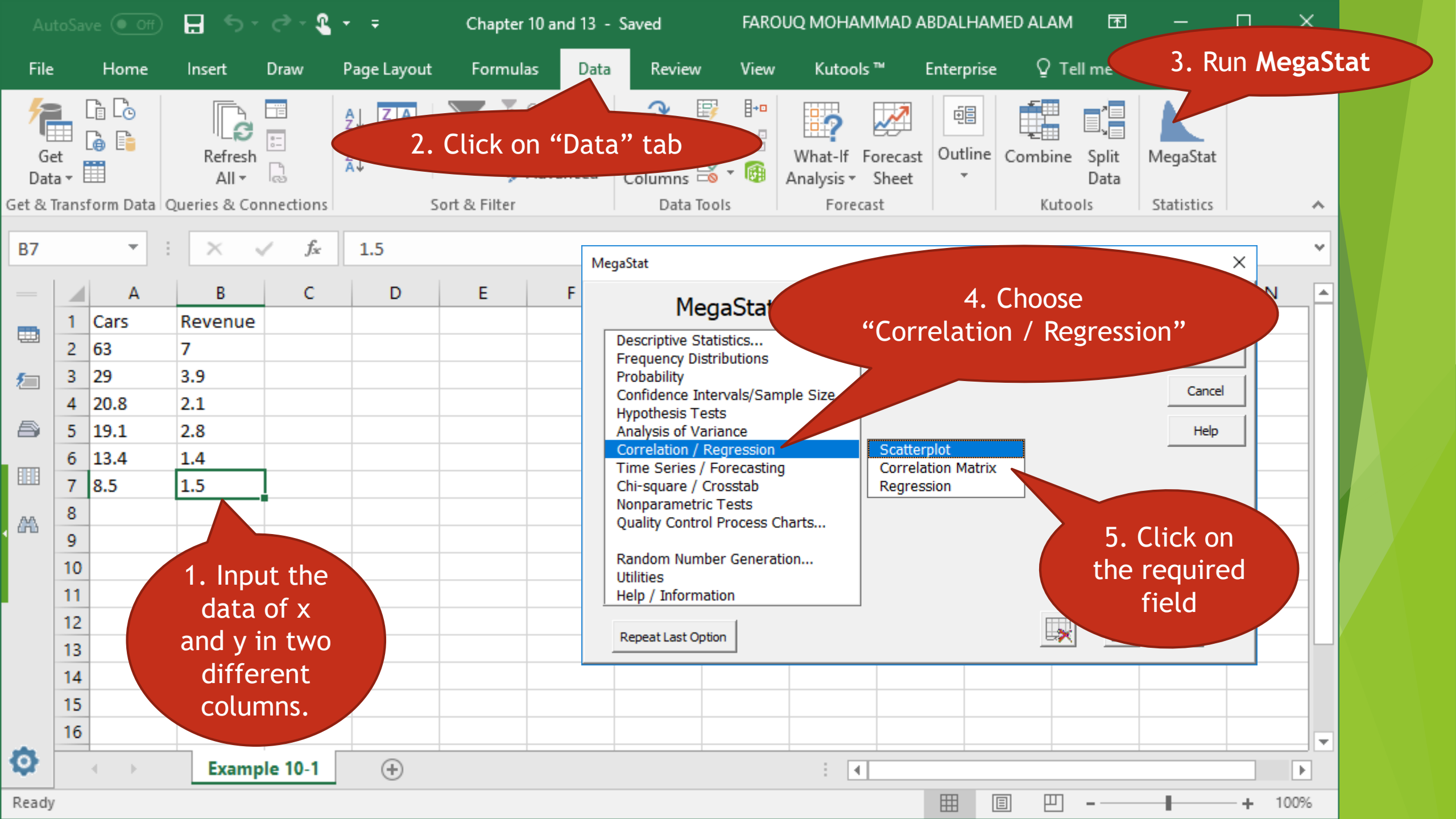
Chapter 10: Correlation and Regression
Chapter 13: Nonparametric Statistics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3. Run MegaStat
2. Click on “Data” tab
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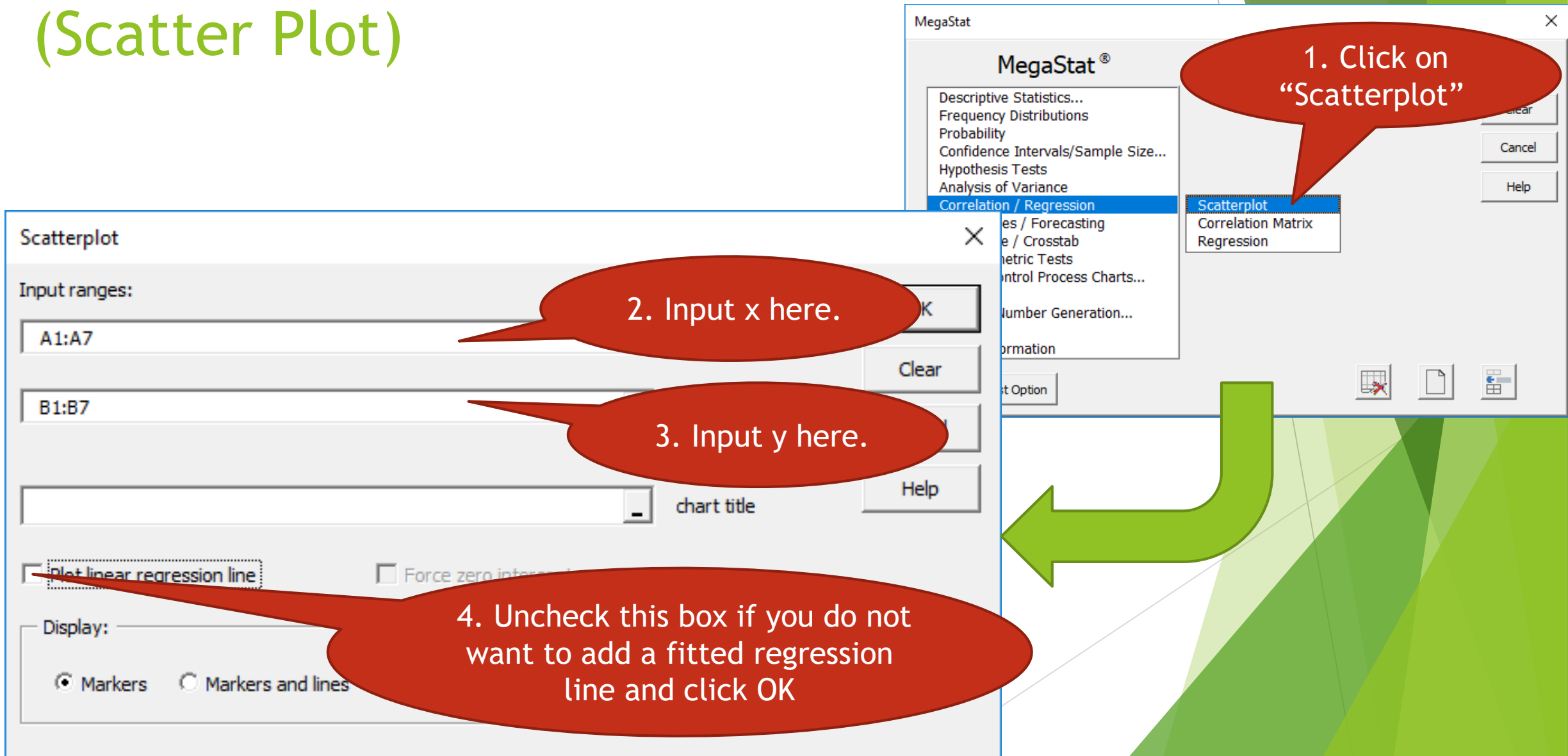
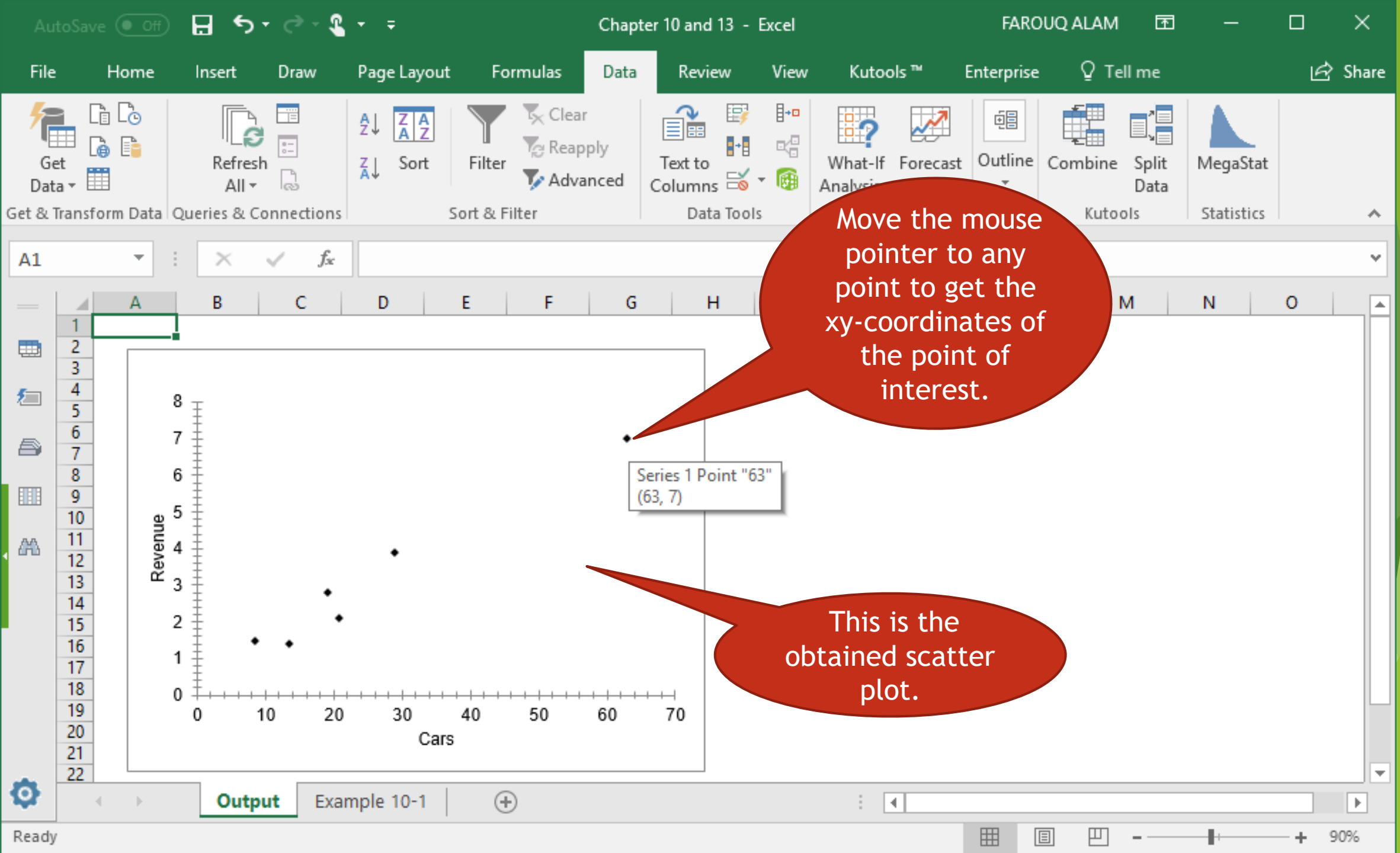
Split Data
MegaStat
