

Zadatak 3. Dokaži:

1) $\sin \frac{\pi}{3} + \sin \frac{\pi}{6} > 1$;

2) $\cos \frac{7\pi}{4} + \cos \frac{11\pi}{6} > 1$.

Rješenje.

1) $\sin \frac{\pi}{3} + \sin \frac{\pi}{6} > 1$
 $\frac{\sqrt{3}}{2} + \frac{1}{2} > 1$
 $\frac{\sqrt{3}+1}{2} > 1 \quad / \cdot 2$
 $\sqrt{3} + 1 > 2$
 $\sqrt{3} > 1$

2) $\cos \frac{7\pi}{4} + \cos \frac{11\pi}{6} > 1$
 $\frac{\sqrt{2}}{2} + \frac{\sqrt{3}}{2} > 1$
 $\frac{\sqrt{2}+\sqrt{3}}{2} > 1 \quad / \cdot 2$
 $\underbrace{\sqrt{2}}_{>1} + \underbrace{\sqrt{3}}_{>1} > 2$