Suppose the graph of $f(x)$ intersects the x-axis at point $M(x_0, 0)$. Hence:
$f(x_0) = 0$;
$2\cos x_0 - 1 = 0$;
$2\cos x_0 = 1$;
$\cos x_0 = 0.5$;
$x_0 = \pm \arccos 0.5 + 2\pi n, n \in Z$;
$x_0 = \pm \frac{\pi}{3} + 2\pi n, n \in Z$.
Thus $f(x)$ intersects the x-axis at points $M(\pm \frac{\pi}{3} + 2\pi n, 0), n \in Z$.