

2) Řešte v \mathbb{R} , určete podmínky řešitelnosti

$$\sin\left(3x + \frac{\pi}{3}\right) = -\frac{1}{2}$$

$$3x + \frac{\pi}{3} = a$$

$$\sin a = -\frac{1}{2}$$

$$a_0 = \frac{\pi}{6}, \quad \text{III., IV. kv.}$$

$$a_1 = \frac{7\pi}{6} + k2\pi \Rightarrow 3x + \frac{\pi}{3} = \frac{7\pi}{6} + k2\pi \Rightarrow 3x = \frac{5\pi}{6} + k2\pi \Rightarrow x_1 = \frac{5\pi}{18} + k\frac{2\pi}{3}$$

$$a_2 = \frac{11\pi}{6} + k2\pi \Rightarrow 3x + \frac{\pi}{3} = \frac{11\pi}{6} + k2\pi \Rightarrow 3x = \frac{9\pi}{6} + k2\pi \Rightarrow x_2 = \frac{9\pi}{18} + k\frac{2\pi}{3} = \frac{\pi}{2} + k\frac{2\pi}{3}$$

$$P = \left\{ \frac{5\pi}{18} + k\frac{2\pi}{3}, \quad \frac{\pi}{2} + k\frac{2\pi}{3} \right\}, k \in \mathbb{Z}$$

[Zpět:](#)

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