

3) $\mathcal{D} = \mathbb{C}$ (ensemble des complexes)

\downarrow TF existe $|z|=1 \subset \mathcal{D}$.

$z = e^{2\pi j f}$

$G_1(z) = \frac{1}{2} + \frac{1}{2} z^{-2}$

$G_1(f) = \frac{1}{2} + \frac{1}{2} e^{-4\pi j f}$
 $= e^{-2\pi j f} \left(\frac{e^{2\pi j f}}{2} + \frac{e^{-2\pi j f}}{2} \right)$
 $\qquad\qquad\qquad \underbrace{\qquad\qquad\qquad}_{\cos 2\pi f}$

$= e^{-2\pi j f} \cdot \cos 2\pi f$

$|G_1(f)|^2 = \cos^2 2\pi f$

