Example 1 (Simple Linear Regression):

Fit a straight line to Y = (number of) Jobs as a function of X = GPA to the following data:

GPA	Jobs
3.5	24
3.3	23
2.6	18
2.8	20
3	22
2.3	15
2.4	17
2.7	17
3.2	22
3.5	25
2.9	21
3.5	25
2.2	13
3.8	27
2.7	18

Open the data file JOB_GPA.xlsx in MINITAB, then
click on Stat/Regression/Fitted Line Plot (Figure 1a), which will open the window in Figure 1b, select Jobs as Response, GPA as Predictor, Linear Regression Model, then click on Graphs and select Four in One. (You can use Regression procedure as well, but Fitted Line Plot gives the best output in the case of a straight line model).

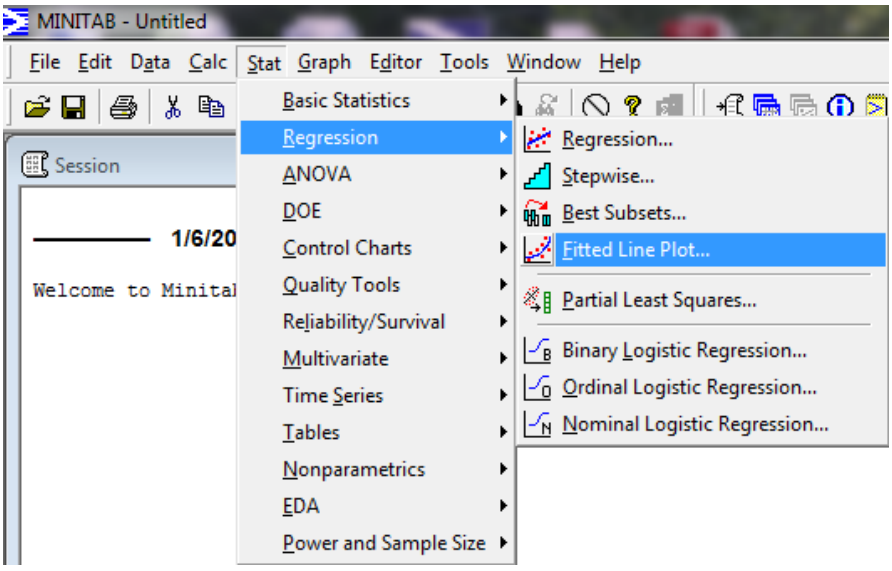

Figure 1a: Fitting a Straight Line in MINITAB

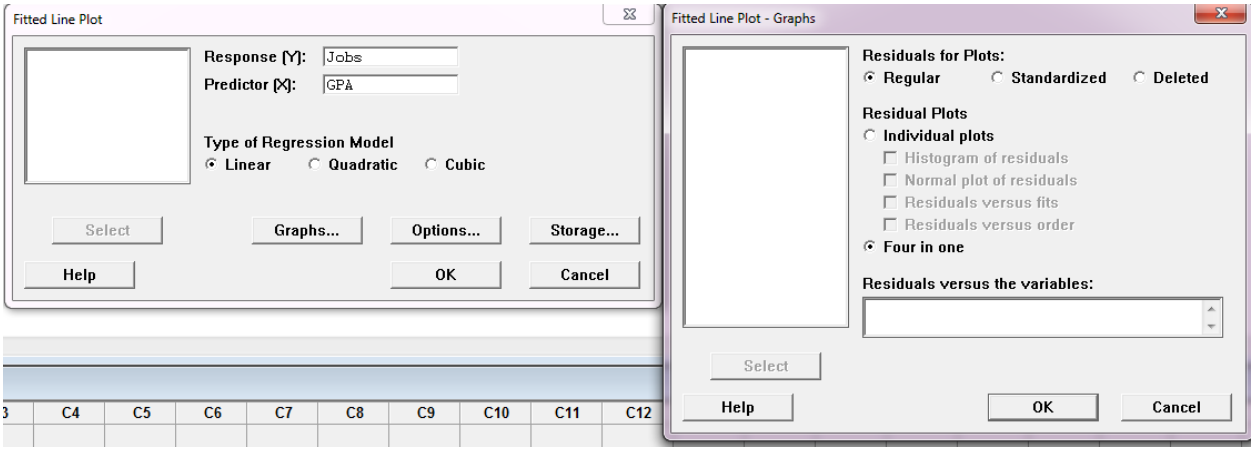

Figure 1b: Selecting Variables and Residual Plots in Fitted Line Plot in MINITAB

Figure 1c shows the output from MINITAB.

