

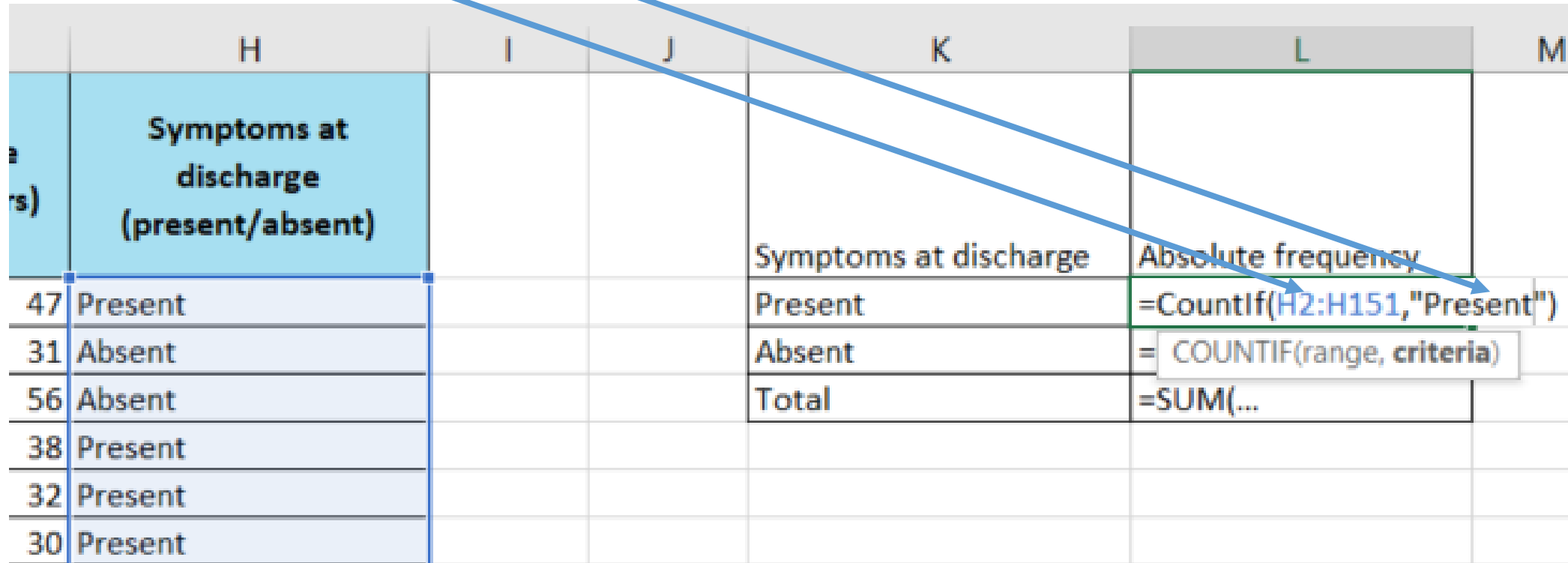
Descriptive statistics in Excel

- Hints

Calculate frequencies in Excel

- with CountIf function

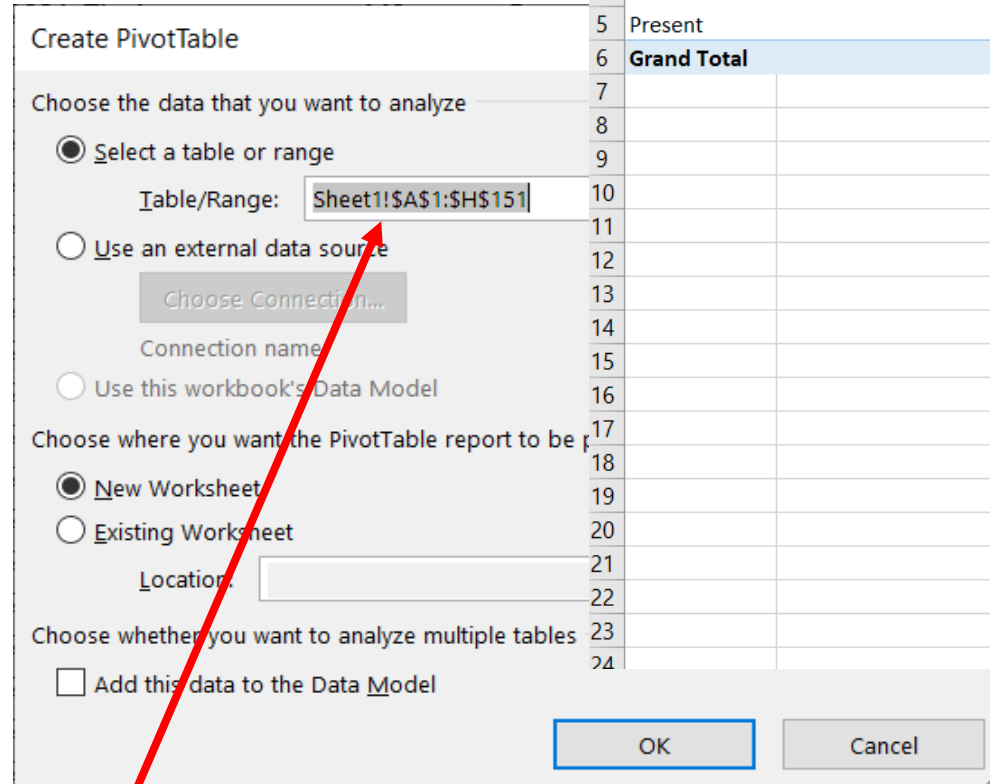
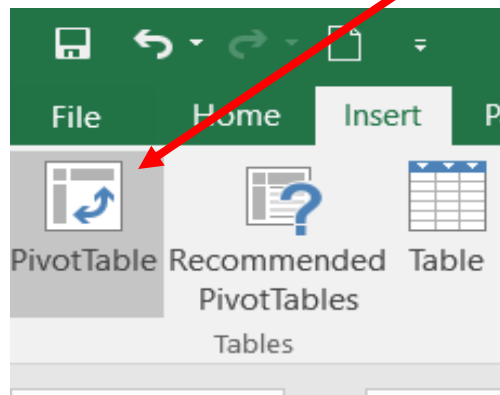
=CountIf(range, criteria)



