

Zadatak 7. Koliko je:

$$1) \cos\left(\arccos\left(-\frac{1}{2}\right) + \frac{\pi}{3}\right);$$

$$2) \operatorname{tg} 2\left(\operatorname{arctg}\left(-\frac{1}{\sqrt{3}}\right) + \frac{\pi}{3}\right);$$

$$3) \operatorname{tg}\left(2\pi - \arcsin \frac{\sqrt{3}}{2}\right);$$

$$4) \operatorname{ctg}\left(\frac{3\pi}{2} - \arccos \frac{\sqrt{2}}{2}\right)?$$

Rješenje.

$$1) \cos\left(\arccos\left(-\frac{1}{2}\right) + \frac{\pi}{3}\right) = \cos\left(\frac{2\pi}{3} + \frac{\pi}{3}\right) = \cos \pi = -1;$$

$$2) \operatorname{tg} 2\left(\operatorname{arctg}\left(-\frac{1}{\sqrt{3}}\right) + \frac{\pi}{3}\right) = \operatorname{tg} 2\left(-\frac{\pi}{6} + \frac{\pi}{3}\right) = \operatorname{tg} 2 \cdot \frac{\pi}{6} = \operatorname{tg} \frac{\pi}{3} = \sqrt{3};$$

$$3) \operatorname{tg}\left(2\pi - \arcsin \frac{\sqrt{3}}{2}\right) = \operatorname{tg}\left(2\pi - \frac{\pi}{3}\right) = \operatorname{tg} \frac{2\pi}{3} = -\sqrt{3};$$

$$4) \operatorname{ctg}\left(\frac{3\pi}{2} - \arccos \frac{\sqrt{2}}{2}\right) = \operatorname{ctg}\left(\frac{3\pi}{2} - \frac{\pi}{4}\right) = \operatorname{ctg} \frac{5\pi}{4} = 1.$$