```
%exercise 5 part 2
A=[-1 1;6 -2]
P=poly(A)   % Sets up char polynomial, det(A-lambdaI)=0
R=roots(P)  % Finds the roots of the above polynomial
E=eig(A)    % Finds the eigenvalues of A, same as roots
I2=eye(2)    % 2 by 2 identity
C=A+I2       % c=a- (-1*i), ie a-lambda*I
N1=null(C,'r')  % Finds null space of A-lambda*I, ie the eigenvectors
A*N1         % A matrix*its null space, should be 0.
```