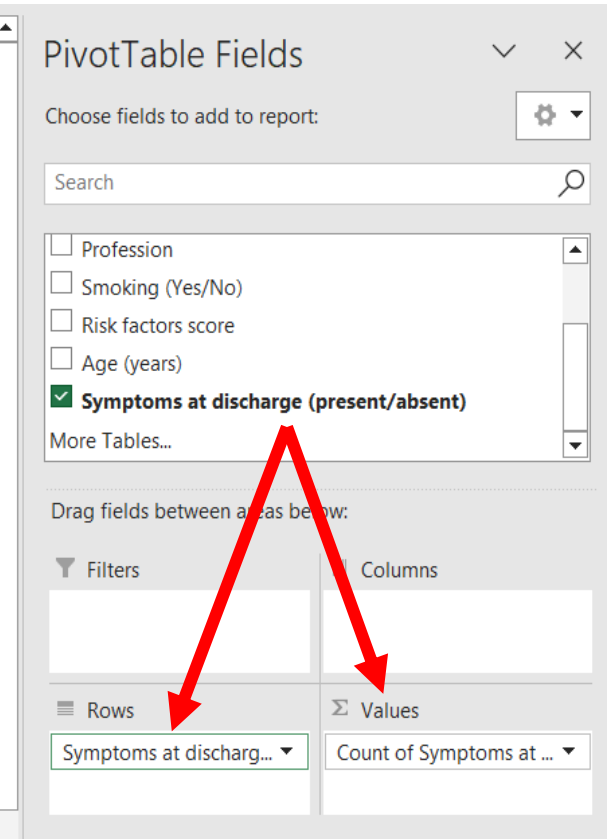
	H	I	J	K	L	M
	Symptoms at discharge (present/absent)					
47	Present			Symptoms at discharge Present	Absolute frequency =CountIf(H2:H151,"Present")	
31	Absent			Absent	= COUNTIF(range, criteria)	
56	Absent			Total	=SUM(...	
38	Present					
32	Present					
30	Present					

