

Применим т. Синусов где ΔABE , ΔAEC

$$\Delta ABE: \frac{AB}{\sin 80^\circ} = \frac{AE}{\sin 20^\circ}$$

$$\sin 50^\circ = \sin (90^\circ - 40^\circ) = \cos 40^\circ$$

$$\sin 20^\circ = 2 \sin 10^\circ \cos 10^\circ$$

$$\Delta AEC: \frac{AE}{\sin 10^\circ} = \frac{EC}{\sin 30^\circ}$$

$$AE = \frac{AB \cdot \sin 20^\circ}{\sin 80^\circ}; \quad AE = \frac{EC \cdot \sin 10^\circ}{\sin 30^\circ} = \frac{EC \cdot \sin 10^\circ}{0,5}$$

$$\frac{AB \cdot 2 \sin 10^\circ \cos 10^\circ}{\cos 10^\circ} = 2EC \cdot \sin 10^\circ$$

$$AB = EC$$

Получили: $AB = EC$, при этом $\angle BEC = 60^\circ \Rightarrow$

$\Rightarrow \Delta BCE$ - равносторон.

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