```
>> L3
Choose a matrix from P,Q,R,S: P

M =

     3     2
     4     1


e1 =

     5


e2 =

    -1


X =

     2     2
     2    -4


D =

    5.0000   -0.0000
    0.0000   -1.0000

>> L3
Choose a matrix from P,Q,R,S: Q

M =

     3    -1
    -2     4


e1 =

     5


e2 =
```

```
         2


X =

      1      1
     -2      1


D =

    5.0000         0
    0.0000    2.0000

>> L3
Choose a matrix from P,Q,R,S: R

M =

      1     -2
     -4      8


e1 =

      9


e2 =

      0


X =

      2      2
     -8      1


D =

      9      0
      0      0

>> L3
Choose a matrix from P,Q,R,S: S
```

```
M =

     2     3
    -3     8


e1 =

    5.0000


e2 =

    5.0000

The matrix is not diagonalizable
>>
```