Zadatak 4. Napiši jednadžbu tangente na krivulju $y = \cos\left(2x - \frac{\pi}{3}\right) + 2$ u točki s apscisom $x_0 = \frac{\pi}{2}$.

Rješenje. $y\left(\frac{\pi}{2}\right) = \cos\left(\pi - \frac{\pi}{3}\right) + 2 = \cos\frac{2\pi}{3} + 2 = -\frac{1}{2} + 2 = \frac{3}{2}$; $y' = -2\sin\left(2x - \frac{\pi}{3}\right) \implies y'\left(\frac{\pi}{2}\right) = -2\sin\left(\frac{2\pi}{2} - \frac{\pi}{3}\right) = -2\sin\frac{2\pi}{3} = -\sqrt{3}$. Jednadžba tangente glasi $y - \frac{3}{2} = -\sqrt{3}\left(x - \frac{\pi}{2}\right)$, odnosno $y = -\sqrt{3}x + \frac{1}{2}(\pi\sqrt{3} + 3)$.