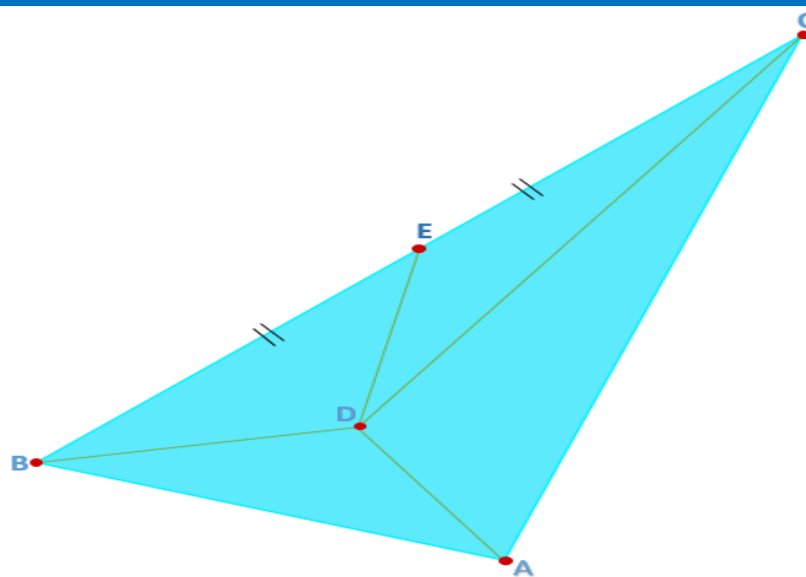


# ROMANIAN MATHEMATICAL MAGAZINE

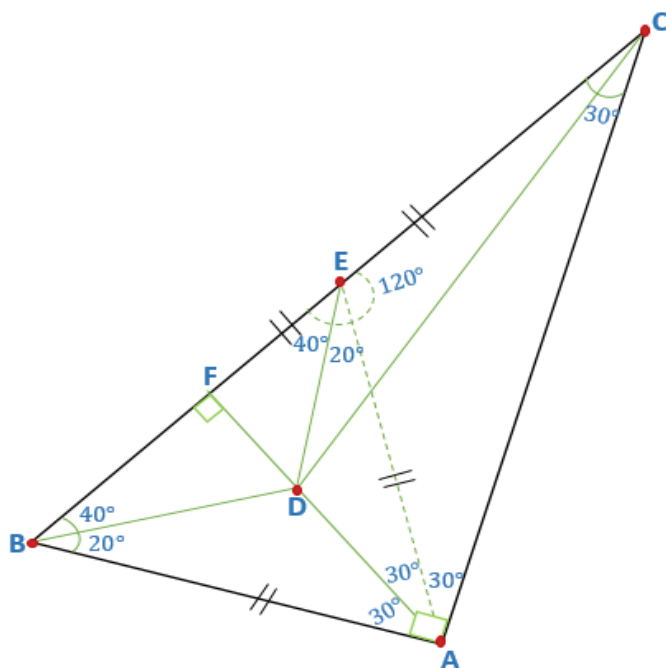


Suppose that  $\angle DBA = 20^\circ$ ,  $\angle DAB = 30^\circ$ ,  $\angle DBC = 40^\circ$ ,  $\angle DAC = 60^\circ$

Prove that :  $\angle DEC = 140^\circ$

Proposed by Jafar Nikpour-Iran

Solution by Mirsadix Muzefferov-Azerbaijan



# ROMANIAN MATHEMATICAL MAGAZINE

*Construct the media  $AE$ .  $\triangle ABE$  equilateral triangle. Here  $AE$  bisectors*

*$D \in AF$ ,  $\hat{C}BD = 40^\circ$ . Then  $\hat{B}ED = 40^\circ$ .*

*That's why  $\hat{A}ED = 20^\circ$ . On the other hand  $\hat{C}EA = 120^\circ$ .*

**So,**

$$\hat{D}EC = \hat{A}EC + \hat{D}EA = 120^\circ + 20^\circ = 140^\circ$$

$$\hat{D}EC = 140^\circ$$