

MTH 441: Lab 7

P 1. Consider the Webster, Gunst, and Mason (WGM) data set given in Table 9.4 of Montgomery Book.

- (a) Normalise the data set by subtracting the associated mean and dividing by the square root of $(n - 1) \times$ the sample variance of each variables.
- (b) Find the VIFs.
- (c) Find the condition number.
- (d) Find the eigen vectors and verify if it matches with the eigen vectors given in Table 9.6 of Montgomery Book.

P 2 . Find variance Decomposition Proportions for the WGM data and verify if it matches with the results reported in Table 9.7 of Montgomery Book.