallel BD$, prove that $AB \perp AG$.

$$\frac{A-B}{A-G}\frac{\dfrac{B-D}{B-A}}{\dfrac{D-C}{D-A}}\left(\frac{G-A}{G-C}\frac{D-C}{D-A}\right)\frac{G-C}{D-B}=-1.$$