Code:

syms n z;

% note that sym(1.2) is used for 1.2delta(n)

HZ = sym(1.2) + ztrans(0.5\*(-0.5)^n\*heaviside(n) -0.6\*(-0.6)^n\*heaviside(n) );

H\_inverse = 1/HZ;

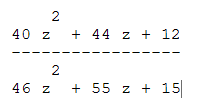
fprintf('The inverse of H(z) is \n')

pretty(simplify(H\_inverse))

fprintf('h inverse as function of n\n')

iztrans(H\_inverse)

The inverse of H(z) is



;===========================================================

h inverse as function of n

ans =

(4\*kroneckerDelta(n, 0))/5 - (24\*(-1)^n\*46^(1 - n)\*265^(1/2)\*(55/2 - 265^(1/2)/2)^(n - 1))/6095 + (24\*(-1)^n\*46^(1 - n)\*265^(1/2)\*(265^(1/2)/2 + 55/2)^(n - 1))/6095 + (16\*(-1)^n\*15^n\*cos(n\*acos((11\*690^(1/2))/276)))/(115\*(690^(1/2))^n)