Zadatak 4. $\operatorname{tg}\left(\frac{\pi}{3}\cdot\cos(2\pi x)\right)=\sqrt{3}.$

Rješenje.

$$\operatorname{tg}\left(\frac{\pi}{3}\cdot\cos(2\pi x)\right)=\sqrt{3}$$
$$\frac{\pi}{3}\cdot\cos(2\pi x)=\frac{\pi}{3}+k\pi$$
$$\cos(2\pi x)=1+3k,\quad k\in\mathbf{Z}$$

zbog $|\cos(2\pi x)|\leqslant 1$jednakost je rješiva samo za $k=0$ pa imamo :

$$\cos(2\pi x)=1$$
$$2\pi x=2\pi m,\quad m\in\mathbf{Z}$$
$$x=m,\quad m\in\mathbf{Z}$$