Signal System:

x0(n)

…

xk(n)

y(n)

…

yh(n)

**y(n) = T{x(n)}**

Filter:

a(1)\*y(n)+ a(2)\*y(n-1) + ... + a(na+1)\*y(n-na) = b(1)\*x(n) + b(2)\*x(n-1) + ... + b(nb+1)\*x(n-nb)

[a(1) a(2) …]\*[y(n) y(n-1)…]

= [b(1) b(2) …]\*[x(n) x(n-1)]

[A][Y] = [B][X]

[Y] = ([B]/[A])\*[X]

Y = (num/den)\*X = FILTER

Num stand for Numerator

Den stand for Denominator