Calculate frequencies in Excel

- with Pivot Table



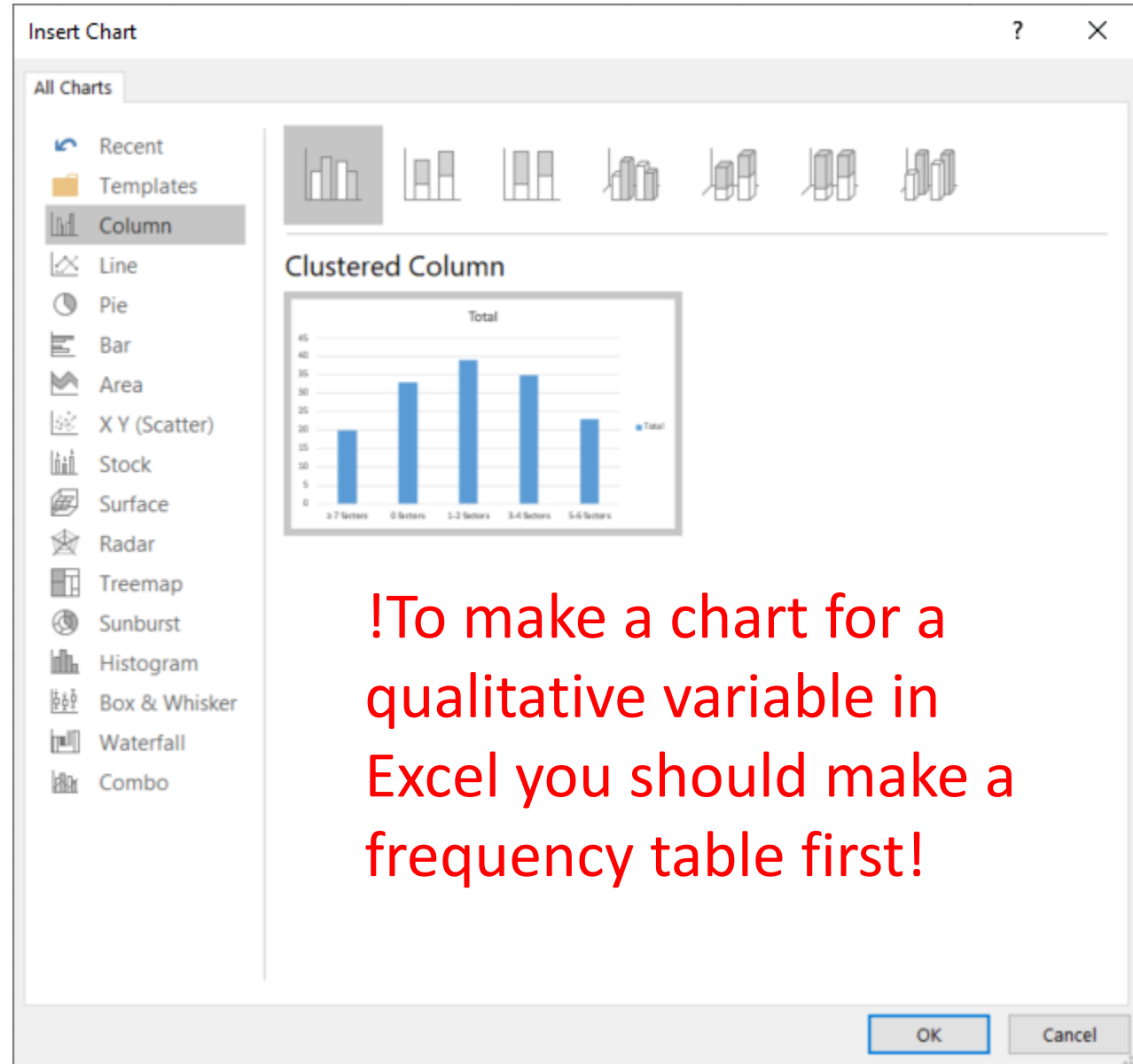
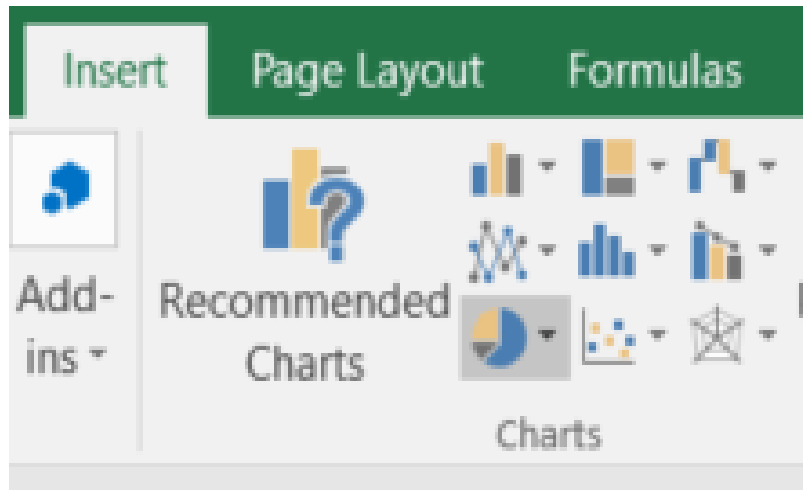
	A	B
1		
2		
3	Row Labels	Count of Symptoms at discharge (present/absent)
4	Absent	98
5	Present	52
6	Grand Total	150
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		



