



**Example 9 :** As shown in Figure 1,  $\triangle ABC$ , take  $BD = AE = \frac{AB}{3}$  on  $AB$  and  $AC$ ,

and verify:  $AB = AC$ ,  $AB \perp AC$ ,  $\angle ADE = \angle EBC$ . Among these three conditions, if any two are known to be true, you can The third is also established.

Proof: Suppose 
$$\frac{\frac{B - \frac{2A+C}{3}}{\frac{B-C}{B-A}}}{\frac{A+2B}{3} - \frac{2A+C}{3}} = t_1, \quad \frac{\frac{C-B}{\frac{C-A}{B-A}}}{\frac{B-C}}{\left(\frac{A-C}{A-B}\right)^2} = t_2, \quad \left(\frac{A-C}{A-B}\right)^2 = t_3,$$

$$6t_2 - 9t_1t_2 + t_3 = 1.$$