Zadatak 6. Izračunaj:

1) $\arcsin\left(-\dfrac{1}{2}\right) + \arcsin\dfrac{\sqrt{2}}{2}$;

2) $\arcsin\left(-\dfrac{\sqrt{2}}{2}\right) - \arcsin\dfrac{\sqrt{3}}{2}$;

3) $\arcsin\dfrac{1}{2} + \arccos\dfrac{\sqrt{3}}{2} + \operatorname{arc tg}\dfrac{\sqrt{3}}{3}$;

4) $\arcsin\dfrac{\sqrt{3}}{2} + \arccos\left(-\dfrac{\sqrt{3}}{2}\right) + \operatorname{arc tg}\left(-\dfrac{\sqrt{3}}{3}\right)$.

Rješenje. **1)** $\arcsin\left(-\dfrac{1}{2}\right) + \arcsin\dfrac{\sqrt{2}}{2} = -\dfrac{\pi}{6} + \dfrac{\pi}{4} = \dfrac{-2\pi + 3\pi}{12} = \dfrac{\pi}{12}$;

2) $\arcsin\left(-\dfrac{\sqrt{2}}{2}\right) - \arcsin\dfrac{\sqrt{3}}{2} = -\dfrac{\pi}{4} - \dfrac{\pi}{3} = -\dfrac{7\pi}{12}$;

3) $\arcsin\dfrac{1}{2} + \arccos\dfrac{\sqrt{3}}{2} + \operatorname{arc tg}\dfrac{\sqrt{3}}{3} = 0 + \dfrac{\pi}{2} + 0 = \dfrac{\pi}{2}$;

4) $\arcsin\dfrac{\sqrt{3}}{2} + \arccos\left(-\dfrac{\sqrt{3}}{2}\right) + \operatorname{arc tg}\left(-\dfrac{\sqrt{3}}{3}\right) = \dfrac{\pi}{3} + \dfrac{5\pi}{6} - \dfrac{\pi}{6} = \pi$.