

Найдите $\operatorname{tg} \alpha$, если $\cos \alpha = \frac{\sqrt{10}}{10}$ и $\alpha \in \left(\frac{3\pi}{2}; 2\pi\right)$.

$$1 + \operatorname{tg}^2 x = \frac{1}{\cos^2 x}$$

$$\operatorname{tg}^2 x = \frac{1}{\cos^2 x} - 1$$

$$\operatorname{tg}^2 x = 10 - 1 = 9$$

$$\operatorname{tg} x = \pm 3$$

$$\operatorname{tg} x = -3$$