Get & Transform Data
Queries & Connections
Sort & Filter
Data Tools
Forecast
Kutools
Statistics
B7
1.5
Cars
Revenue
63 7
29 3.9
20.8 2.1
19.1 2.8
13.4 1.4
8.5 1.5
1. Input the data of x and y in two different columns.
MegaStat
Descriptive Statistics...
Frequency Distributions
Probability
Confidence Intervals/Sample Size
Hypothesis Tests
Analysis of Variance
Correlation / Regression
Time Series / Forecasting
Chi-square / Crosstab
Nonparametric Tests
Quality Control Process Charts...
Random Number Generation...
Utilities
Help / Information
Repeat Last Option
4. Choose “Correlation / Regression”
Scatterplot
Correlation Matrix
Regression
Cancel
Help
5. Click on the required field
Example 10-1
Ready
100%

10 – 1 Scatter Plots and Correlation (Scatter Plot)

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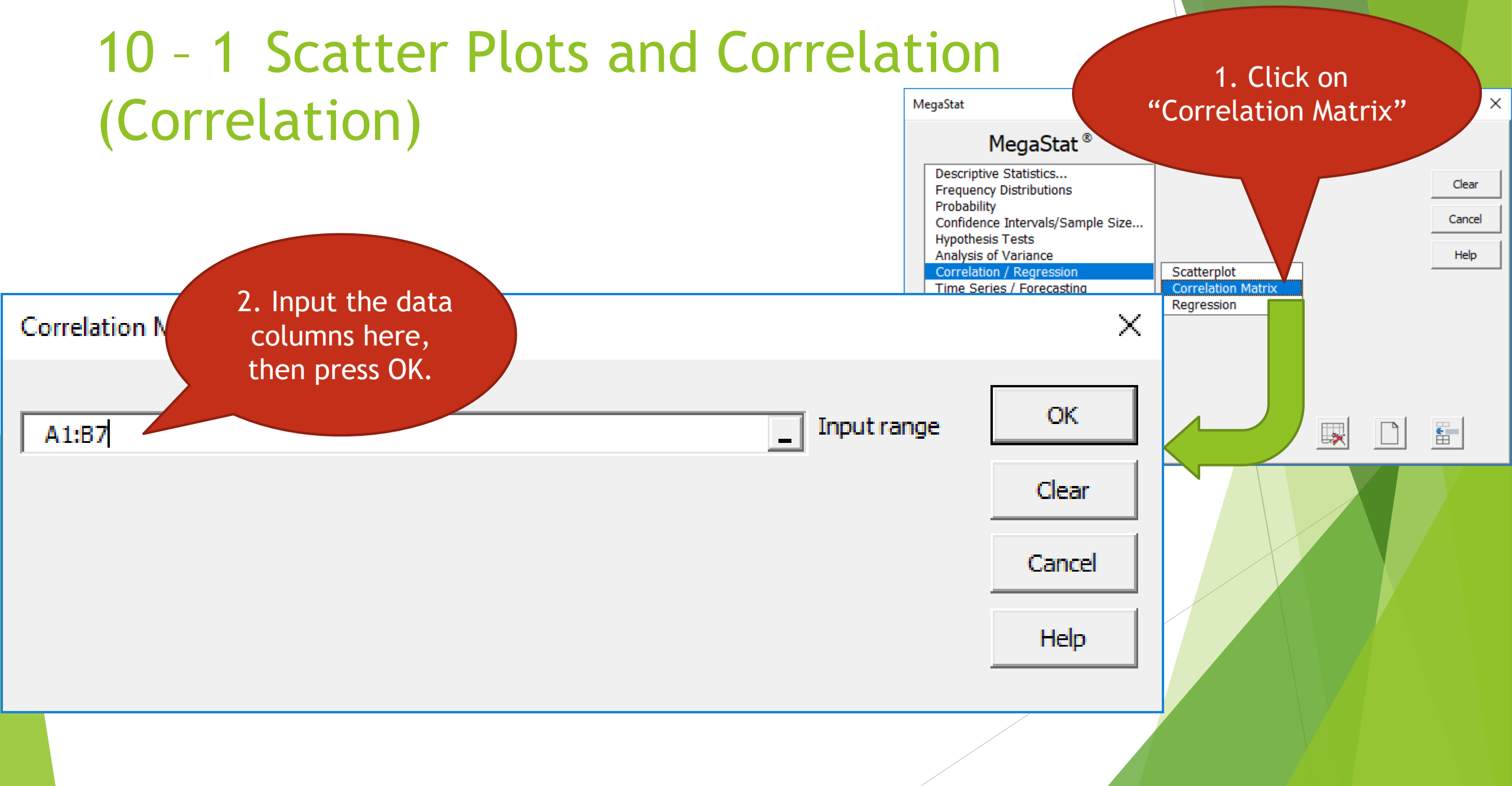
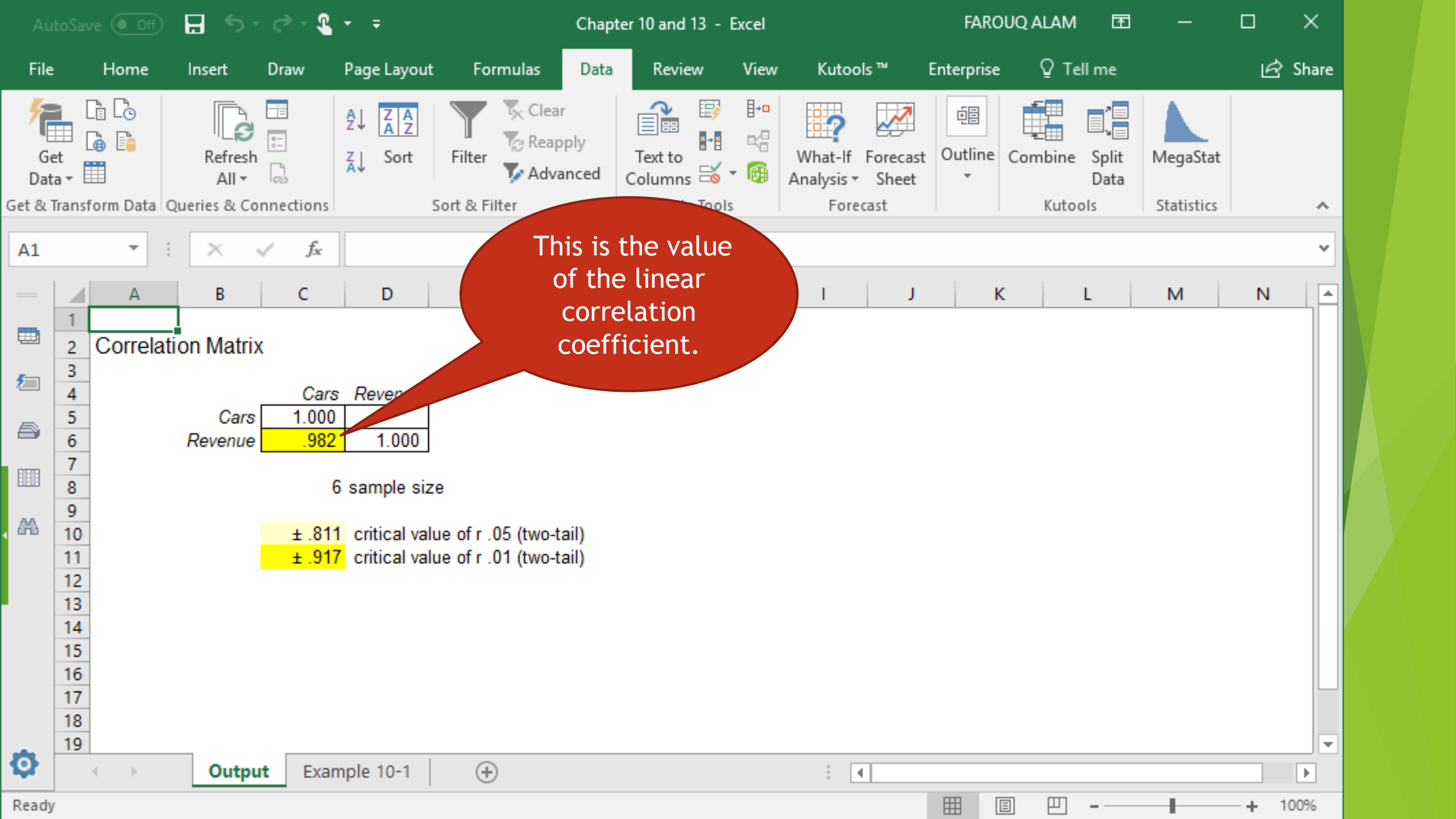
A1
Move the mouse pointer to any point to get the xy-coordinates of the point of interest.
Series 1 Point "63"
(63, 7)
Revenue
Cars
0
1
2
3
4
5
6
7
8
0
10
20
30
40
50
60
70
This is the obtained scatter plot.
