21. $\cos(2\theta) = \frac{\sqrt{2}}{2}$

$\cos\frac{\pi}{4} = \frac{\sqrt{2}}{2}$ $\cos\frac{7\pi}{4} = \frac{\sqrt{2}}{2}$ $\cos\frac{\pi}{4}+2\pi = \frac{\sqrt{2}}{2}$ $\cos\frac{7\pi}{4}+2\pi = \frac{\sqrt{2}}{2}$ $\cos\frac{\pi}{4}+4\pi = \frac{\sqrt{2}}{2}$

$\cos\frac{\pi}{4} = \frac{\sqrt{2}}{2}$ $\cos\frac{7\pi}{4} = \frac{\sqrt{2}}{2}$ $\cos\frac{9\pi}{4} = \frac{\sqrt{2}}{2}$ $\cos\frac{15\pi}{4} = \frac{\sqrt{2}}{2}$ $\cos\frac{17\pi}{4} = \frac{\sqrt{2}}{2}$

$2\theta = \frac{\pi}{4}$ $2\theta = \frac{7\pi}{4}$ $2\theta = \frac{9\pi}{4}$ $2\theta = \frac{15\pi}{4}$ $2\theta = \frac{17\pi}{4}$

$\theta = \frac{\pi}{8}$ $\theta = \frac{7\pi}{8}$ $\theta = \frac{9\pi}{8}$ $\theta = \frac{15\pi}{8}$ $\theta = \frac{17\pi}{8}$

$= 2\frac{1}{8}\pi$

22. $\cos\theta = \frac{1}{8}$

$\cos\theta - \frac{1}{8} = 0$

$r1$ $r2$

$\theta = 1.45, 4.84$