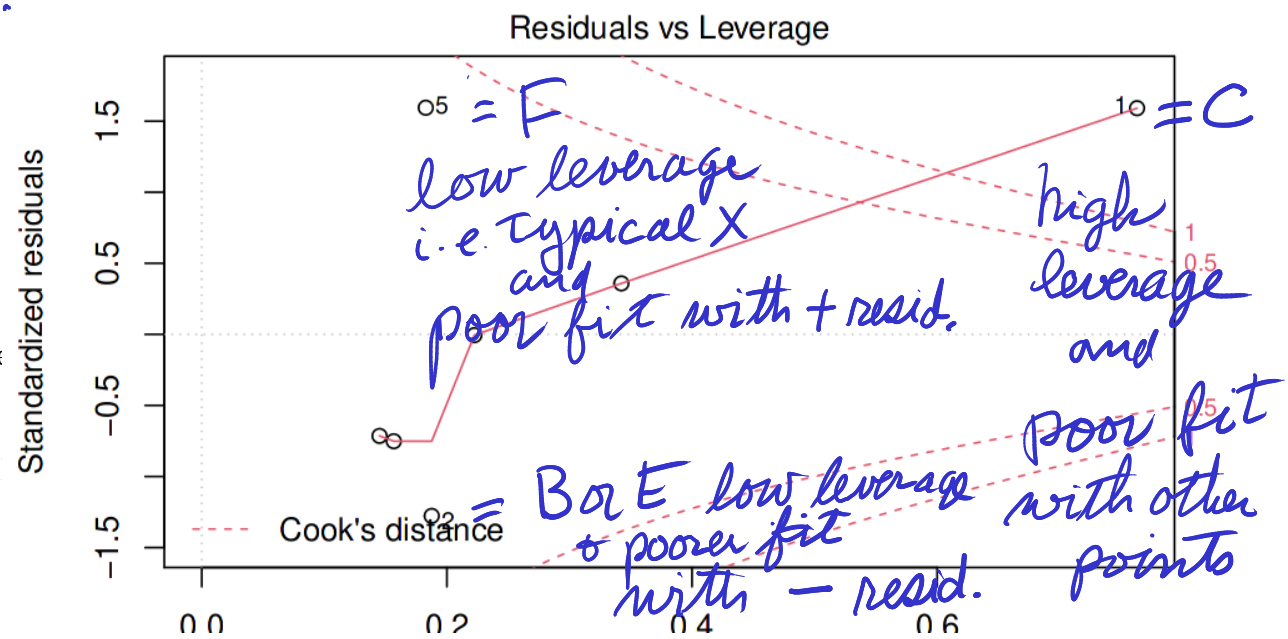
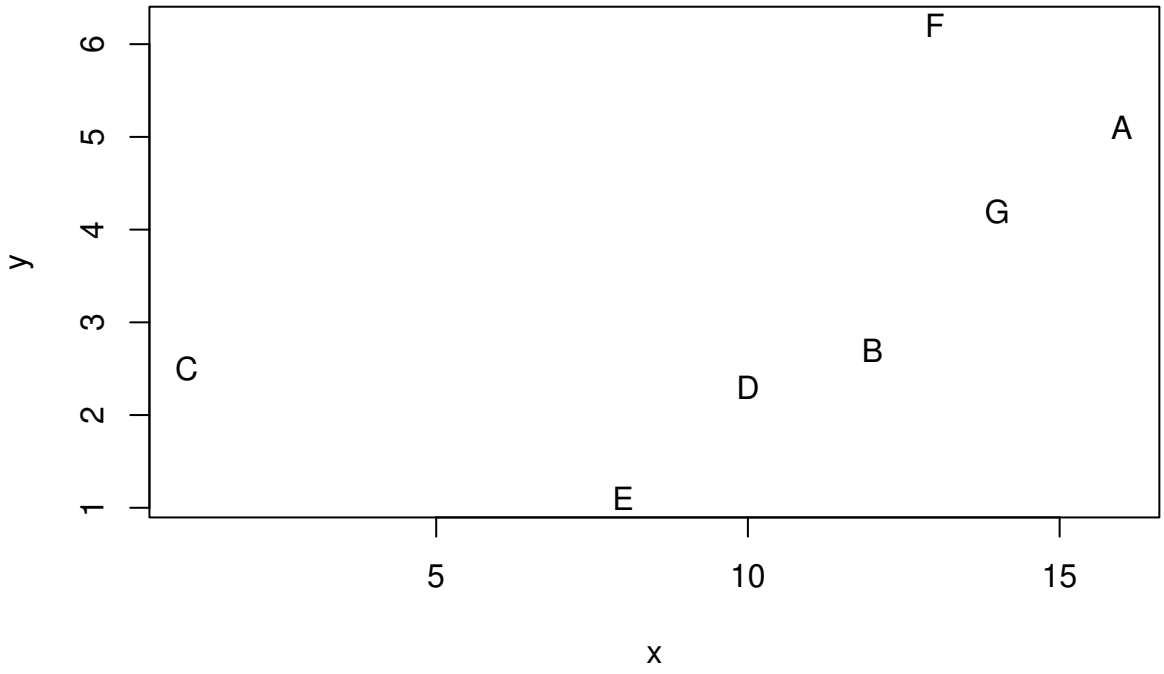
There are