Select the data table

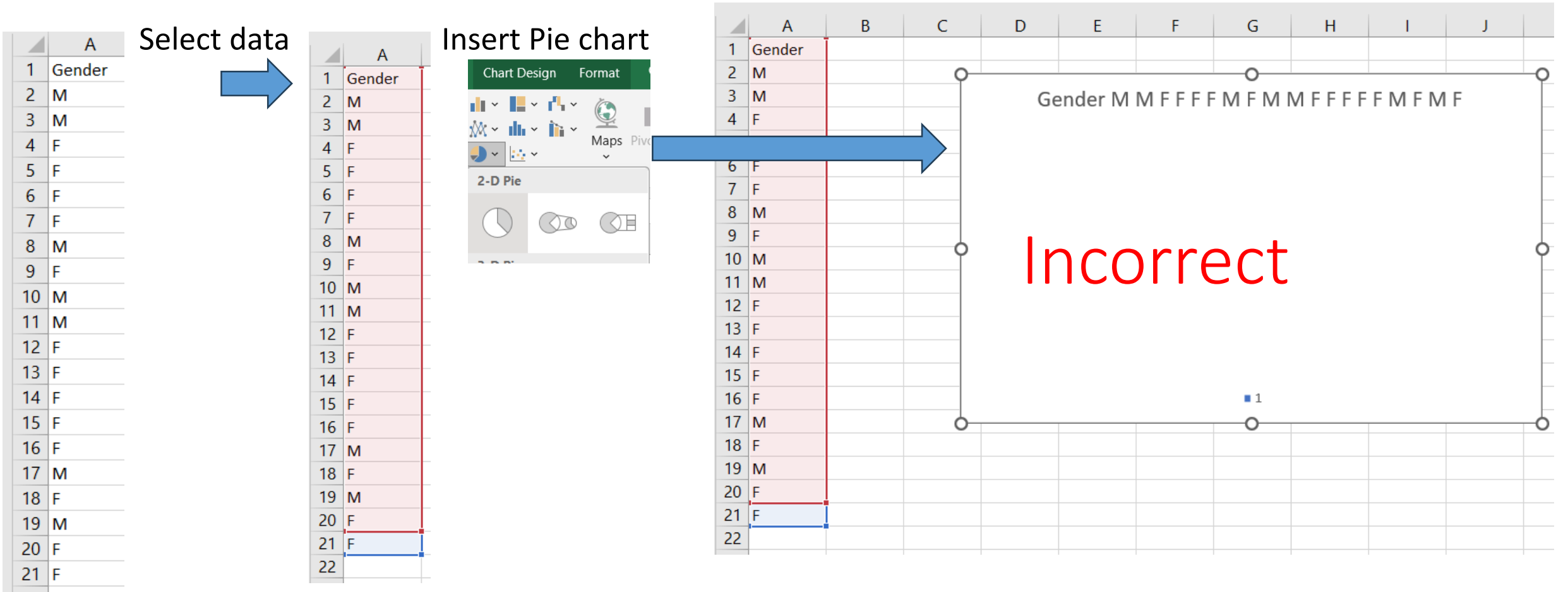
Drag and drop the variable on Rows and on Σ Values

Insert a Chart in Excel



!To make a chart for a qualitative variable in Excel you should make a frequency table first!

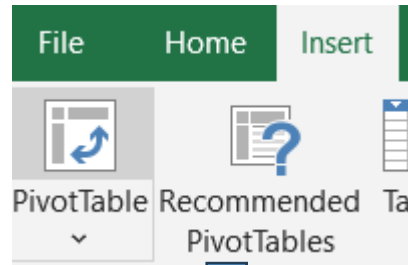
Without frequency table in Excel



With frequency table in Excel

- Select the title → Insert Pivot table

	A
1	Gender
2	M
3	M
4	F
5	F
6	F
7	F
8	M
9	F
10	M
11	M
12	F
13	F
14	F
15	F
16	F
17	M
18	F
19	M
20	F
21	F



PivotTable from table or range

Select a table or range

Table/Range:

Choose where you want the PivotTable to be placed

☒ New Worksheet

☐ Existing Worksheet

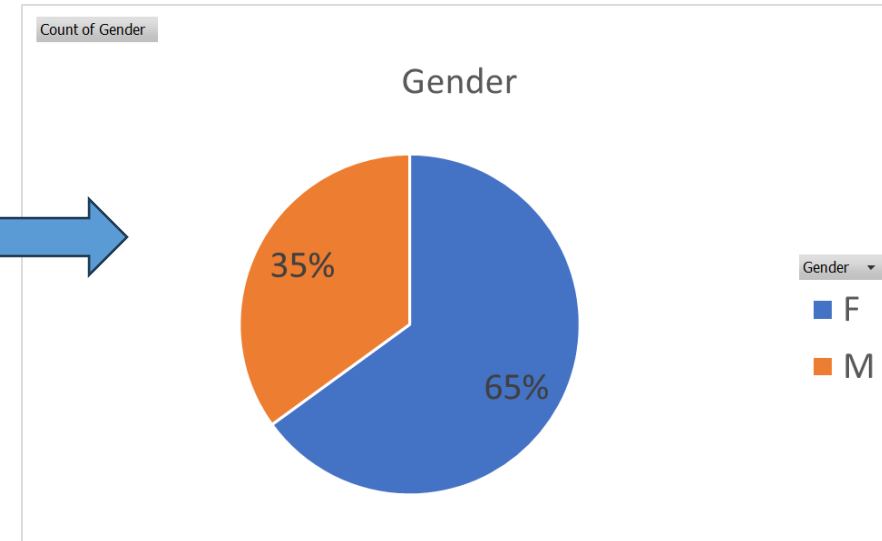
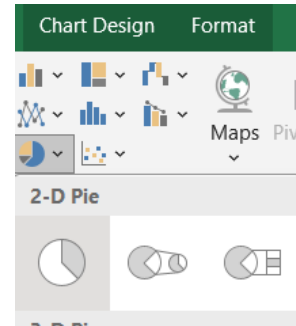
Location:

