Exercise 1. Textbook exercise 6.1.5. Find the eigenvectors associated to each eigenvalue.

Exercise 2. Textbook exercise 6.1.6. Find the eigenvectors associated to each eigenvalue.

Exercise 3. Textbook exercise 6.1.15.

Exercise 4. Textbook exercise 6.1.20. Find the eigenvectors associated to each eigenvalue.

Exercise 5. Textbook exercise 6.1.26. Find the eigenvectors associated to each eigenvalue.

Exercise 6. Textbook exercise 6.1.27. Rather than use the characteristic polynomial to find the eigenvalues, find the eigenvectors first instead.