Problem 23 (ISL 1998). Let ABC be a triangle such that $\angle ACB = 2\angle ABC$. Let D be the point of the segment BC such that $CD = 2BD$. The segment AD is extended over the point D to the point E for which $AD = DE$. Prove that $\angle ECD + 180° = 2\angle EBC$.

Example 1 7 : As shown in Figure 1, in $\triangle ABC$, D is the third bisection point of side BC, $2BD = DC$, extend AD to E, so that $AD = DE$, $\angle ACB = 2\angle ABC$, prove: $\angle ECD + 180^\circ = 2\angle EBC$. (ISL 1998)

Proof: Suppose $B = 0$, $D = \dfrac{2B + C}{3}$, $E = 2D - A$, $\dfrac{\dfrac{C-E}{C-B}}{\left(\dfrac{B-C}{B-E}\right)^2} + \dfrac{\left(\dfrac{B-A}{B-C}\right)^2}{\dfrac{C-B}{C-A}} = \dfrac{4}{27}$.

Explanation: It can be obtained from the identity equation $\angle ECD + 180^\circ = 2\angle EBC \Leftrightarrow \angle ACB = 2\angle ABC$ and the line segment relational expression $-CE \cdot BE^2 + CA \cdot BA^2 = \dfrac{4}{27} BC^3$. Note $180^\circ = 2\angle EBC - \angle ECD$ that $CE \cdot BE^2$ the previous coefficient is negative.