Output
Example 10-1
Ready
90%

10 – 1 Scatter Plots and Correlation (Correlation)

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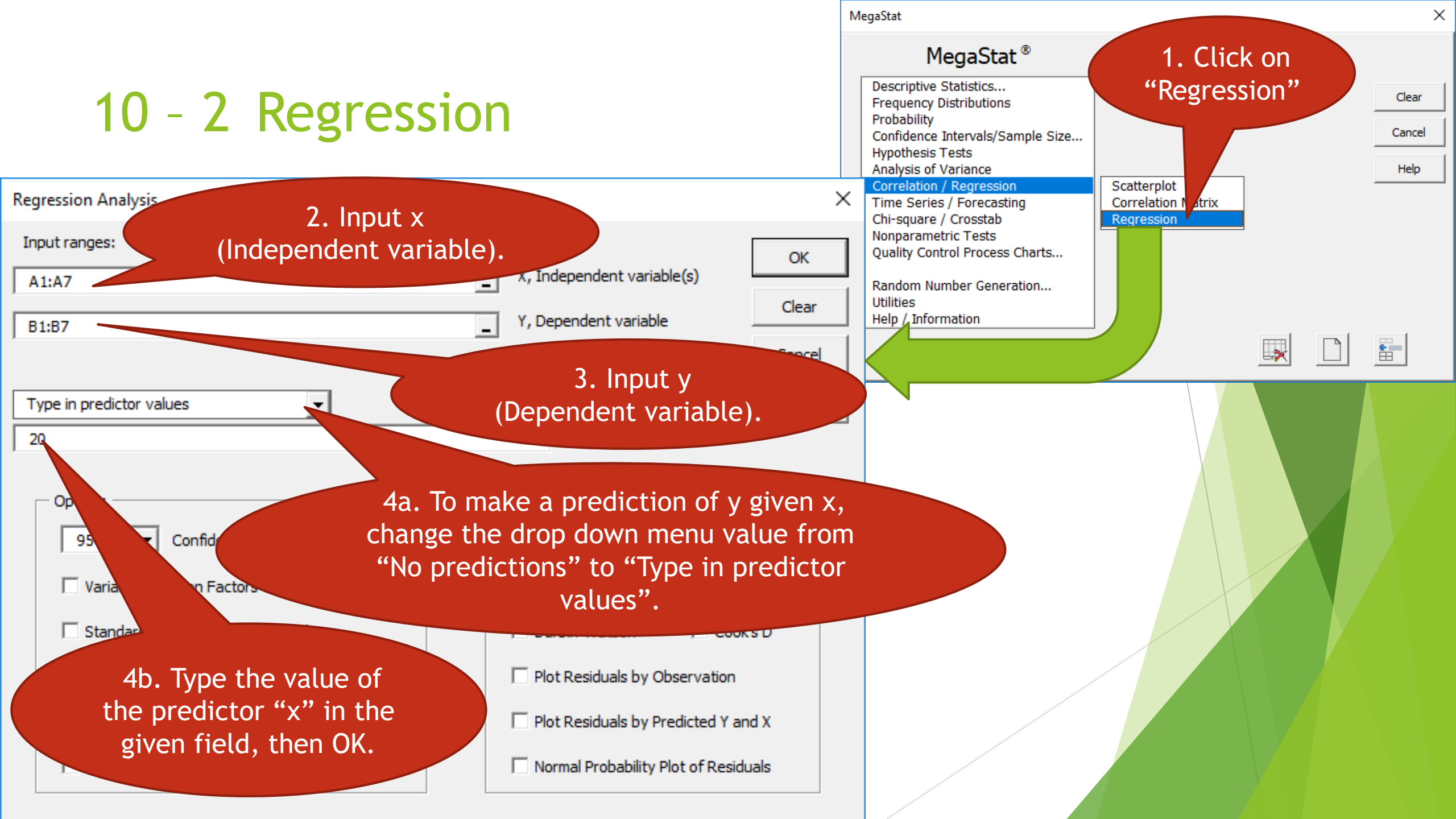
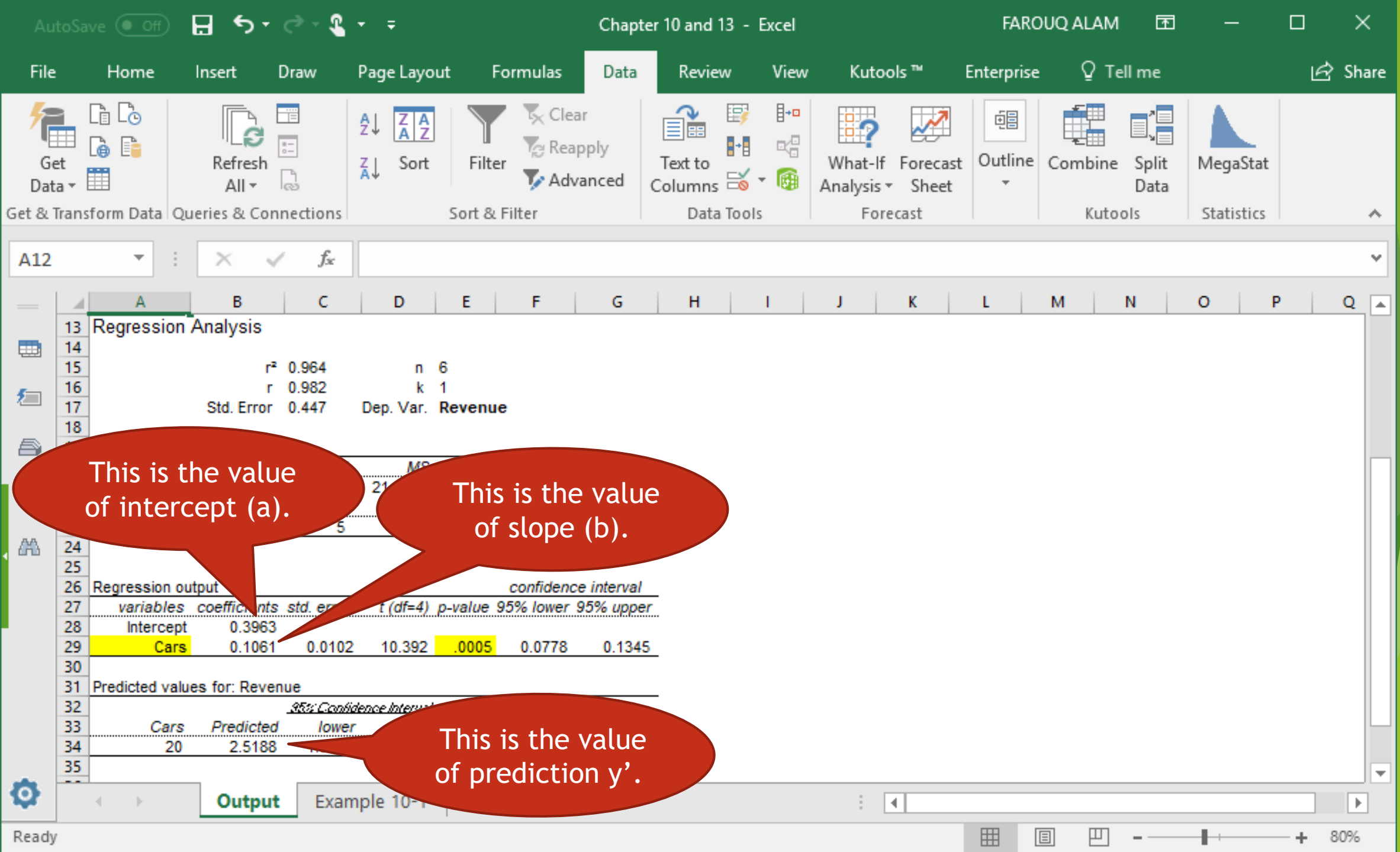
A1
This is the value of the linear correlation coefficient.
Correlation Matrix
Cars Revenue
Cars 1.000
Revenue .982 1.000
6 sample size
± .811 critical value of r .05 (two-tail)
