data
fecha

D S F O O S S
D L M M J V S

$H[z] = \frac{1-2z^{-1}}{1-0,5z^{-1}}$

↳ hay cero and polos

• Zero

$-2z^{-1} = 1$

$\frac{1}{2z^1} = 1$

$2z = \frac{1}{1}$

$z = \frac{1}{2}$

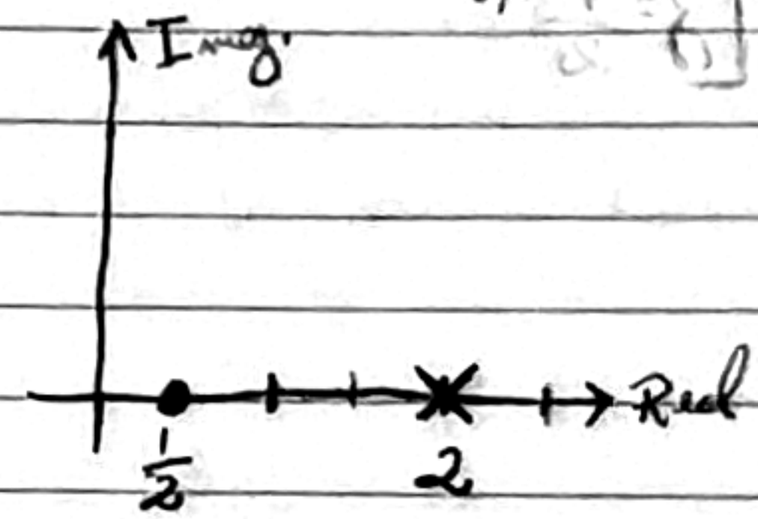
• Polo

$0,5z^{-1} = 1$

$\frac{1}{0,5z^1} = 1$

$0,5z = \frac{1}{1}$

$z = \frac{1}{0,5} = \frac{2}{1}$



$\frac{Y[z]}{X[z]} = \frac{1-2z^{-1}}{1-0,5z^{-1}}$

$Y[z](1-0,5z^{-1}) = X[z](1-2z^{-1})$

$Y[z] - 0,5Y[z]z^{-1} = X[z] - 2X[z]z^{-1}$

$y[n] = x[n] - 2x[n-1] + 0,5y[n-1]$