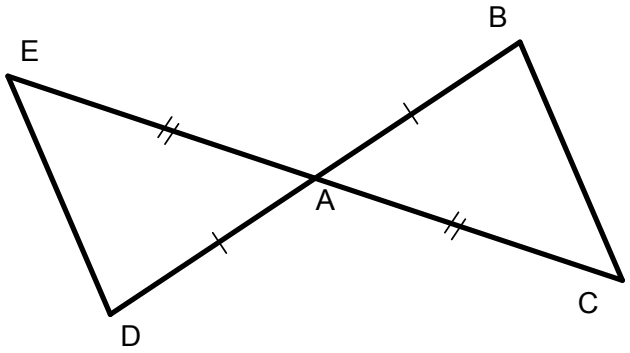
In triangle ABC, BA&CA are produced to D&E respectively such that BA=AD& CA=AE prove that ED||BC.



Proof:

In and

1) AE=AC – given

2) AB=AD – given

3) as vertically opposite angels.

So (two sides and the icluded angle are equal)

Hence ∠ACB=∠AED (matching angles of congruent triangles)

∠ACB and ∠AED are the alternate angles for Edand BC.

If any pair of alternate angles are equal, then the lines are parallel, so ED||BC