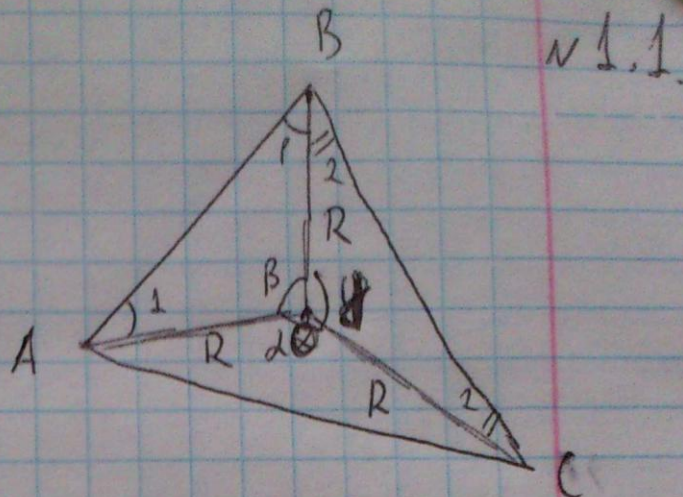


$$\alpha + \beta + \gamma = 360^\circ$$

$$\angle 1 = \frac{180 - \beta}{2} = \frac{180 - (360 - \alpha - \gamma)}{2}$$

$$\angle 2 = \frac{180 - \gamma}{2} = \frac{180 - (360 - \alpha - \beta)}{2}$$



$$\begin{aligned} \angle AOC &= \angle 1 + \angle 2 = \frac{360 - 420 + \alpha + \beta + \gamma + \alpha}{2} = \frac{-360 + \alpha + \beta + \gamma + \alpha}{2} = \frac{-360 + 360 + \alpha}{2} \\ &= \frac{\alpha}{2} = \frac{\angle AOC}{2} \end{aligned}$$

аналогично  $\angle AOB = \angle 2C$ ,  $\angle BOC = \angle 2A$ .

$$S_{\triangle AOC} = \frac{1}{2} AO \cdot OC \cdot \sin \angle AOC = \frac{1}{2} R \cdot R \cdot \sin 2B = \frac{R^2 \sin 2B}{2}$$

$$S_{\triangle BOC} = \frac{R^2 \sin 2A}{2} \quad S_{\triangle AOB} = \frac{R^2 \sin 2C}{2}$$

$$\lambda_1 : \lambda_2 : \lambda_3 = \frac{S_{\triangle BOC}}{S_{\triangle ABC}} : \frac{S_{\triangle AOC}}{S_{\triangle ABC}} : \frac{S_{\triangle ABO}}{S_{\triangle ABC}} =$$

$$= \frac{R^2 \sin 2A}{S} : \frac{R^2 \sin 2B}{S} : \frac{R^2 \sin 2C}{S} = \sin 2A : \sin 2B : \sin 2C$$

Отсюда:  $O (\sin 2A : \sin 2B : \sin 2C)$