

Mutassuk meg, hogy

$$4\operatorname{ctg}\phi = \operatorname{ctg}\frac{\alpha}{2}\operatorname{ctg}\frac{\beta}{2}\operatorname{ctg}\frac{\gamma}{2} + \operatorname{ctg}\frac{\alpha}{2}\operatorname{tg}\frac{\beta}{2}\operatorname{tg}\frac{\gamma}{2} + \operatorname{tg}\frac{\alpha}{2}\operatorname{ctg}\frac{\beta}{2}\operatorname{tg}\frac{\gamma}{2} + \operatorname{tg}\frac{\alpha}{2}\operatorname{tg}\frac{\beta}{2}\operatorname{ctg}\frac{\gamma}{2},$$

ha

$$\operatorname{ctg}\phi = \operatorname{ctg}\alpha + \operatorname{ctg}\beta + \operatorname{ctg}\gamma$$

és

$$\alpha + \beta + \gamma = 180^\circ.$$