

## Categorical variables. Visualization techniques

### EXERCISE 1

#### Ice cream shop

**Background** There is an ice cream shop, that is operating in New York, LA and San Francisco.

**Data** You have sold 12,327 ice creams in New York; 17,129 in LA and 19,923 in San Francisco.

**Task** Order the data in a frequency distribution table.

SOLUTION --->

City	Sales	frequency(%)	frequency
NY	12327	25%	0.25
LA	17129	35%	0.35
SF	19923	40%	0.40
Total	49379	100%	1.00

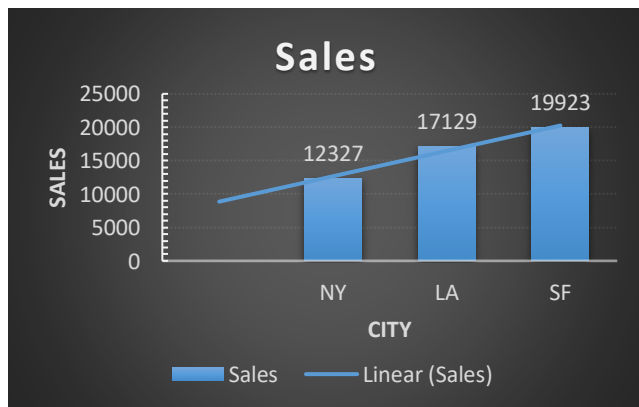
### EXERCISE 2

**Background** You have a frequency distribution table with all the sales.

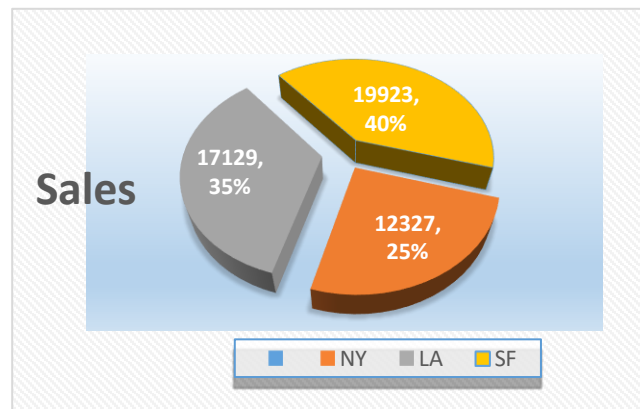
**Task** Create a bar and pie chart, representing the data.

SOLUTION -->

Bar Chart



Pie Chart



EXERCISE 3

- Task 1
- Task 2
- Task 3
- Task 4
- Order the table by frequency.
- Create a bar (column) chart representing the ordered data.
- In a new column, calculate the cumulative frequency of the data.
- On a second axis in the same chart, represent the cumulative frequency of the data.

City	Sales	frec	frequency	cumulative frequency
SF	19923	40%	0.40	0.40
LA	17129	35%	0.35	0.75
NY	12327	25%	0.25	1.00
Total	49379	100%	1.00	

