1, Get the *Eigenvalues* and *Eigenvectors*

```
L = np.array([[0,   1/2, 1/3, 0, 0,   0 ],
              [1/3, 0,   0,   0, 1/2, 0 ],
              [1/3, 1/2, 0,   1, 0,   1/2 ],
              [1/3, 0,   1/3, 0, 1/2, 1/2 ],
              [0,   0,   0,   0, 0,   0 ],
              [0,   0,   1/3, 0, 0,   0 ]])
```

```
eVals, eVecs = la.eig(L)
```

```
print (eVals)
```

```
[ 1.00000000+0.j          0.31416979+0.j         -0.54288045+0.30393757j
 -0.54288045-0.30393757j -0.22840890+0.j          0.00000000+0.j        ]
```

```
print (eVecs)
```

```
[[ 0.30769231+0.j          0.53116445+0.j         -0.25448371-0.35792579j
  -0.25448371+0.35792579j -0.29449150+0.j         -0.80178373+0.j        ]
 [ 0.10256410+0.j          0.56356410+0.j          0.02528834+0.23392751j
   0.02528834-0.23392751j  0.42977236+0.j          0.00000000+0.j        ]
 [ 0.76923077+0.j         -0.34471868+0.j          0.70289147+0.j
   0.70289147-0.j         -0.44286511+0.j         -0.00000000+0.j        ]
 [ 0.48717949+0.j         -0.38426425+0.j         -0.14510850+0.30796164j
  -0.14510850-0.30796164j -0.33872028+0.j          0.26726124+0.j        ]
 [ 0.00000000+0.j          0.00000000+0.j          0.00000000+0.j
   0.00000000-0.j          0.00000000+0.j          0.53452248+0.j        ]
 [ 0.25641026+0.j         -0.36574562+0.j         -0.32858759-0.18396336j
  -0.32858759+0.18396336j  0.64630452+0.j         -0.00000000+0.j        ]]
```

2, *Absolute* values sorted:

```
np.absolute(eVals)
```

```
array([ 1.        ,  0.31416979,  0.62217138,  0.62217138,  0.2284089 ,  0.        ])
```

```
np.absolute(eVals).argsort()
```

```
array([5, 4, 1, 2, 3, 0])
```

```
np.absolute(eVals).argsort()[::-1]
```

```
array([0, 3, 2, 1, 4, 5])
```

3, *Real* number:

```
r / np.sum(r)
```

```
array([ 0.16000000+0.j,  0.05333333+0.j,  0.40000000+0.j,  0.25333333+0.j,
        0.00000000+0.j,  0.13333333+0.j])
```

```
np.real(r/np.sum(r))
```

```
array([ 0.16      ,  0.05333333,  0.4       ,  0.25333333,  0.        ,
        0.13333333])
```