

Experiment 10

>> **MATLAB Code**

diffy.m

```
function [co]=charpoly(A)
    [m n]= size(A)
    if(m~=n)
        disp('matrix is not square');
        co=[];
        Return;
    end
    for i=1:(n+1)
        x(i)=(i-1)*pi/n;
        y(i)=det(A-x(i)*eye(n));
    end
    co=polyfit(x,y,n)
end
```

Experiment_10

```
A=[7 8 6 7; 1 4 6 8 ; 1 2 3 8; 3 6 8 9]
charpoly(A)
z=length(ans);
syms x
f=0;
i=4;
for y=1:1:z
    f=f+ans(y).*x.^(i-1) ;
    i=i+1;
end
```

>> **Command Window**

Experiment_10

A =

7	8	6	7
1	4	6	8
1	2	3	8
3	6	8	9

m =

4

n =

4

co =

1.0000	-23.0000	28.0000	154.0000	-82.0000
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ans =

1.0000	-23.0000	28.0000	154.0000	-82.0000
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