а) $2\cos^2 x = \sqrt{3}\sin\left(\frac{3\pi}{2}+x\right)$

$2\cos^2 x = \sqrt{3}\cos x$

$2\cos^2 x - \sqrt{3}\cos x = 0$

$\cos x(2\cos x - \sqrt{3}) = 0$

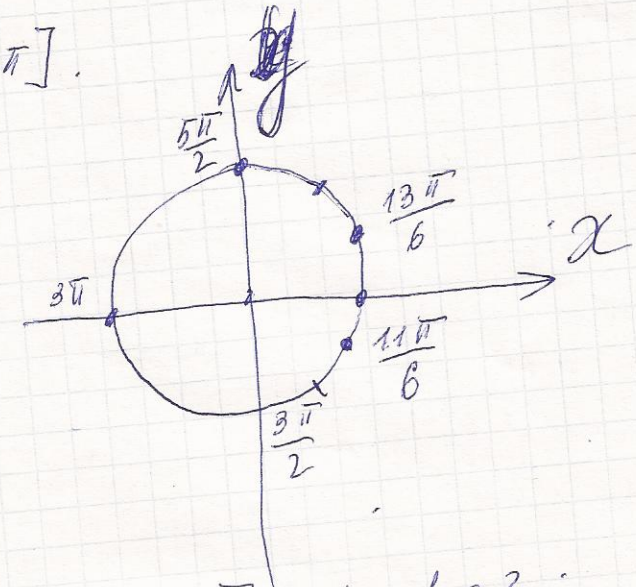
$\cos x = 0$ или $2\cos x = +\sqrt{3}$

$x = \frac{\pi}{2} + \pi k;\ k \in Z$ $\cos x = \frac{\sqrt{3}}{2}$

$x = \pm \arccos\frac{\sqrt{3}}{2} + 2\pi n,\ n \in Z$

$x = \pm\frac{\pi}{6} + 2\pi n;\ n \in Z.$

б) $\left[\frac{3\pi}{2};\ 3\pi\right]$.



Ответ: а) $\frac{\pi}{2} + \pi k;\ k \in Z;$

$\pm\frac{\pi}{6} + 2\pi n;\ n \in Z$

б) $\frac{3\pi}{2};\ \frac{5\pi}{2};\ \frac{11\pi}{6};\ \frac{13\pi}{6}$