2. $\sqrt{3}\,\mathrm{tg}\left(2x-\frac{\pi}{3}\right)-3=0$

$\sqrt{3}\,\mathrm{tg}\left(2x-\frac{\pi}{3}\right)=3 \quad /\cdot\frac{1}{\sqrt{3}}$

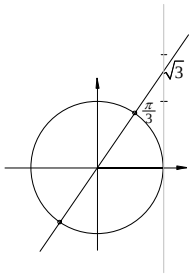
$\mathrm{tg}\left(2x-\frac{\pi}{3}\right)=\frac{3}{\sqrt{3}}$

$\mathrm{tg}\left(2x-\frac{\pi}{3}\right)=\frac{3}{\sqrt{3}}\cdot\frac{\sqrt{3}}{\sqrt{3}}=\frac{3\sqrt{3}}{3}$

$\mathrm{tg}\left(2x-\frac{\pi}{3}\right)=\sqrt{3}$

$2x-\frac{\pi}{3}=t$ → uvedemo novu nepoznanicu

$\mathrm{tg}\,t=\sqrt{3}$ → i jednadžbu smo sveli na elementarnu jednadžbu



$\underbrace{t=\frac{\pi}{3}+k\pi \quad , \quad t=2x-\frac{\pi}{3}}$

$\Downarrow$

$2x-\frac{\pi}{3}=\frac{\pi}{3}+k\pi$

$2x=\frac{\pi}{3}+\frac{\pi}{3}+k\pi$

$2x=\frac{2\pi}{3}+k\pi \quad /\cdot\frac{1}{2}$

$x=\frac{\pi}{3}+\frac{k\pi}{2}$

Za one kojima ovo nije dovoljno
dodatna video uputa uz ovaj zadatak nalazi se ovdje >>>