

Решите систему уравнений 
$$\begin{cases} 2\sin^2 x + 6 = 13\sin y, \\ y - 2x = 0. \end{cases}$$

1)

$$\left\{ \left( \operatorname{arctg} \frac{1}{4} + \pi n; 2 \operatorname{arctg} \frac{1}{4} + 2\pi n \right); (\operatorname{arctg} 3 + \pi k; 2 \operatorname{arctg} 3 + 2\pi k) : k, n \in \mathbb{Z} \right\}$$

$$2) \left\{ \left( \frac{\pi}{4} + \pi n; \frac{\pi}{2} + \pi n \right) : n \in \mathbb{Z} \right\} \quad 3) \left\{ \left( \frac{\pi}{4} + \pi k; \frac{\pi}{2} + 2\pi k \right) : k \in \mathbb{Z} \right\}$$

4)

$$\{(\operatorname{arctg} 1 + \pi n; 2(\operatorname{arctg} 1 + \pi n)); (\operatorname{arctg} 2 + \pi k; 2(\operatorname{arctg} 2 + \pi k)) : n, k \in \mathbb{Z}\}$$

$$5) \left\{ \left( \frac{\pi}{4} + \pi n; \frac{\pi}{2} + 2\pi n \right); \left( \frac{\pi}{4} + \pi k; \frac{\pi}{2} + 2\pi k \right) : k, n \in \mathbb{Z} \right\}$$