allthemath.org Vol II Episode VIII – R cheat sheet

Eigenvalues and eigenvectors of a matrix:

```
eigstuff <- eigen(A)</pre>
```

This returns a list with two items:

- **eigstuff\$values** is an array of the eigenvalues.
- **eigstuff\$vectors** is a matrix with the eigenvectors as columns.

Notes:

- The eigenvalues will be in the same order as the eigenvectors (*i.e.*, eigenvalue #7 will be the eigenvalue that corresponds to column #7 of the eigenvector matrix).

- The dominant eigenvector is **eigstuff\$vectors[,1]**.

- The eigenvectors will be *normalized* (*i.e.*, scaled to give a Euclidean norm of 1).