± .917 critical value of r .01 (two-tail)
Output
Example 10-1
Ready
100%

10 – 2 Regression

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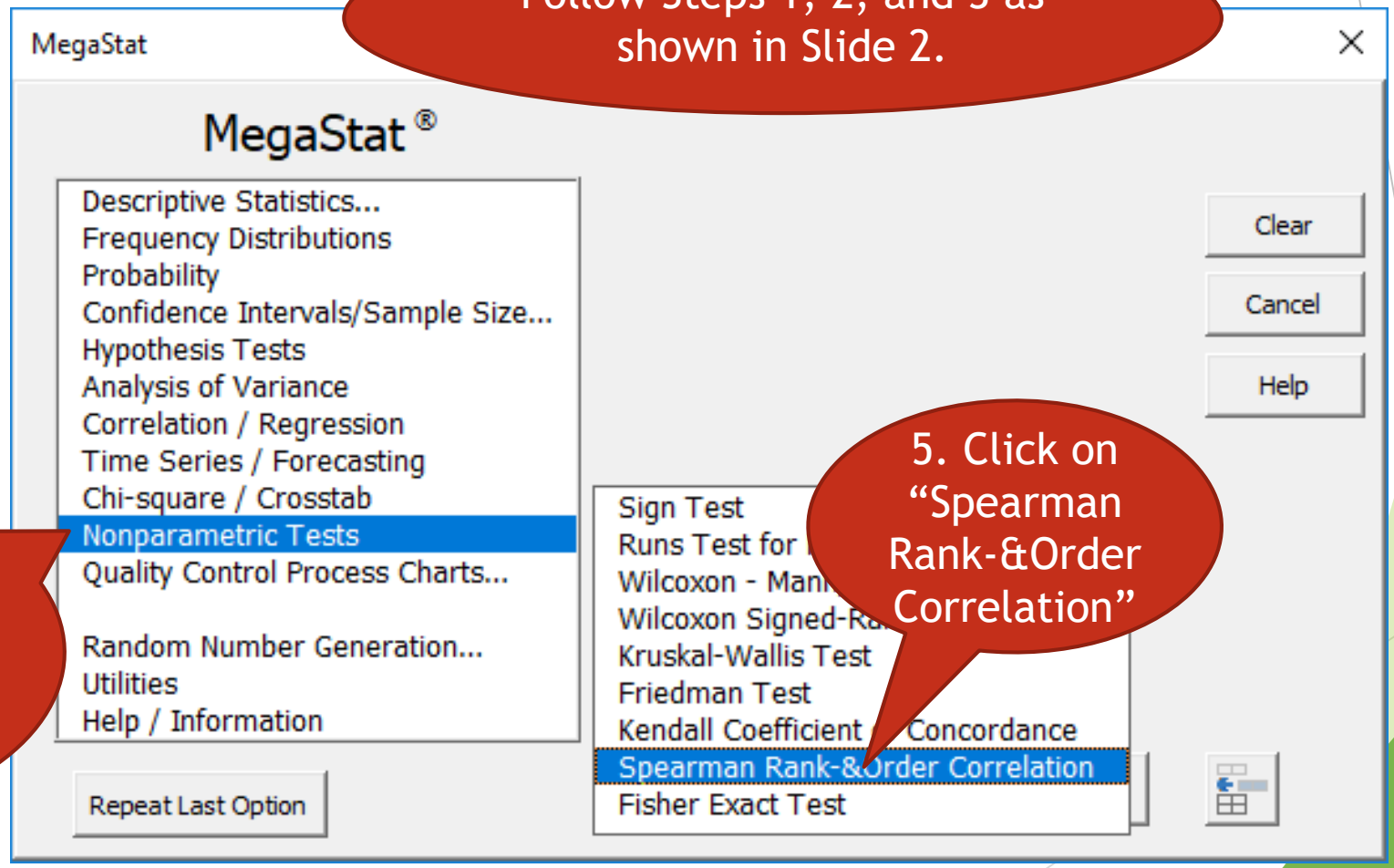
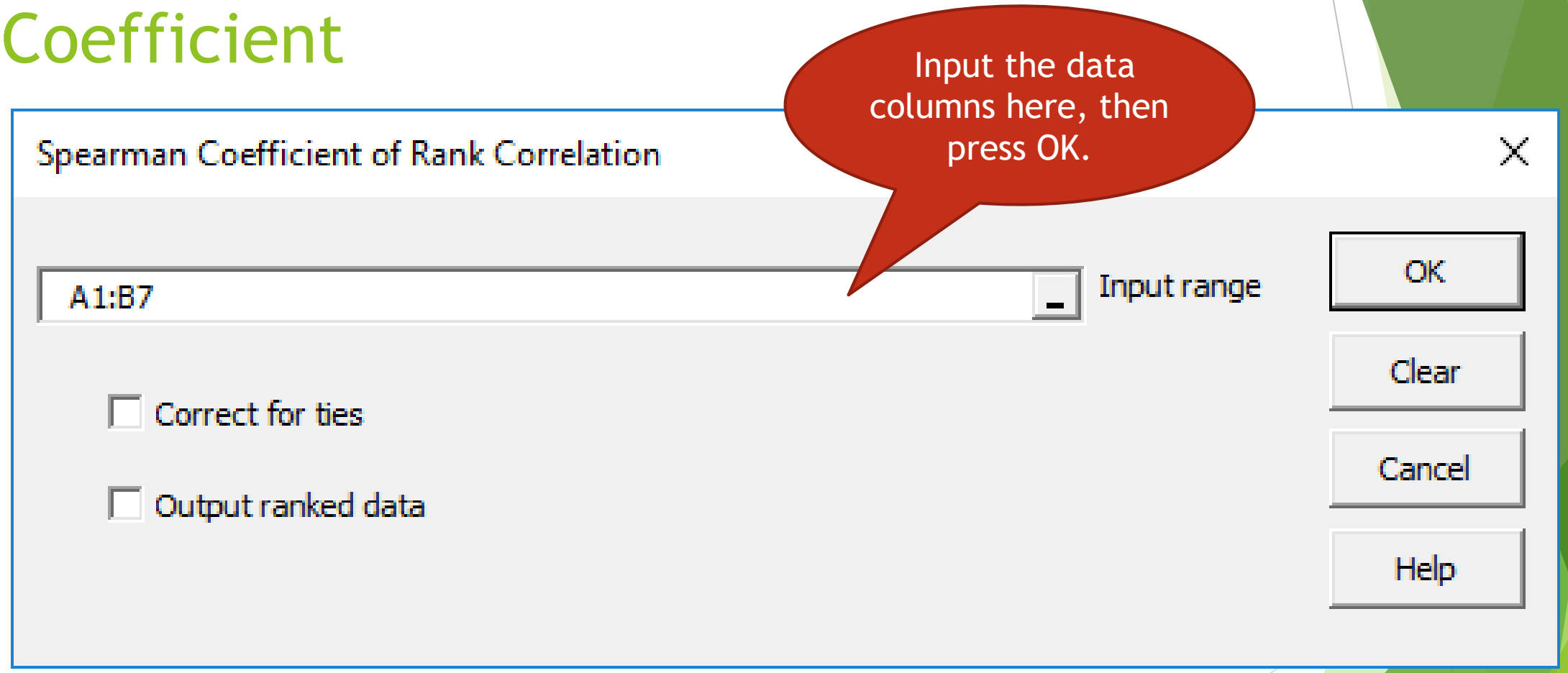
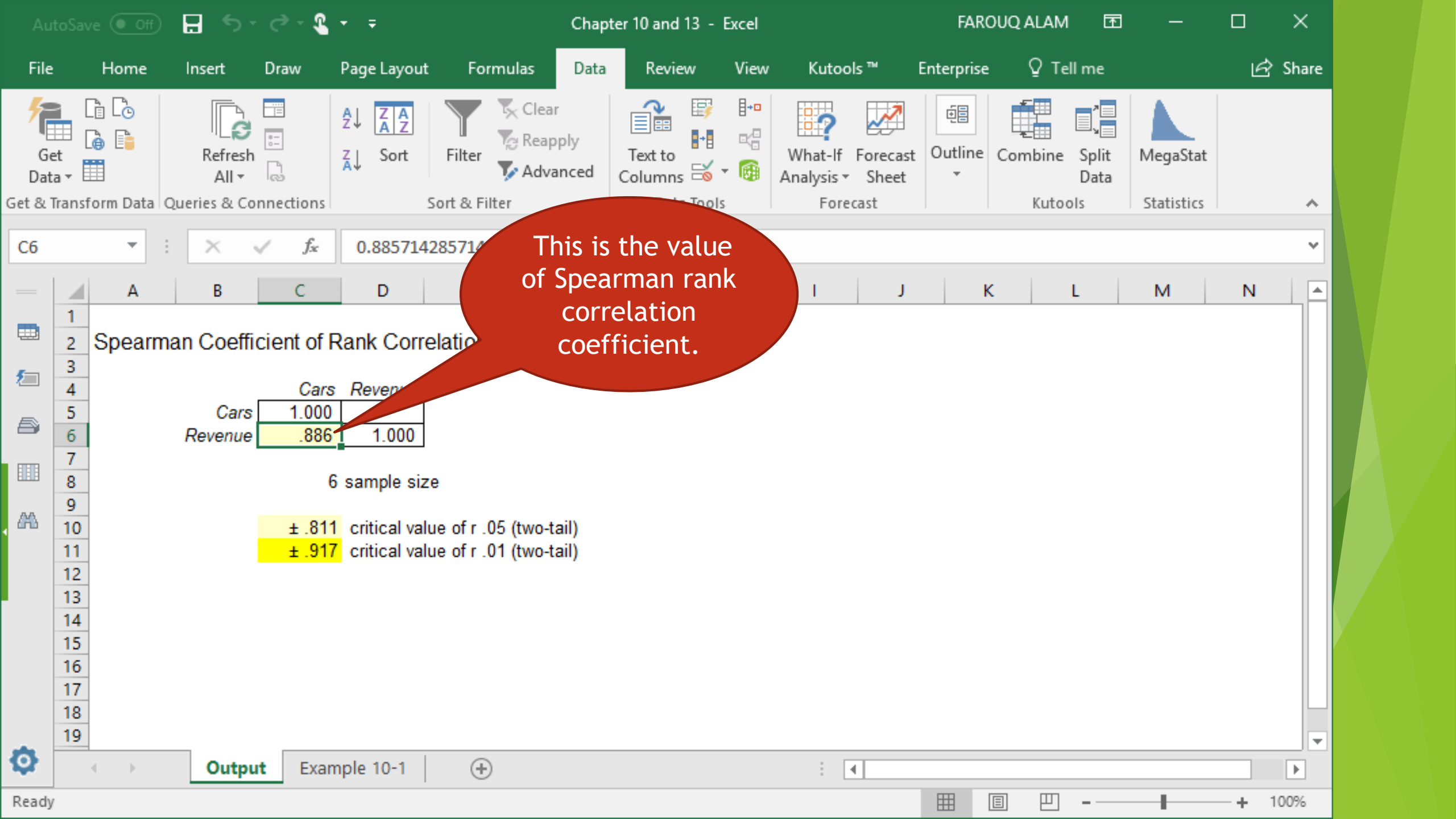
Statistics
A12
Regression Analysis
r² 0.964
r 0.982
Std. Error 0.447
n 6
k 1
Dep. Var. Revenue
Regression output
confidence interval
variables coefficients std. error t (df=4) p-value 95% lower 95% upper
Intercept 0.3963
Cars 0.1061 0.0102 10.392 .0005 0.0778 0.1345
Predicted values for: Revenue
Cars Predicted lower
20 2.5188
This is the value of intercept (a).
This is the value of slope (b).
This is the value of prediction y'.
Output
Example 10-1
Ready
80%

13 – 6 The Spearman Rank Correlation Coefficient



13 – 6 The Spearman Rank Correlation Coefficient

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Sort & Filter
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Kutools
Statistics
C6
0.885714285714
This is the value of Spearman rank correlation coefficient.
Spearman Coefficient of Rank Correlatio
Cars Reven
Cars 1.000
Revenue .886 1.000
6 sample size
± .811 critical value of r .05 (two-tail)
± .917 critical value of r .01 (two-tail)
Output
Example 10-1
Ready
100%