

Example 115: As shown in Figure 1, in the acute angle  $\triangle ABC$ , take a point D on the straight line where BC is located, so that  $\angle BAD = \angle ACB$ . Then take another point E, so that  $\angle CAE = \angle ABC$ . Prove: AD = AE.

$$E-A$$
  $C-B$   $A-C$ 

$$\frac{\overline{B-C}}{C-B} \frac{\overline{C-A}}{A-D} \frac{\overline{A-E}}{B-A} = 1,$$

$$C-B$$
  $A-D$   $B-A$ 

$$D-A$$
  $A-B$   $B-C$