### 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**