3.5-5 Repita o Prob. 3.5-4 para

$$y[n]+2y[n-1]+y[n-2]=2x[n]-x[n-1]$$

com $x[n] = (3)^{-n}u[n]$, $y[-1] = 2$, e $y[-2]=3$.

CIs e x[n]=0

y0[n] = -2y[n-1]-y[n-2]

n = 0 => y0[0] = -2.2-3 = -7

n = 1 => y0[1] = -2.(-7)-2 = 12

n = 2 ....

CIs = 0; x[n]

ynull[n] = 2x[n]-x[n-1]-2y[n-1]-y[n-2]

n = 0 => ynull[0] = 2.1-0-2.0-0 = 2

n = 1 => ynull[1] = 2.1/3-1-2.(2)-0 = 2/3-5

n = 2 ....

CIs e x[n]

y[n] = 2x[n]-x[n-1]-2y[n-1]-y[n-2]

n = 0 => y[0] = 2.1-0-2.2-3 = -5

n = 1 => y[1] = 2.1/3-1-2.(-5)-2 = 2/3+7

n = 2 ....

y[n] = y0[n]+ynull[n]

3.5-5 Repita o Prob. 3.5-4 para

$$y[n]+2y[n-1]+y[n-2]=2x[n]-x[n-1]$$

com $x[n] = (3)^{-n}u[n]$, $y[-1] = 2$, e $y[-2] = 3$.

y0[n]

$E^2+2E+1 = Q(E)$

$2E^2-E = P(E)$

$\gamma^2 + 2 \quad \gamma + 1 = 0$

$\gamma 1 = -1; \gamma 2 = -1$

y0[n] = (c1+c2n) γ ^n pois são raizes repetidas

y0[-1] = (c1+c2(-1))(-1) ^(-1) = 2

y0[-2] = (c1+c2(-2))(-1) ^(-2) = 3

c1 = c2 =

y0[2] = (c1+c22) γ ^2

3.5-5 Repita o Prob. 3.5-4 para

$$y[n]+2y[n-1]+y[n-2]=2x[n]-x[n-1]$$

h[n]

com $x[n] = (3)^{-n}u[n]$, $y[-1] = 2$, e $y[-2]=3$.

$E^2+2E+1 = Q(E)$

$2E^2-E = P(E)$

$\gamma^2+2\gamma+1=0$

$\gamma_1=-1;\ \gamma_2=-1$

yc[n] = (c1+c2n) γ ^n pois são raizes repetidas

h[n] = A0. δ[n]+yc[n]u[n] A0 = bN/aN = 0/1

CIs= 0 e x[n]= δ[n]; y[n] = h[n]

h[n] = 2 δ [n]-δ [n-1]-2h[n-1]-h[n-2]

n = 0 => h[0] = 2.1-0-2.0-0 = 2

n = 1 => h[1] = 2.0-1-2.(2)-0 = -5

n = 2 ....

h[0] = (c1+c2(0))(-1) ^(0) = 2

h[1] = (c1+c2(1))(-1) ^(1) = -5

yc[n] = (c1+c2n) γ ^n h[n] = yc[n]u[n]

3.5-5 Repita o Prob. 3.5-4 para

$$y[n]+2y[n-1]+y[n-2]=2x[n]-x[n-1]$$

com $x[n] = (3)^{-n}u[n]$, $y[-1] = 2$, e $y[-2]=3$.

ynull[n]

h[n] = yc[n]u[n] x[n] = (3)^(-n). u[n] = 1/3^n u[n] yc[n] = (c1+c2n) γ ^n

ynull[n] = h[n]*x[n]

ynull[n] = (c1+c2n) γ1 ^n.u[n] * γ2 ^n.u[n]

ynull[2] = ...

y[n] = y0[n]+ynull[n]

y[2] =...

3.5-5 Repita o Prob. 3.5-4 para

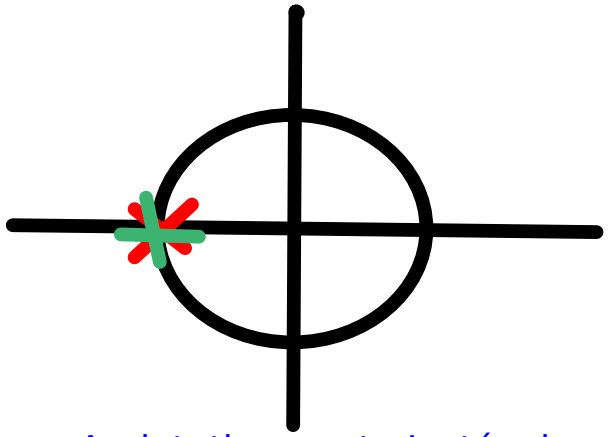
$$y[n]+2y[n-1]+y[n-2]=2x[n]-x[n-1]$$

com $x[n] = (3)^{-n}u[n]$, $y[-1] = 2$, e $y[-2]=3$.

$E^2+2E+1 = Q(E)$

$\gamma^2+2\gamma+1=0$

$\gamma 1=-1;\ \gamma 2=-1$



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