

17.13

Από νόμο συνημιτόνων , έχουμε :

$$\bullet \beta^2 = \alpha^2 + \gamma^2 - 2\alpha\gamma\cos B \Rightarrow \cos B = \frac{\alpha^2 + \gamma^2 - \beta^2}{2\alpha\gamma}$$

$$\bullet \gamma^2 = \alpha^2 + \beta^2 - 2\alpha\beta\cos \Gamma \Rightarrow \cos \Gamma = \frac{\alpha^2 + \beta^2 - \gamma^2}{2\alpha\beta}$$

$$\begin{aligned} \text{Άρα , } \beta' \text{ μέλος} &= \beta \cdot \cos \Gamma + \gamma \cdot \cos B = \frac{\beta \cdot (\alpha^2 + \beta^2 - \gamma^2)}{2\alpha\beta} + \frac{\gamma \cdot (\alpha^2 + \gamma^2 - \beta^2)}{2\alpha\gamma} = \\ &= \frac{2\alpha^2}{2\alpha} = \alpha = \alpha' \text{ μέλος} \end{aligned}$$