

Example 123 : As shown in Figure 3,  $\triangle in\ ABC$ , AB = AC, extend BA  $to\ E$ , if the bisector of  $\angle$ ACB intersects AB  $at\ D$ , prove that  $\angle CDE = \frac{3}{4}\ \angle$ CAE.

$$\frac{\left(\frac{B-A}{D-C}\right)^4}{\left(\frac{B-A}{A-C}\right)^3} = \left(\frac{\frac{C-B}{C-D}}{\frac{C-D}{C-A}}\right)^2 \frac{\frac{B-A}{B-C}}{\frac{B-C}{C-A}},$$