Choose whether you want to analyze multiple tables

☐ Add this data to the Data Model

OK Cancel

Insert a Pie chart



Make the frequency table

	Row Labels	Count of Gender
4	F	13
5	M	7
6	Grand Total	20

Correct

Obs. Frequency table can be made also with CountIf function

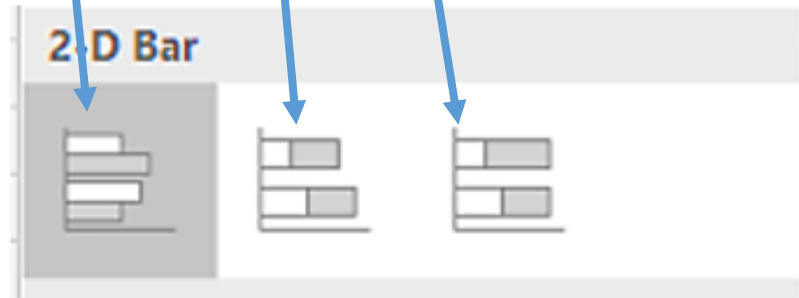
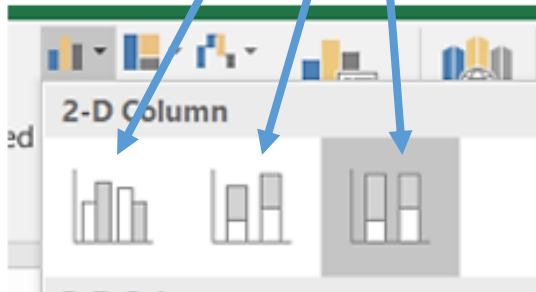
Two qualitative variables

- Contingency table



Charts

- Column / Bar
- Stacked Column / Bar
- 100% Stacked Column / Bar



Calculate the parameters in Excel

range C2:C21

	C
1	MELD score
2	5
3	1
4	6
5	9
6	11
7	8
8	25
9	30
10	32
11	14
12	8
13	7
14	6
15	5
16	22
17	25
18	29
19	12
20	16
21	19

Parameter	Equation in Excel
Minimum	=min(C2:C21)
Maximum	=max(C2:C21)
Range	=max(C2:C21)-min(C2:C21)
Median	=median(C2:C21)
Cuartile 1	=quartile(C2:C21,1)
Cuartile 3	=quartile(C2:C21,3)
Mode	=mode(C2:C21)

Centrality measurements	Functions	Formulas
Arithmetic mean	=AVERAGE(ARRAY)	
Median	=MEDIAN(ARRAY)	
Mode	=MODE.MULT(ARRAY) =MODE.SINGL(ARRAY)	
Central value		=(MAX(ARRAY)+MIN(ARRAY))/2
Dispersion		
Range		=MAX(ARRAY)-MIN(ARRAY)
Variation	=VAR.S(ARRAY)	
Standard deviation	=STDEV.S(ARRAY) =SQRT(VAR.S(ARRAY))	
Standard error		=STDEV.S(ARRAY)/SQRT(COUNT(ARRAY))
Coeficient of variation		CV =STDEV.S(ARRAY)/AVERAGE(ARRAY) CQV =(QUARTILE.INC(ARRAY,3)- QUARTILE.INC(ARRAY,1))/(QUARTILE.INC(ARRAY,3) +QUARTILE.INC(ARRAY,1))
Asymmetry		
Asymmetry	=SKEW(ARRAY)	
Kurtosis	=KURT(ARRAY)	

where ARRAY is the selection of cells containing the values of the variable of interest.

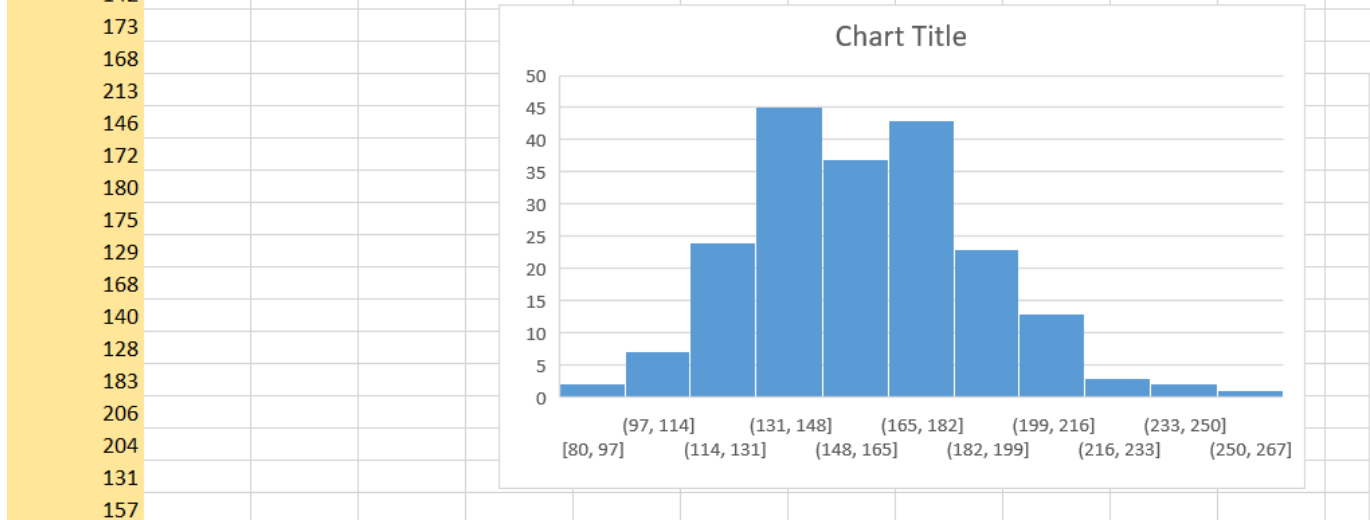
Insert Page Layout Formulas Data Review View Tell me what you want to do...

