

QUESTION 2

command window

clear

clc

$a = [1, -2, -1, 3; 2, 3, 0, 1; 1, 0, -4, -2; 0, -1, 3, 1]$

eig a

ans $\lambda_1 = 2.4323 + 2.2437i$

$\lambda_2 = 2.4323 - 2.2437i$

$\lambda_3 = -1.9323 + 1.7651i$

$\lambda_4 = -1.9323 - 1.7651i$

It is stable because the eigenvalues are equally distributed by the corresponding values of the differential analysis