```
>> syms x y z t lambda L
>> A=[ 3 2; 5 1]

A =

    3    2
    5    1

>> [xi,R]=eig(sym(A))

xi =

[ 1/5 - 11^(1/2)/5, 11^(1/2)/5 + 1/5]
[              1,              1]


R =

[ 2 - 11^(1/2),           0]
[           0, 11^(1/2) + 2]

>> B=[3 -2; 5 -1]

B =

    3   -2
    5   -1

>> [xi,R]=eig(sym(B))

xi =

[ 2/5 - (6^(1/2)*i)/5, (6^(1/2)*i)/5 + 2/5]
[                 1,                 1]


R =

[ 1 - 6^(1/2)*i,           0]
[           0, 6^(1/2)*i + 1]

>> C=[3 -2 0;2 -2 0; 0 1 1]

C =

    3   -2    0
    2   -2    0
    0    1    1
```

```
>> [xi,R]=eig(sym(C))

xi =

[ 0, 2, -1]
[ 0, 1, -2]
[ 1, 1,  1]


R =

[ 1, 0,  0]
[ 0, 2,  0]
[ 0, 0, -1]

>>
```