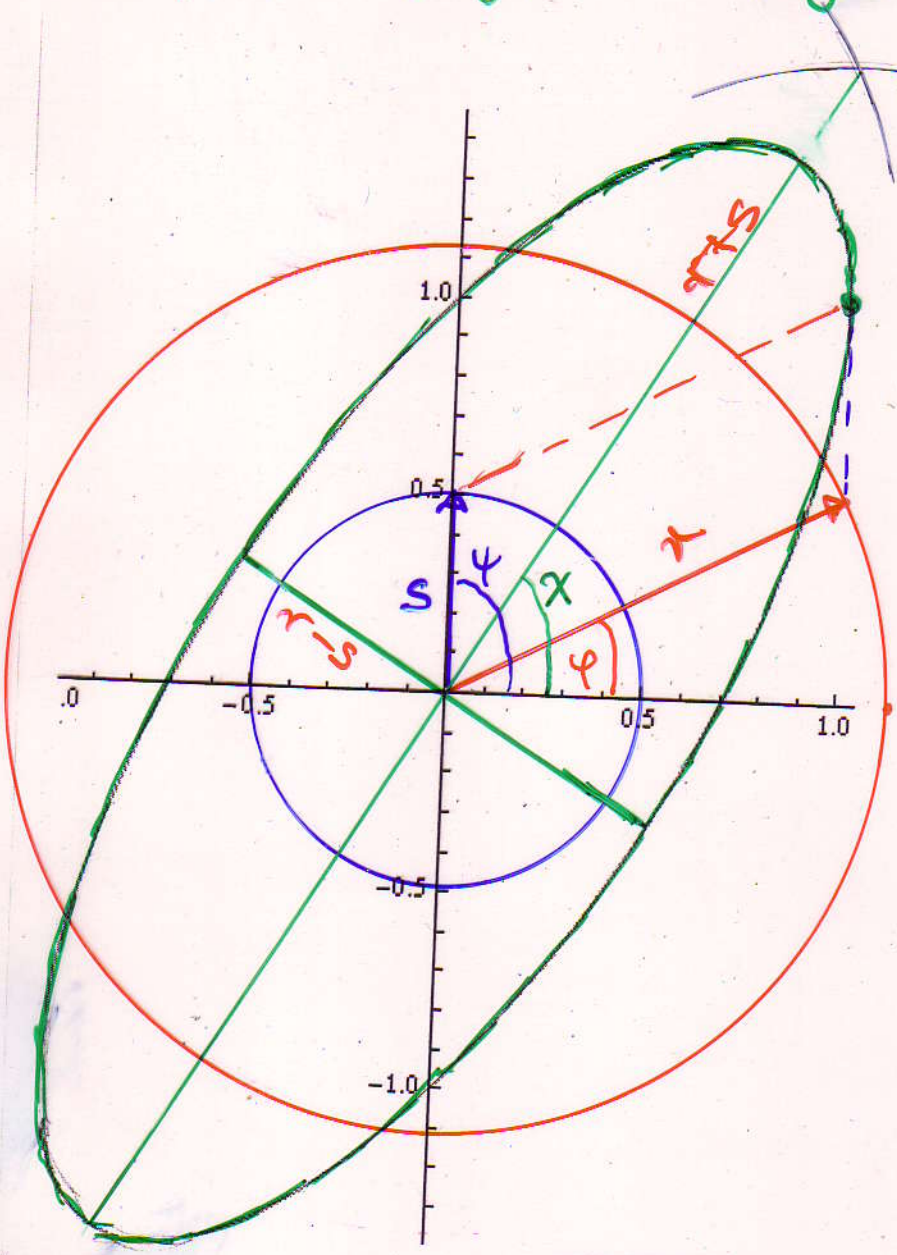
$$f(t) = (1+j)\cos t + j\sin t$$



$$f(t) = r\,e^{j(t+\varphi)} + s\,e^{-j(t-\psi)}$$

$$= (a+bj)(\cos t + j\sin t) + (c+dj)(\cos t + j\sin t)$$

$$= (a+c+(b+d)j)\cos t + (-b+d+(a-c)j)\sin t$$

$a+c=1 \quad b+d=1$ $\quad a=1,\ b=\frac{1}{2},\ r=\frac{\sqrt{5}}{2},\ \varphi=\arctan\frac{1}{2}$

$-b+d=0 \quad a-c=1$ $\quad c=0,\ d=\frac{1}{2},\ s=\frac{1}{2},\ \psi=\frac{\pi}{2}$

$$\frac{1}{2}(\psi-\varphi) \equiv \frac{1}{2}(\pi/2 + \arctan\tfrac{1}{2}) \mod \pi$$