ESO208 Programming Assignment Program-2

Test problem-1:

Output: a)

```
1   Power Method
2
3   The Largest eigenvalue :
4   5.302749
5
6   Eigenvector :
7   0.206394
8   -0.679168
9   0.674354
10  -0.203419
11
12  Iterations :
13  17
14
```

b)

```
1   QR Decomposition Method
2
3   Eigenvalues :
4   5.302775
5   3.618035
6   1.697127
7   1.382045
8
9   Iterations :
10  21
11
```

Test problem-2:

Output: a)

```
1   Power Method
2
3   The Largest eigenvalue :
4   11.999971
5
6   Eigenvector :
7   0.410241
8   -0.815697
9   0.407849
10
11  Iterations :
12  11
13
```

b)

```
 1    QR Decomposition Method
 2
 3    Eigenvalues :
 4    11.999979
 5    6.000010
 6    6.000000
 7
 8    Iterations :
 9    11
10
```

Test problem-3:

Output: a)

```
 1    Power Method
 2
 3    The Largest eigenvalue :
 4    8.156855
 5
 6    Eigenvector :
 7    0.613541
 8    0.699268
 9    0.366868
10
11    Iterations :
12    7
13
```

b)

```
 1    QR Decomposition Method
 2
 3    Eigenvalues :
 4    8.156856
 5    0.656378
 6    0.186777
 7
 8    Iterations :
 9    9
10
```