

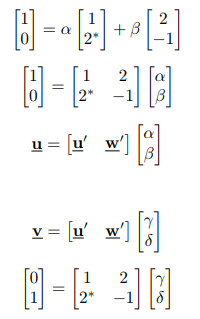
**Eigenvalue Problem**



**Coordinate transform:**

**Gauss-Jordan:**

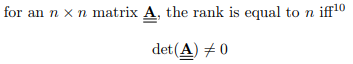
**LU decomposition:**

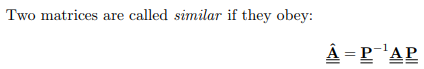
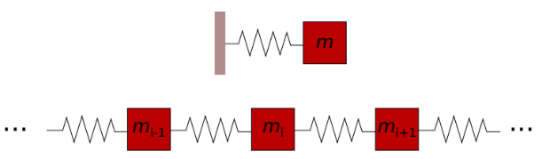




**Gerschgorin`s theorem**









**Infinite solutions**

**No solutions**







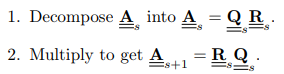
**Lp Norm:**



**Matrix Norm:**

**QR Factorization**







def powerMethod(A,x0,n):

x = x0

for i in range(0,n):

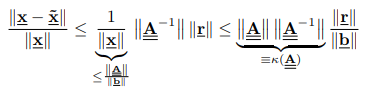
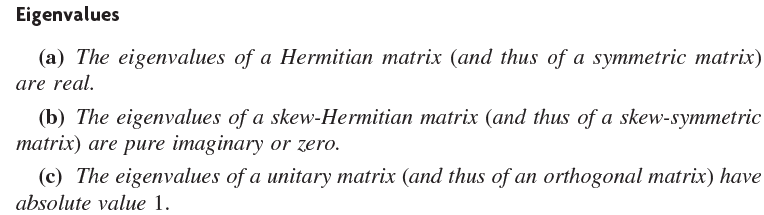
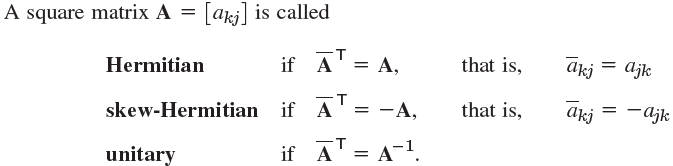
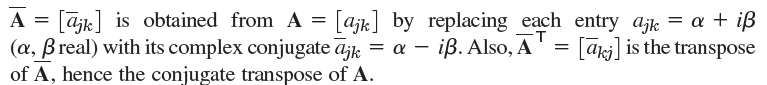
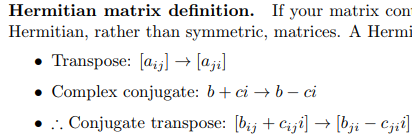
x = np.matmul(A, x)

a = np.max(x)

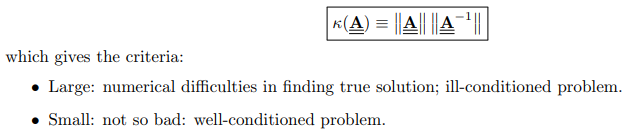
x = x/a

return x

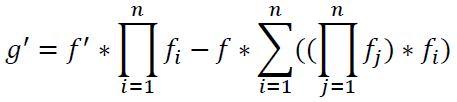
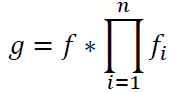
**Power Method:**



**Condition Number:**

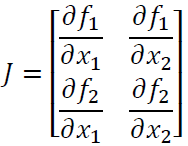


**Factor out roots:**



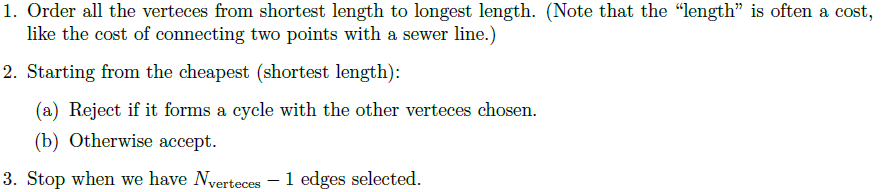
**Bifurcation:**



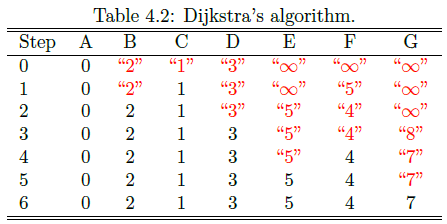
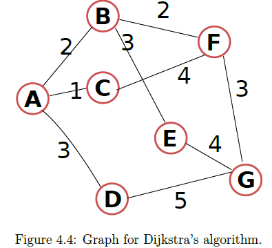




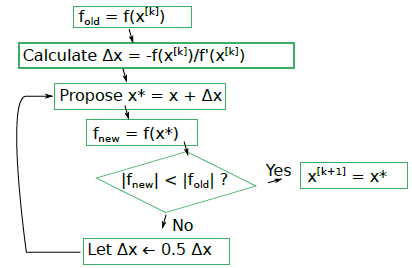
**Newton\_Raphson Iteration:**



**Shortest Spanning Tree:**

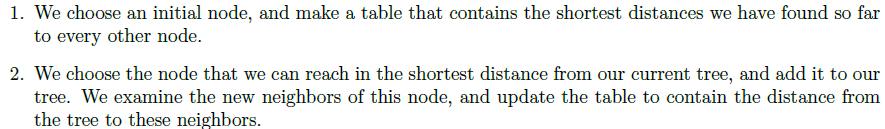


**Dijkstra:**



**Linesearch:**

**Prim:**





**Improved Euler:**



**Runge Kutta:**

**Explicit Euler:**



**Discretizing:**

