

Result

You entered matrix

$$A = \begin{bmatrix} 1 & 1 & 1 \\ 1 & 2 & 2 \\ 1 & 2 & 3 \end{bmatrix}$$

The eigenvalues and eigenvectors of matrix A are:

Eigenvalue	Eigenvector
0.643104	1 0.445042 -0.801938
0.307979	1 -1.24698 0.554958
5.048917	1 1.801938 2.24698

Notice that the upper left entry, the determinant of the 2x2 submatrix at the upper left, and the determinant of the entire matrix are all positive. Also notice that (1) the associated linear transformation sends the first octant of coordinate space to itself, (2) the eigenvector for the largest eigenvalue has all positive coordinates.