# CSCE 421 HW 4

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## Problem 1
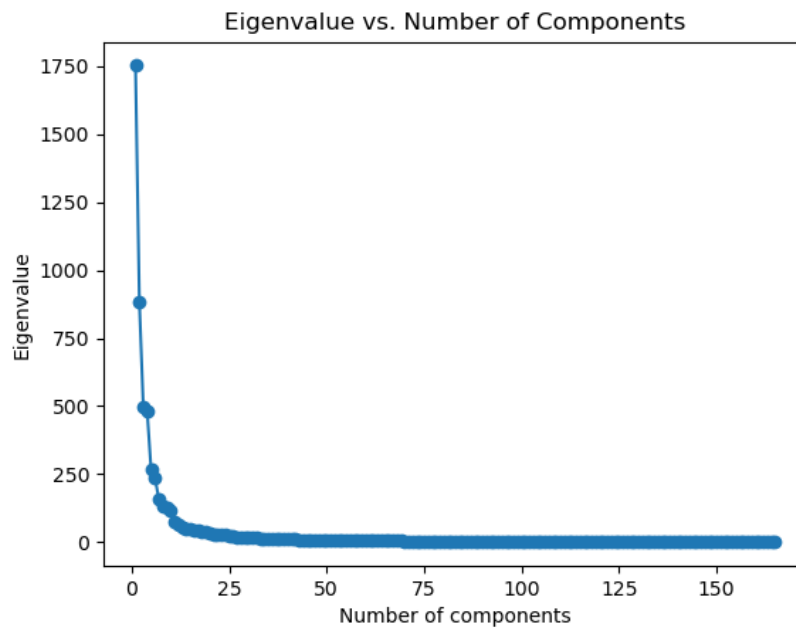
b)



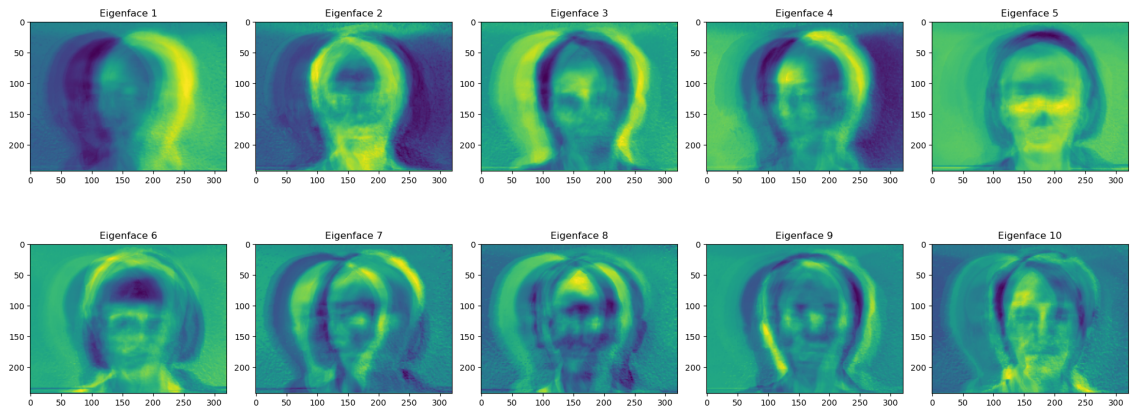Figure 1: The figure above is the number of eigenvalues for the number of components used

**b)**



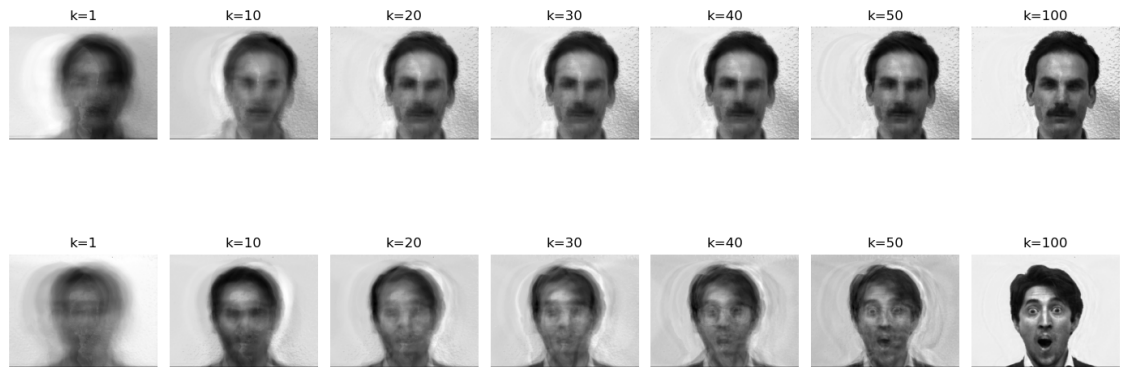Figure 2: The image above shows the first 10 eigenfaces for an image

**d)**



Figure 3: The image above shows the reconstructed faces for different values of k components

From the plots, it looks like 50 components isn't quite all the way there to achieve a visually good result. I added one more test at 100 components and it begins to look a lot better.