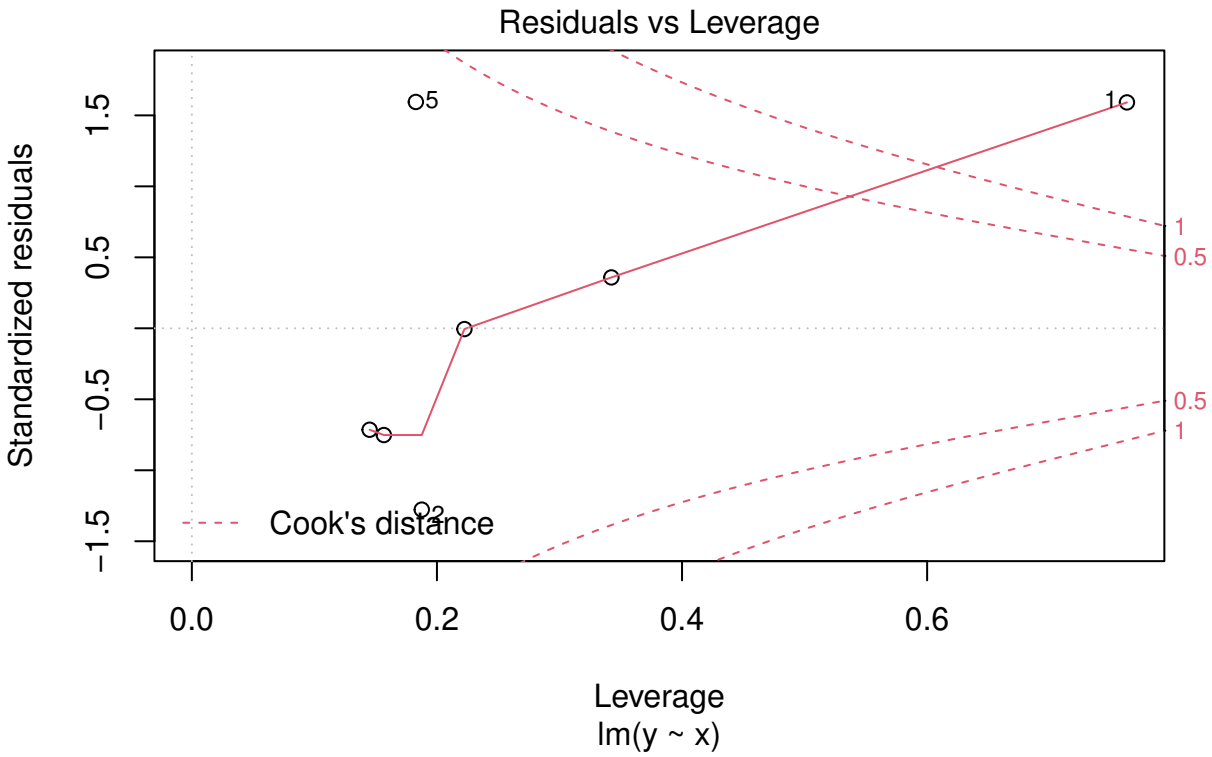
Question

Consider t





The following plot is the Residual-Leverage plot for the regression of y on x:



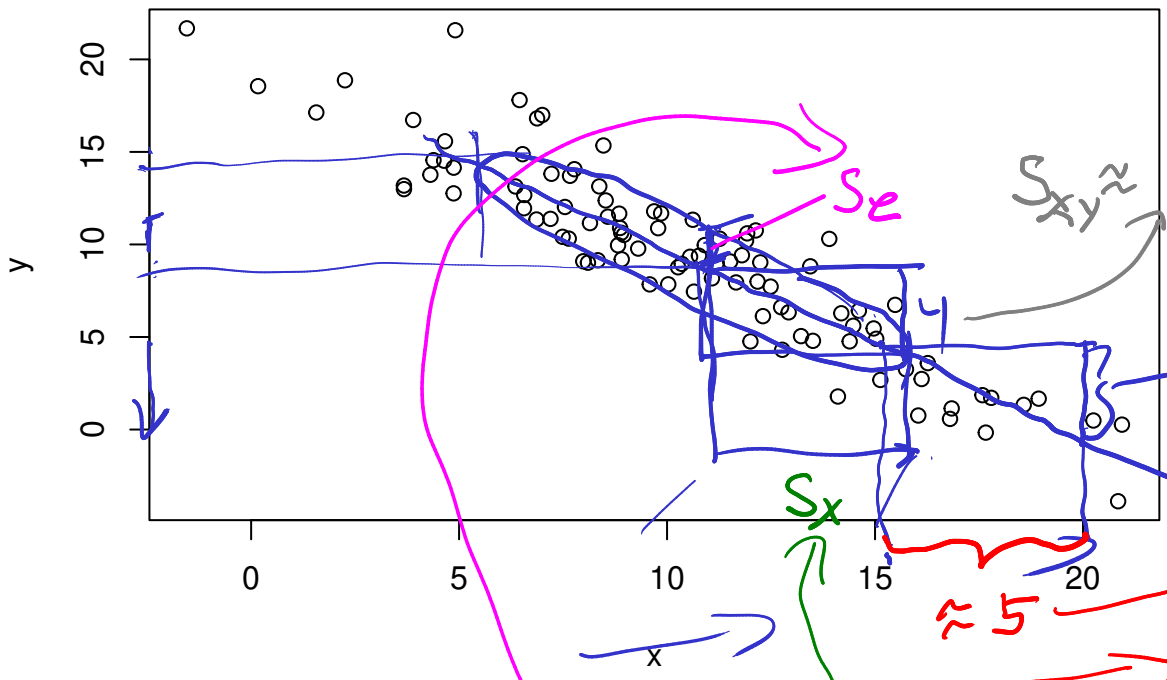
Three points are labelled, 1, 2, and 5, in the Residual-Leverage plots.

Identify which point in the original plot corresponds to each of these three points, e.g. perhaps 1 = G, etc. and justify your choice for each point.

Question 2:

This is a scatterplot displaying 100 observations on two variables, x and y.

$\frac{1}{\sqrt{100}} = .1$ $\sqrt{100} = 10$



a) Estimate the slope and the standard error of the estimate of the slope of the regression of y on x. Show or explain the method you used.

b) Estimate the variance covariance matrix of x and y. Show or explain the method you used method.

$$SE(\hat{\beta}_x) \approx \frac{1}{\sqrt{n}} \times \frac{S_e}{S_x} \approx \frac{1}{\sqrt{100}} \frac{2}{5}$$

$$\approx 0.04$$

NOT REQUIRED - BUT HERE IT IS

$$\begin{bmatrix} S_x^2 & S_{xy} \\ S_{xy} & S_y^2 \end{bmatrix} \approx \begin{bmatrix} 5^2 & 4 \times 5 \\ 4 \times 5 & 5^2 \end{bmatrix} = \begin{bmatrix} 25 & 20 \\ 20 & 25 \end{bmatrix}$$