

Решите простейшее тригонометрическое неравенство $\operatorname{tg} x > 1$.

$$\begin{aligned} 1) \bigcup_{k \in \mathbb{Z}} \left(\frac{\pi}{4} + \pi k; \frac{\pi}{2} + \pi k \right) \quad & 2) \bigcup_{k \in \mathbb{Z}} \left[\frac{\pi}{4} + \pi k; \frac{\pi}{2} + \pi k \right] \quad & 3) \bigcup_{k \in \mathbb{Z}} \left(\frac{\pi}{4} + \pi k; \frac{\pi}{2} + \pi k \right] \\ 4) \bigcup_{k \in \mathbb{Z}} \left(\frac{\pi}{4} + 2\pi k; \frac{\pi}{2} + 2\pi k \right) \quad & 5) \bigcup_{k \in \mathbb{Z}} \left[\frac{\pi}{4} + \pi k; \frac{\pi}{2} + \pi k \right) \\ 6) \bigcup_{k \in \mathbb{Z}} \left(\frac{\pi}{4} + 4\pi k; \frac{\pi}{2} + 4\pi k \right) \end{aligned}$$