**HW7**

**Damin Xia**

The first 450 data points were used as training points to perform SVD to obtain principal components. Only the first three eigenvectors were used to approximate the overall variance. Then, 5 other data points were tested to verify the results.

Test point 451: 97.85% of the total variance is captured.

Test point 452: 98.11% of the total variance is captured.

Test point 453: 97.55% of the total variance is captured.

Test point 454: 97.64% of the total variance is captured.

Test point 455: 97.31% of the total variance is captured.