ended Table bles Pictures Online Pictures Illustrations Shapes SmartArt Screenshot Store My Add-ins Add-ins Visio Data Visualizer Bing Maps People Graph Recommended Charts Histogram Box and Whisker More Statistical Charts...

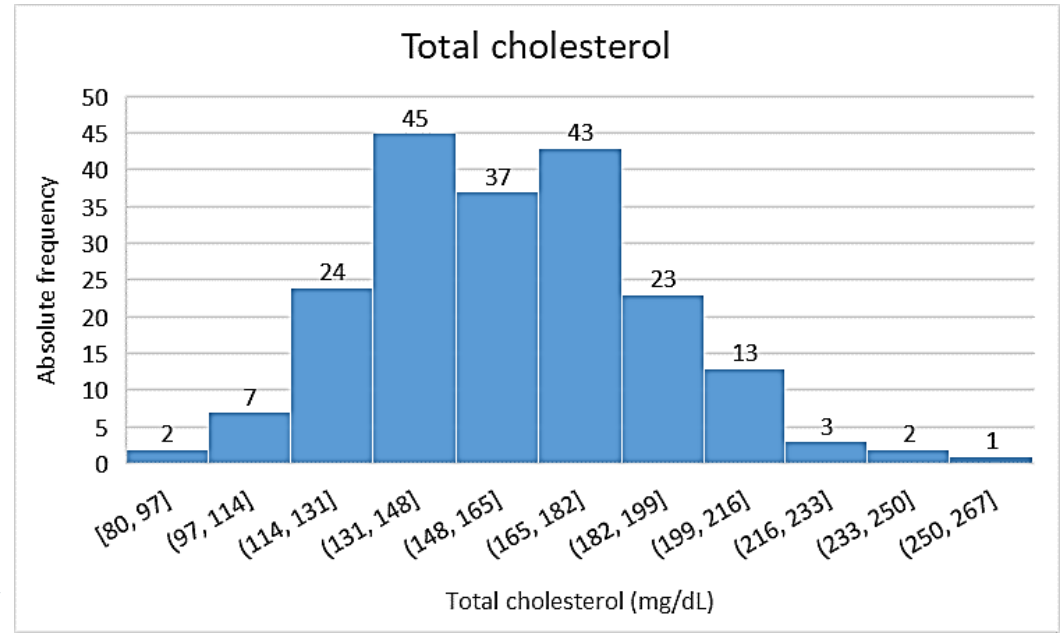
Cololesterol

Select the data

Insert the histogram



add title and axis titles

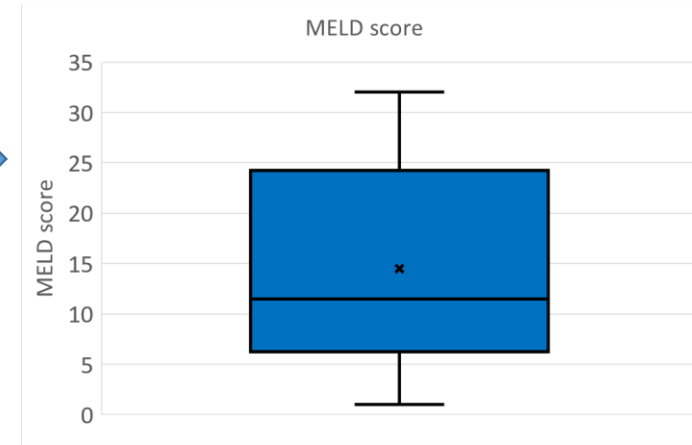
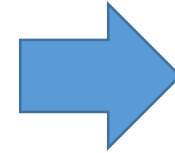
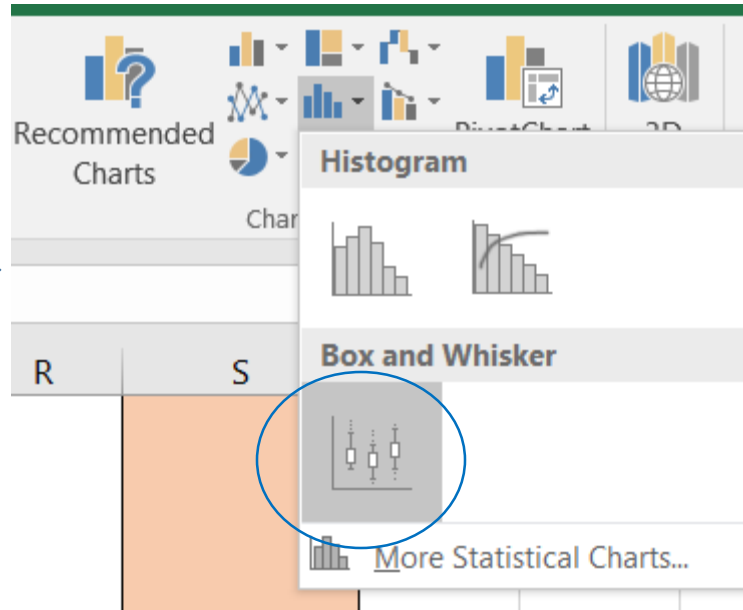
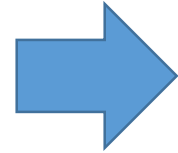


