

1. Решите простейшее тригонометрическое неравенство $\cos 3x < -\frac{1}{2}$.

$$\begin{array}{ll} 1) \bigcup_{k \in \mathbb{Z}} \left[\frac{2\pi}{9} + \frac{2\pi k}{3}; \frac{4\pi}{9} + \frac{2\pi k}{3} \right). & 2) \bigcup_{k \in \mathbb{Z}} \left(\frac{2\pi}{9} + \frac{2\pi k}{3}; \frac{4\pi}{9} + \frac{2\pi k}{3} \right]. \\ 3) \bigcup_{k \in \mathbb{Z}} \left(\frac{2\pi}{9} + \frac{\pi k}{3}; \frac{4\pi}{9} + \frac{\pi k}{3} \right). & 4) \bigcup_{k \in \mathbb{Z}} \left(\frac{2\pi}{9} + \frac{2\pi k}{3}; \frac{4\pi}{9} + \frac{2\pi k}{3} \right) \\ 5) \bigcup_{k \in \mathbb{Z}} \left[\frac{2\pi}{9} + \frac{2\pi k}{3}; \frac{4\pi}{9} + \frac{2\pi k}{3} \right]. & 6) \bigcup_{k \in \mathbb{Z}} \left(\frac{2\pi}{9} + \frac{4\pi k}{3}; \frac{4\pi}{9} + \frac{4\pi k}{3} \right). \end{array}$$