

$$\begin{aligned} \operatorname{tg}x \cdot \operatorname{tg}z &= 3 \\ \operatorname{tgy} \cdot \operatorname{tg}z &= 6 \\ x + y + z &= P \end{aligned}$$

$$\begin{aligned} \operatorname{tg}x / \operatorname{tgy} &= \frac{1}{2} \\ \sin x \cos y / \cos x \sin y &= \frac{1}{2} \end{aligned}$$

$$\begin{aligned} \operatorname{tg}z(\operatorname{tg}x + \operatorname{tgy}) &= 9 \\ 3\operatorname{tg}z\operatorname{tg}x &= 9 \\ \operatorname{tg}x \cdot \operatorname{tg}z &= 3 \end{aligned}$$

$$\begin{aligned} \operatorname{tg}(x+y) &= \frac{\sin(x+y)}{\cos(x+y)} = \frac{\sin x \cos y + \cos x \sin y}{\cos x \cos y - \sin x \sin y} = \\ &= \frac{(\sin x / \cos x + \sin y / \cos y)}{(1 - \sin x \sin y / \cos x \cos y)} = \frac{\operatorname{tg}x + \operatorname{tgy}}{1 - \operatorname{tg}x \operatorname{tgy}} \end{aligned}$$

$$\begin{aligned} z &= P - y - x \\ \operatorname{tg}x \operatorname{tg}(P - (x+y)) &= 3 \\ \operatorname{tg}x \operatorname{tg}(x+y) &= -3 \\ \operatorname{tg}x(\operatorname{tg}x + \operatorname{tgy}) / (1 - \operatorname{tg}x \operatorname{tgy}) &= -3 \\ 3\operatorname{tg}^2x / (1 - 2\operatorname{tg}^2x) &= -3 \\ 3\operatorname{tg}^2x &= -3(1 - 2\operatorname{tg}^2x) \\ 3\operatorname{tg}^2x &= -3 + 6\operatorname{tg}^2x \\ \operatorname{tg}^2x &= -1 + 2\operatorname{tg}^2x \\ \operatorname{tg}^2x &= 1 \\ \operatorname{tg}x &= 1 \\ x &= P/4 + Pk \\ \operatorname{tg}x &= -1 \\ x &= -P/4 + Ph \end{aligned}$$

$$\begin{aligned} 1 / \operatorname{tgy} &= \frac{1}{2} \\ \operatorname{tgy} &= 2 \\ y &= \operatorname{arctg}2 + Pk \\ \operatorname{tgy} &= -2 \\ y &= -\operatorname{arctg}2 + Ph \end{aligned}$$

$$\begin{aligned} \operatorname{tg}z &= 6/2 = 3 \\ z &= \operatorname{arctg}3 + Pk \\ \operatorname{tg}z &= -3 \\ z &= -\operatorname{arctg}3 + Ph \end{aligned}$$

Ответ $(P/4 + Pk; \operatorname{arctg}2 + Pn; \operatorname{arctg}3 + Ph)$ $(-P/4 + Pk; -\operatorname{arctg}2 + Pn; \operatorname{arctg}3 + Ph)$

