

1. (SAS) File T6-10.dat contains variables in Table 6.10 on page 345.
 - (1) Find two sample sizes n_g and n_d .
 - (2) Find two sample mean vectors \bar{X}_g and \bar{X}_d . (Keep 5 digits after decimal point)
 - (3) Find two sample variance-covariance matrices S_g and S_d . (Keep 5 digits after decimal point)
2. Example 6.3 on page 287 gives the following information on two samples.

$$n_1 = 50, n_2 = 50, \bar{X} = \begin{pmatrix} 8.3 \\ 4.1 \end{pmatrix}, \bar{Y} = \begin{pmatrix} 10.2 \\ 3.9 \end{pmatrix}, S_x = \begin{pmatrix} 2 & 1 \\ 1 & 6 \end{pmatrix}, S_y = \begin{pmatrix} 2 & 1 \\ 1 & 4 \end{pmatrix}$$

- (1) Find S_{pooled} .
- (2) Find $S_{\bar{X}_2 - \bar{Y}_2}^2$.
- (3) Find a 90% confidence interval for $\mu_{x1} - \mu_{y1}$.