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$I.[-\pi,\pi]$

$f(x)=\operatorname{sen}x+\cos x \qquad g(x)=\operatorname{sen}x-\cos x$

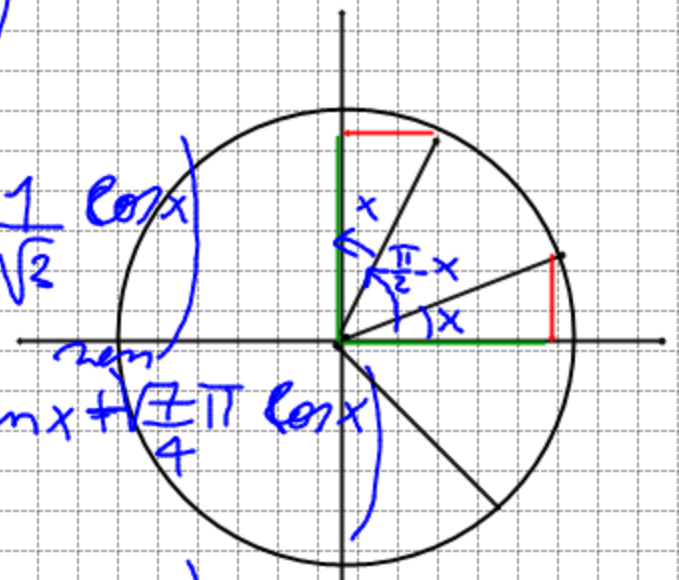
$$f(x)=\sqrt{2}\left(\frac{1}{\sqrt{2}}\operatorname{sen}x+\frac{1}{\sqrt{2}}\cos x\right)$$

$$f(x)=\sqrt{2}\left(\cos\frac{\pi}{4}\operatorname{sen}x+\operatorname{sen}\frac{\pi}{4}\cos x\right)$$

$$f(x)=\sqrt{2}\operatorname{sen}\left(x+\frac{\pi}{4}\right)$$

$$g(x)=\operatorname{sen}x-\cos x$$

$$g(x)=\sqrt{2}\left(\frac{1}{\sqrt{2}}\operatorname{sen}x-\frac{1}{\sqrt{2}}\cos x\right)$$



$$g(x)=\sqrt{2}\left(\cos\frac{7}{4}\pi\operatorname{sen}x+\operatorname{sen}\frac{7}{4}\pi\cos x\right)$$

$$g(x)=\sqrt{2}\operatorname{sen}\left(x+\frac{7}{4}\pi\right)=\sqrt{2}\operatorname{sen}\left(x-\frac{\pi}{4}\right)$$

$$f(x)=\sqrt{2}\operatorname{sen}\left(x+\frac{\pi}{4}\right)$$

$$x+\frac{\pi}{4}=X$$

$$x=X-\frac{\pi}{4}$$