

Calcul $G_2(z)$

1 méthode $G_2(z) = \frac{Y(z)}{X(z)}$

$$y(n] = \frac{1}{2} x(n] + \frac{1}{2} y(n-1) \xrightarrow{\text{TZ}} Y(z) = \frac{1}{2} X(z) + \frac{1}{2} z^{-1} Y(z)$$

$$\Rightarrow G_2(z) = \frac{1}{2} \cdot \frac{1}{1 - \frac{1}{2} z^{-1}}$$

On vérifie $G_2(z) = \frac{\text{num}(z)}{\text{denom}(z)}$ RII

Pôle $z_0 = \frac{1}{2} < 1 \Rightarrow$ pôles stables

2 méthode

$$y(n] = \frac{1}{2} x(n] + \frac{1}{2} y(n] * \delta(n-1)$$

↳ difficile de mettre sous la forme

$$y(n] = x(n] * g_2(n]$$