

Sample 6c

Write a MATLAB program to calculate and print the eigenvalues and eigenvectors of the following matrix:

132	41	40	26	25
50	170	25	14	24
37	26	172	7	3
12	22	9	106	6
61	28	-2	-1	165

The output of this program should look like this:

eigval =

254.0253	0	0	0	0
0	166.7187	0	0	0
0	0	134.9037	0	0
0	0	0	91.9498	0
0	0	0	0	97.4025

eigvec =

0.4690	-0.0522	0.0112	-0.7481	0.6656
0.5741	0.1147	-0.6402	0.2649	-0.2965
0.4259	-0.6423	0.4319	0.2543	-0.2472
0.1691	0.0107	-0.2248	-0.1642	0.4226
0.4904	0.7559	0.5941	0.5278	-0.4789