Variable name → Ox axis, “No. of subjects” or “Absolute frequency” → Oy axis.
 Axis Ox must have unity of measurements!!!

Box-plot in Excel for one ordinal variable

Select the data

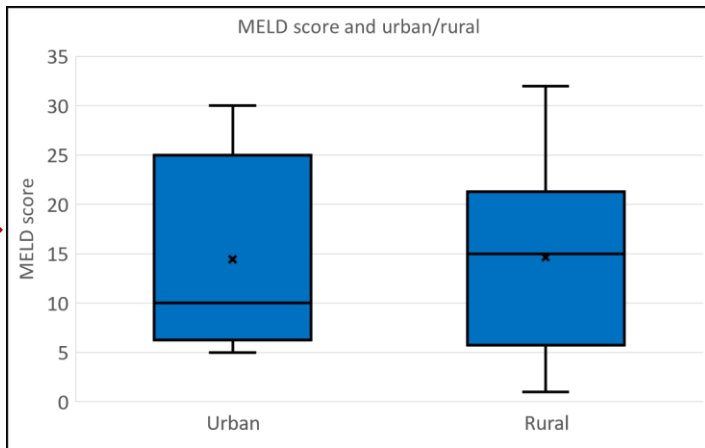
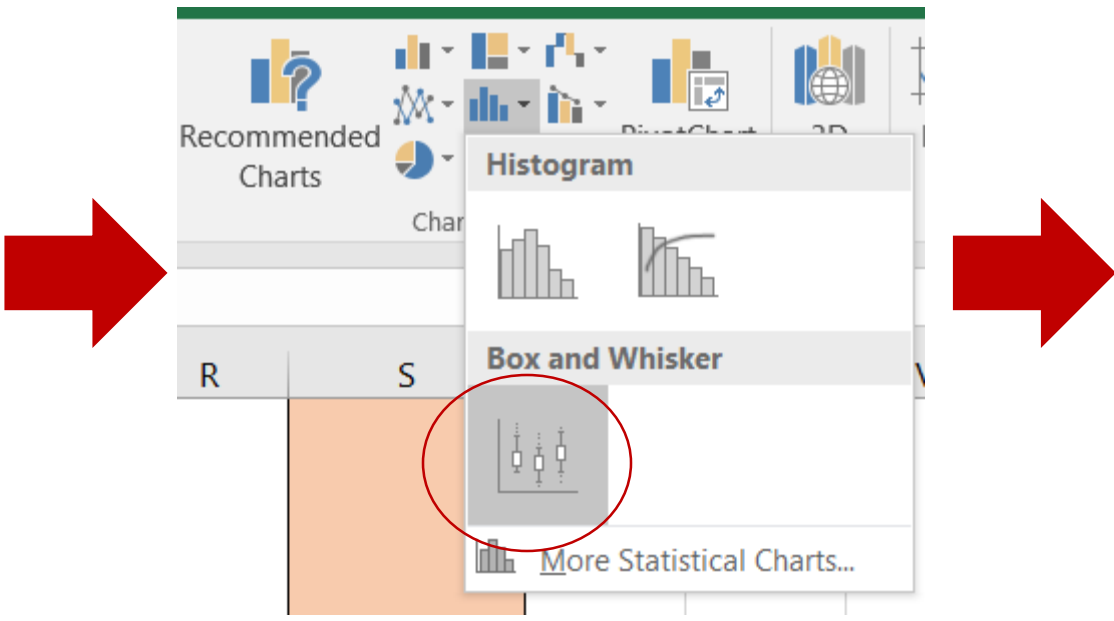
	C
1	MELD score
2	5
3	1
4	6
5	9
6	11
7	8
8	25
9	30
10	32
11	14
12	8
13	7
14	6
15	5
16	22
17	25
18	29
19	12
20	16
21	19

