**Task1**

syms z

n = -2:2;

f = [-3,5,6,7,8];

Fz = sum(f .\* z.^(-n))

**Task2**

syms n z

x = n^2\*heaviside(n);

Xz = ztrans(x,z)

**Task3**

%a

clc

clear

close all

syms z n

x = n^2\*heaviside(n);

X = ztrans(x,z)

%b

X2=iztrans(X,n);

rewrite(x,'heaviside')

**Task4**

num = [ 2 3];

den = [ 1 5 6];

[R,P,K] = residue(num,den);

%a.

syms n z

X = (2\*z+3)/(z^2+5\*z+6);

using\_rational=iztrans(X,n)

%b

X = 3/(z+3)-1/(z+2);

partial\_form=iztrans(X,n)