

1. Решите тригонометрическое неравенство $2\sin^2 x + \sin x \geq 0$.

- 1) $\bigcup_{k \in \mathbb{Z}} [2\pi k; \pi + 2\pi k] \cup \left[\frac{7\pi}{6} + 2\pi k; \frac{11\pi}{6} + 2\pi k \right)$.
- 2) $\bigcup_{k \in \mathbb{Z}} [2\pi k; \pi + 2\pi k] \cup \left[\frac{7\pi}{6} + 2\pi k; \frac{11\pi}{6} + 2\pi k \right]$
- 3) $\bigcup_{k \in \mathbb{Z}} [2\pi k; \pi + 2\pi k] \cup \left(\frac{7\pi}{6} + 2\pi k; \frac{11\pi}{6} + 2\pi k \right]$.
- 4) $\bigcup_{k \in \mathbb{Z}} [2\pi k; \pi + 2\pi k] \cup \left[\frac{7\pi}{6} + \pi k; \frac{11\pi}{6} + \pi k \right)$.
- 5) $\bigcup_{k \in \mathbb{Z}} [2\pi k; \pi + 2\pi k] \cup \left[\frac{7\pi}{6} + 4\pi k; \frac{11\pi}{6} + 4\pi k \right)$.
- 6) $\bigcup_{k \in \mathbb{Z}} [2\pi k; \pi + 2\pi k] \cup \left(\frac{7\pi}{6} + 2\pi k; \frac{11\pi}{6} + 2\pi k \right)$.

2. Решите тригонометрическое неравенство $3\cos^2 x < 3$.

- 1) $\bigcup_{k \in \mathbb{Z}} \left(\frac{\pi}{6} + 2\pi k; \frac{5\pi}{6} + 2\pi k \right) \cup \left(\frac{7\pi}{6} + 2\pi k; \frac{11\pi}{6} + 2\pi k \right]$
- 2) $\bigcup_{k \in \mathbb{Z}} \left(\frac{\pi}{6} + 2\pi k; \frac{5\pi}{6} + 2\pi k \right) \cup \left(\frac{7\pi}{6} + 2\pi k; \frac{11\pi}{6} + 2\pi k \right)$
- 3) $\bigcup_{k \in \mathbb{Z}} \left(\frac{\pi}{6} + 2\pi k; \frac{5\pi}{6} + 2\pi k \right) \cup \left[\frac{7\pi}{6} + 2\pi k; \frac{11\pi}{6} + 2\pi k \right)$
- 4) $\bigcup_{k \in \mathbb{Z}} \left(\frac{\pi}{6} + 2\pi k; \frac{5\pi}{6} + 2\pi k \right) \cup \left[\frac{7\pi}{6} + 2\pi k; \frac{11\pi}{6} + 2\pi k \right]$
- 5) $\bigcup_{k \in \mathbb{Z}} \left(\frac{\pi}{6} + \pi k; \frac{5\pi}{6} + \pi k \right) \cup \left(\frac{7\pi}{6} + \pi k; \frac{11\pi}{6} + \pi k \right)$
- 6) $\bigcup_{k \in \mathbb{Z}} \left(\frac{\pi}{6} + 2\pi k; \frac{5\pi}{6} + 2\pi k \right) \cup \left(\frac{7\pi}{6} + \pi k; \frac{11\pi}{6} + \pi k \right)$