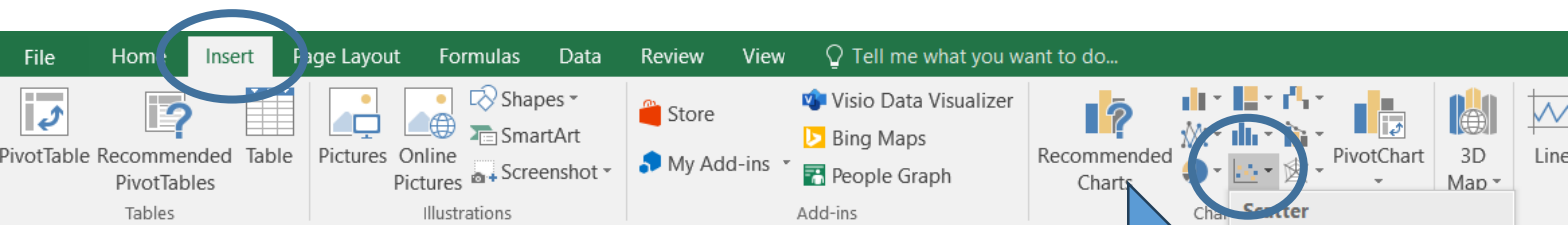


Select both columns

Box-plot in Excel for one ordinal variable and one binary variable

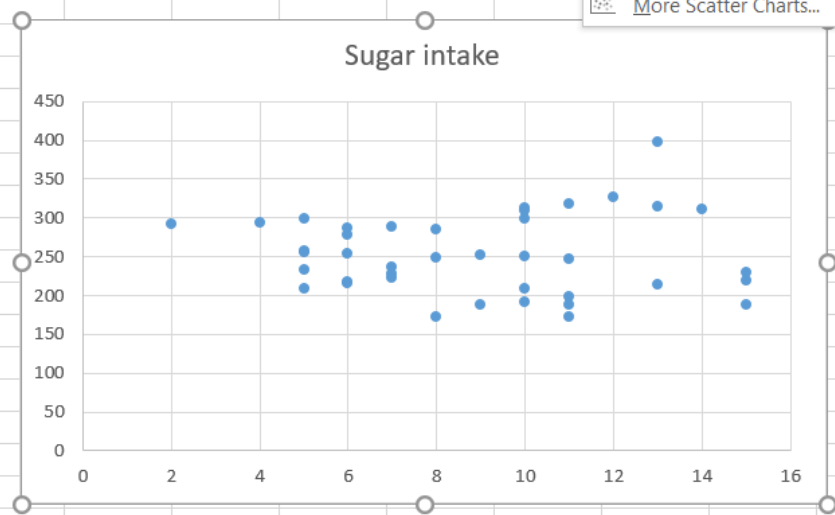
B	C
Urban/Rural	MELD score
Urban	5
Rural	1
Urban	6
Urban	9
Urban	11
Rural	8
Urban	25
Urban	30
Rural	32
Rural	14
Urban	8
Urban	7
Urban	6
Rural	5
Rural	22
Urban	25
Urban	29
Urban	12
Rural	16



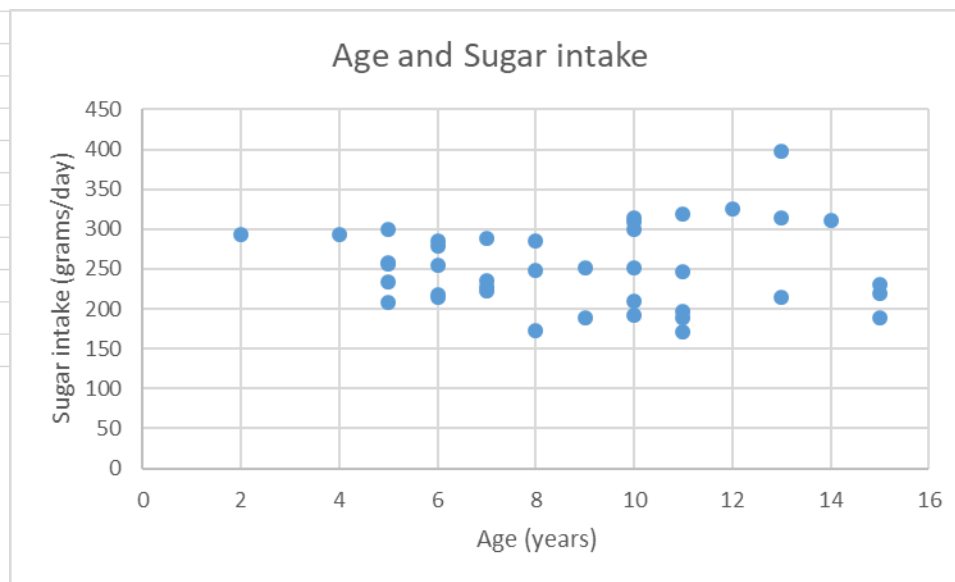


Select the data
Insert the Scatter
chart

	A	B
1	Age	Sugar intake
2	14	311
3	10	251
4	11	318
5	5	233
6	11	172
7	15	189
8	6	215
9	5	257
10	7	222
11	9	188
12	12	326
13	10	192
14	8	248
15	7	228
16	7	236
17	2	293
18	10	209
19	15	220
20	8	173
21	4	294
22	9	251
23	5	209
24	15	230
25	13	314



add title and axis titles



First variable → Ox axis, second variable → Oy axis.
Each axis must have unity of measurements!!!