
```
clear all;
clc;
A = [-2 1 4;
     1 1 1;
     4 1 -2];
% two x0
x0 = [1;2;-1];
x_0 = [1;2;1];
% iteration for the first x0
for i=1:5
    x0 = A*x0;
    x0 = x0/norm(x0);
end
display(x0);
% iteration for the second x_0
for i=1:5
    x_0 = A*x_0;
    x_0 = x_0/norm(x_0);
end
display(x_0);

[V,D]=eig(A);
display(V);
return
```

x0 =

```
-0.6922
 0.0147
 0.7216
```

x_0 =

```
0.5774
0.5774
0.5774
```

V =

```
0.7071    0.4082   -0.5774
0.0000   -0.8165   -0.5774
-0.7071    0.4082   -0.5774
```

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