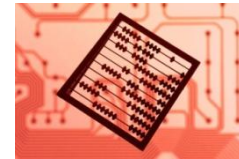


	A	B	C	D
1	Women	Study	Men	Study
2	F	180	M	90
3	F	120	M	120
4	F	180	M	30
5	F	360	M	90
6	F	240	M	200
7	F	120	M	90
8	F	180	M	45
9	F	120	M	30
10	F	240	M	120
11	F	170	M	75
12	F	150	M	150
13	F	120	M	120
14	F	180	M	60
15	F	180	M	240
16	F	150	M	300
17	F	200	M	240
18	F	150	M	60
19	F	180	M	120
20	F	150	M	60
21	F	180	M	30
22	F	120	M	30
23	F	60	M	230
24	F	120	M	120
25	F	180	M	95
26	F	180	M	150
27	F	90	M	0
28	F	240	M	200
29	F	180	M	120
30	F	115	M	120
31	F	120	M	180
32	Mean	165.17		

Math & Formula

- ♪ Do math under any tab
- ♪ Click the cell (B32) where put the result **mean**, and next to fx type: **average(B2:B31)**
- ♪ (B2:B31) is define the data range
- ♪ Equal sign “=” always before a formula
- ♪ You can define a formula yourself
- ♪ Find a function under Formula tab
- ♪ Find functions library:
 - Formula
 - more functions
 - Statistical
 - function list

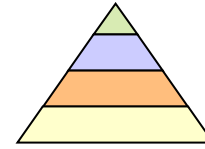


Statistical Functions (Examples)

- MEDIAN `median(a2:a55)`
- MEAN `average(a2:a55)`
- FIRST QUARTILE `quartile(a2:a55, 1)`
- THIRD QUARTILE `quartile(a2:A55, 3)`
- STANDARD DEVIATION `stdev(b2:b43)`
- MINIMUM `min(a2:a67)`
- MAXIMUM `max(a2:a67)`
- SUM `sum(b2:b43)`
- CORRELATION COEFFICIENT `correl(b2:b105,c2:c105)`



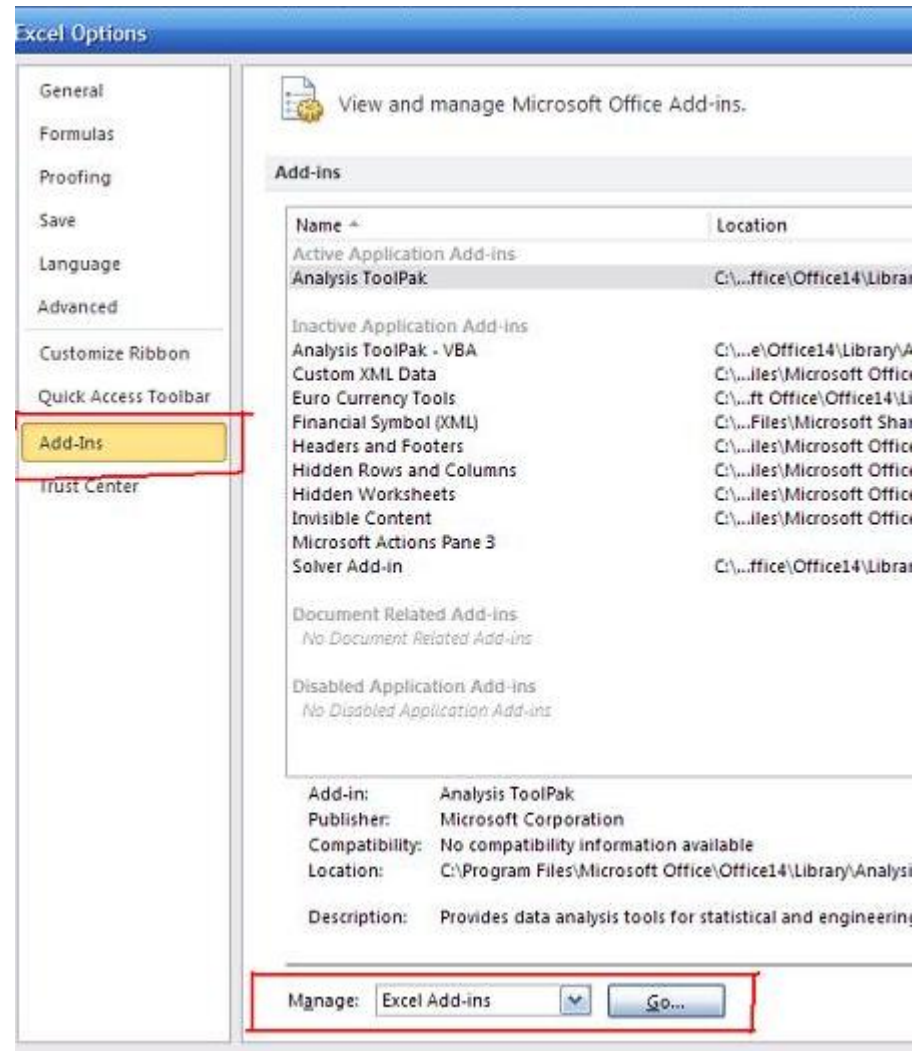
Create A Chart/Plot



- ♪ Highlight the data for plotting
- ♪ Click **Insert** tab, showing different plots available:
 - ▣ column ▣ bar ▣ line ▣ scatter ▣ pie
- ♪ Select bar plot for example
- ♪ After chart is inserted, more commands show up under **Chart Tool**
- ♪ Click inside chart – chart tool appear
click outside chart – chart tool gone
- ♪ Chart tool - **Layout** tab – sub commands
 - ▣ chart title ▣ axis title ▣ axes ▣ plot area ▣ gridlines
- ♪ Using above sub-commands to complete a plot

