8.89. a) $2\sin^3 x - 3\sin x \cos x = 0$ $\quad \sin^2 x + \cos^2 x = 1$

$\sin^2 x = 1 - \cos^2 x$

$\sin x(2\sin^2 x - 3\cos x) = 0$

$\sin x = 0 \quad \vee \quad 2\sin^2 x - 3\cos x = 0$

$\underline{x = k \cdot \pi}$

$2(1-\cos^2 x) - 3\cos x = 0$

$-2\cos^2 x - 3\cos x + 2 = 0 \quad | \cdot (-1)$

$2\cos^2 x + 3\cos x - 2 = 0$ podstawiamy $\cos x = t$

$2t^2 + 3t - 2 = 0 \quad a=2, b=3, c=-2 \quad t \in \langle -1; 1 \rangle$

$\Delta = b^2 - 4ac = 3^2 - 4 \cdot 2 \cdot (-2) = 9 + 16 = 25 \quad \sqrt{\Delta} = 5$

$t_1 = \frac{-b - \sqrt{\Delta}}{2a} = \frac{-3-5}{2 \cdot 2} = \frac{-8}{4} = -2 \notin \langle -1; 1 \rangle$

$t_2 = \frac{-b + \sqrt{\Delta}}{2a} = \frac{-3+5}{2 \cdot 2} = \frac{2}{4} = \frac{1}{2}$

$\cos x = \frac{1}{2}$

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

odp: $\begin{cases} x = k \cdot \pi \\ x = \pm \frac{\pi}{3} + 2k\pi, \end{cases} \quad k \in C$