

1. Решите тригонометрическое неравенство $6\cos^2 x + \cos x - 1 \geq 0$.

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

2. Решите тригонометрическое неравенство $6\sin^2 x - \sin x - 1 < 0$.

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