Create A Histogram: Install Analysis Toolpak

- In Excel 2010, click **File** tab then **Options**
- In Options sub-window, locate and click “**Add-Ins**”
- In the **Manage** list (bottom), select “**Excel Add-ins**”, and then click **Go**
- In the **Add-Ins** dialog box, select the **Analysis Toolpak** check box, then click **OK**
- Under **Data** tab, click **Data Analysis** and highlight the **Histogram** tool, click **OK**



Create A Histogram: Using Histogram Tool

- ♪ We have data shown right:
 - ▣ 1th col: data
 - ▣ 2th col: bin range
- ♪ In the Histogram window
 - ▣ Input Range box: type D1:D36
 - ▣ Bin Range box: type E1:E6
 - ▣ Under **Output Options**, click **New Workbook**
 - ▣ Select **Chart Output** check box
 - Click **OK**
- ♪ A new Histogram table and a histogram chart are created

The screenshot shows an Excel spreadsheet with data in columns D and E. Column D contains the values 4, 3, 4, 5, 2, 14, 7, 2, 5, 10, 7, 9, 9, 7, 23, 13, 18, 13, 17, 20, 15, 19, 20, 22, 13, 8, 9, 16, 23, 25, 17, 12, 13, 15, 18, 18. Column E contains the values 4, 9, 14, 19, 24, 29. The Histogram tool dialog box is open, showing the input range as D1:D36 and bin range as E1:E6. The 'New Workbook' radio button is selected, and the 'Chart Output' checkbox is checked.

Data in Col D
Bin Range in Col E

Histogram Tool

Histogram

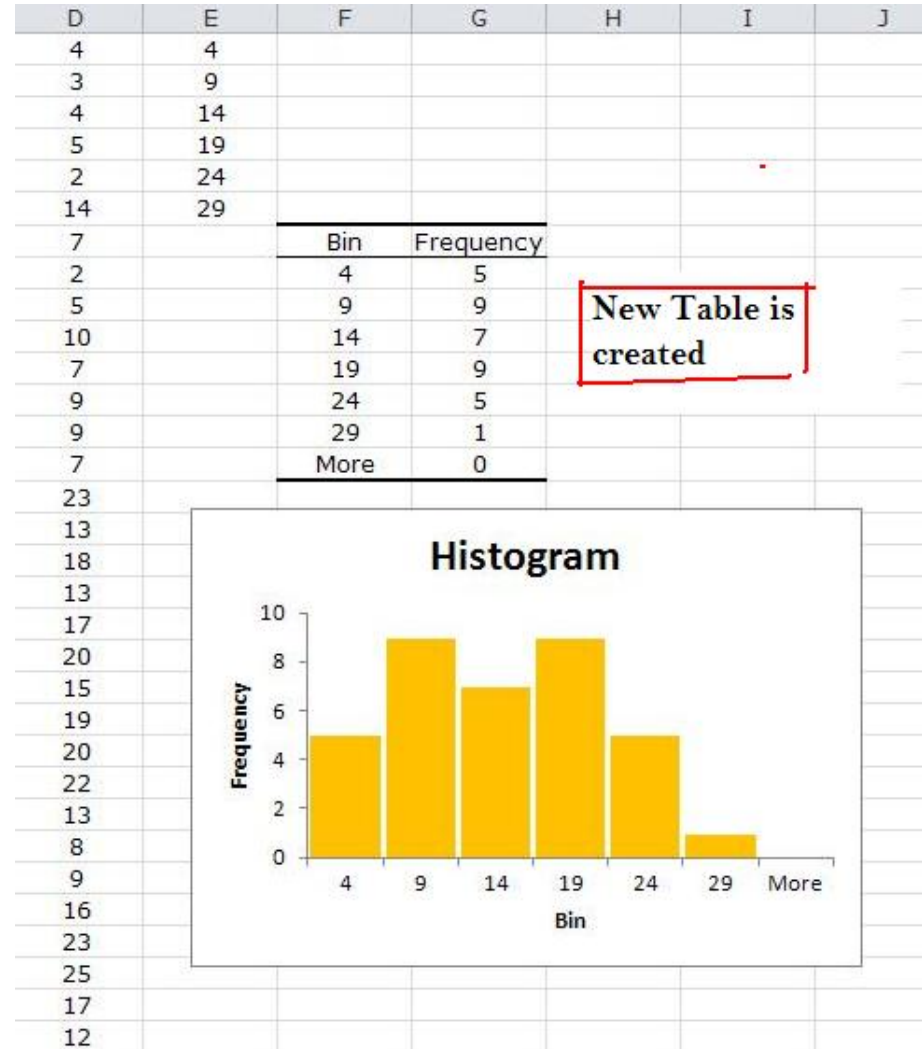
Input
Input Range: D1:D36
Bin Range: E1:E6
 Labels

Output options
 Output Range:
 New Worksheet Ply:
 New Workbook
 Pareto (sorted histogram)
 Cumulative Percentage
 Chart Output

OK
Cancel
Help

Create A Histogram Chart

- A Histogram table (a new workbook) is generated
- A histogram chart is created
- To adjust the **gap** between columns
- Click any column, right click and select “format data series” , change the gap between 0-100%
- You can adjust the gap 0-10%, or as you like.



Curve Fitting & Regression Line

- Draw a scatter plot without line
- Do regression line

Insert – Chart Tools –

Layout – Trendline – Trendline options & select:

- ▣ Linear
- ▣ Display Equation on chart
- ▣ display R-squared value on chart