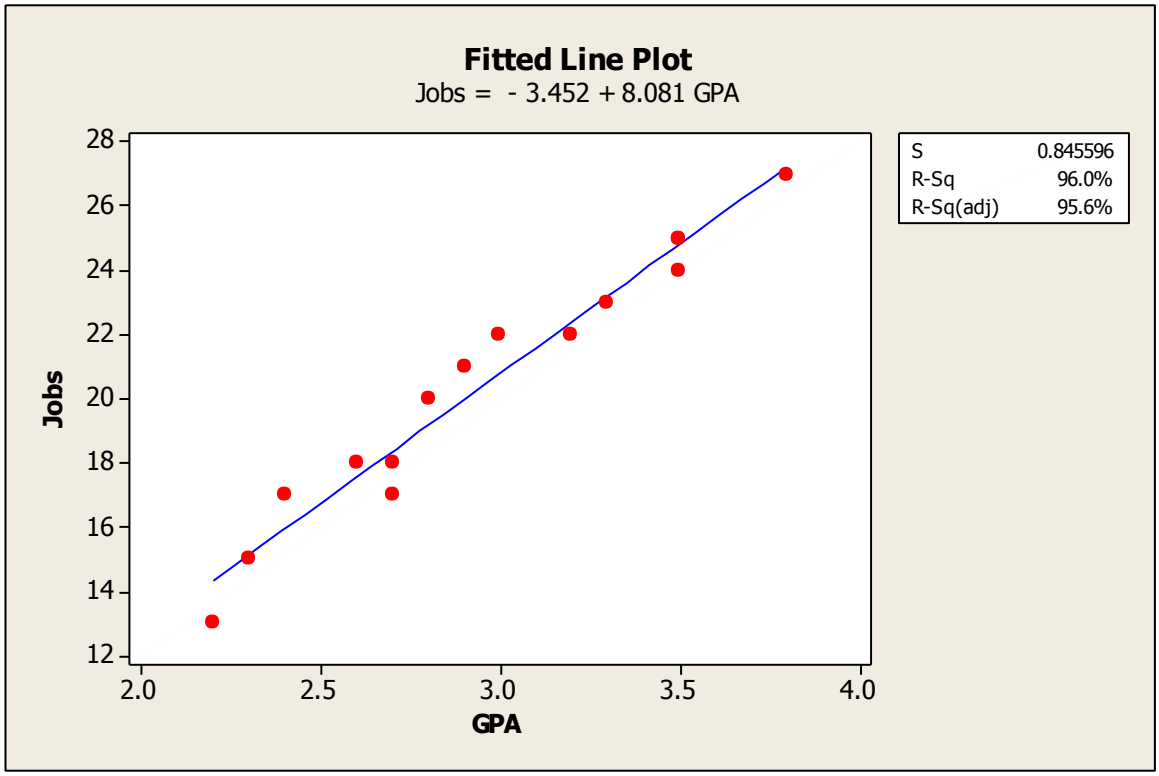

Figure 1c: Fitted Line Plot from MINITAB

The fitted line is Y = -3.452 + 8.081 GPA, with R^2 = 96%.

Figure 1d is the Residual Plots obtained from MINITAB, which shows that the residuals from the straight line model are normally distributed, and hence the linear regression results are valid.

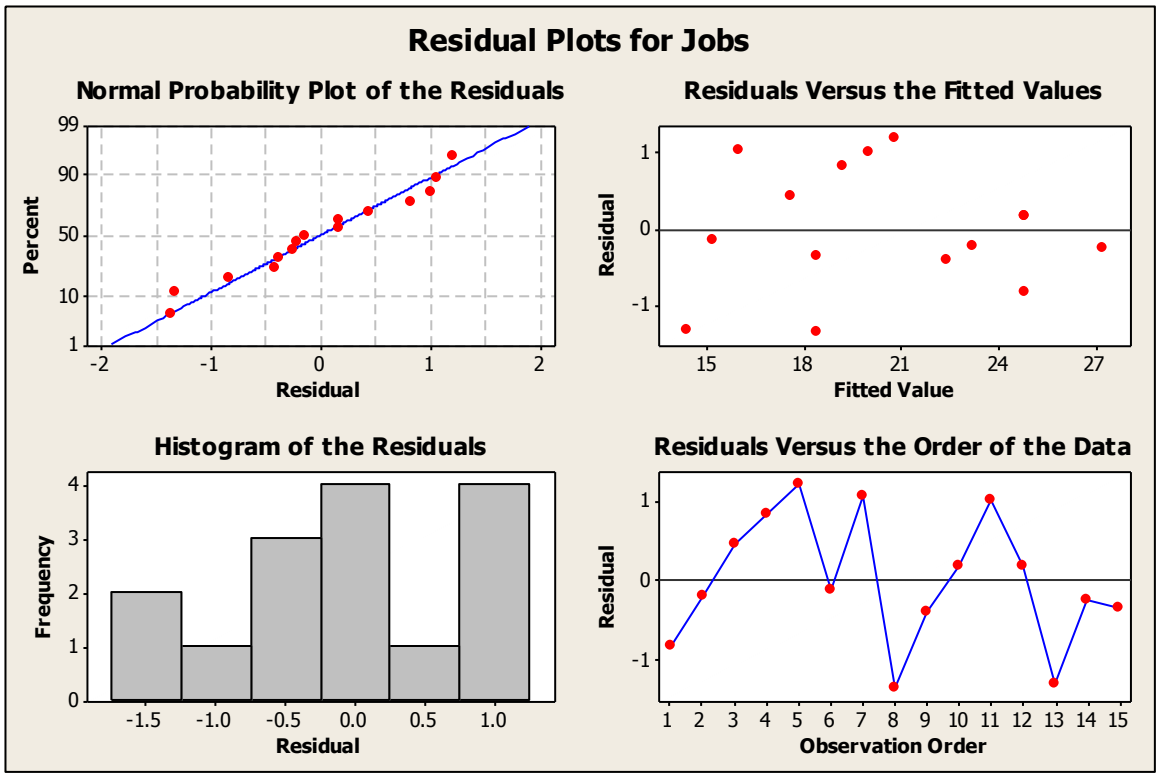

Figure 1d: Residual Plots obtained from MINITAB.