Eigenvalue Power Method[1]

1. Enter the following sequence of commands:
```
format long
A = hilb(5);
m = eig(A)
v = ones(5,1)
w = v./norm(v);
```
2. Next enter the following sequence:
```
v = A*w;
w = v./norm(v);
ma = w'*A*w
```
3. Repeat the steps in part 2 until the value of `ma` stops changing. How many iteratations did it take? Is this number close to one of the eigenvalues? How close?
4. Repeat the above experiment for the Pascal matrix generated by: `A = pascal(5)`.
5. Repeat the experiment for a larger matrix.
6. Using complete sentences and standard mathematical notation, write a brief report.

This demonstrates the simplest form of the QR method. Most modern software including MATLAB'S built-in function "eig" use improved versions of this algorithm.