

STATISTICS



EXERCISES

We want to know what is the average amount of ^{monthly} revenues of businesses in the shoe-making sector in Italy. (Tuscany)

1 what is the POPULATION?

2 " " SAMPLE?

3 " " POPULATION PARAMETER ?

4 " " SAMPLE STATISTICS?

BUSIN. IN THE SHOE-MAK. SECT. IN ITALY

SHOE MAKERS IN TUSCANY

AV. AMOUNT OF REVENUES ...

XXX EUROS

TUTORIAL 1

Rule 1: Number of Classes

The number of classes used in a frequency distribution is decided in a somewhat arbitrary manner.

Quick Guide to Approximate Number of Classes for a Frequency Distribution

SAMPLE SIZE	NUMBER OF CLASSES
Fewer than 50	5-7
50 to 100	7-8
101 to 500	8-10
501 to 1,000	10-11
1,001 to 5,000	11-14
More than 5,000	14-20

consider the data in the following table

17	62	15	65
28	51	24	65
39	41	35	15
39	32	36	37
40	21	44	37
59	13	44	56
12	54	64	59

1. sample size = $7 \times 4 = 28$

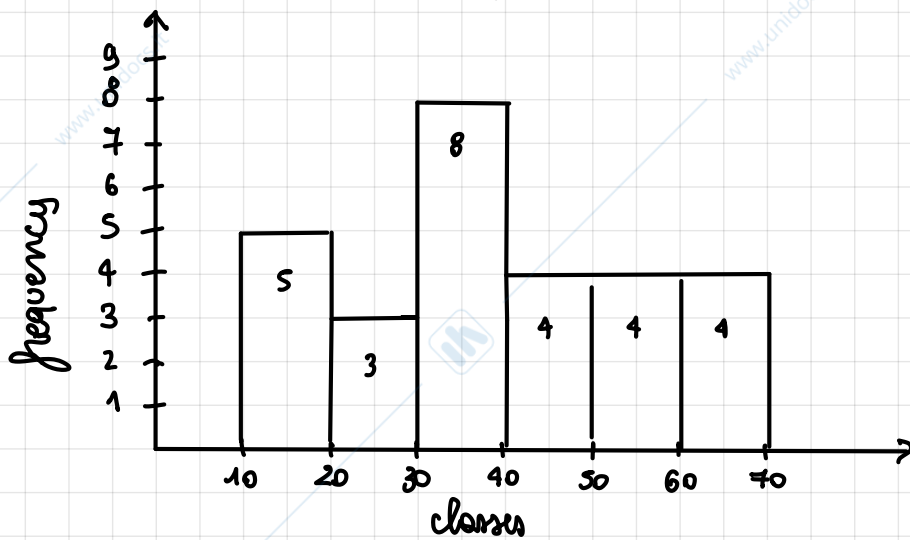
3. $w = \frac{65-12}{6} = 9$ arrotondato

2. n° of classes \rightarrow quick guide $\rightarrow K=6$
 \Rightarrow ARBITRARY number

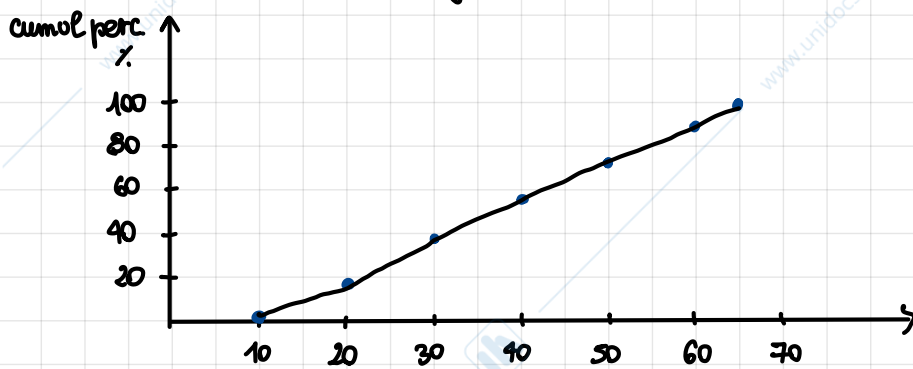
1. construct a FREQUENCY DISTRIBUTION

class	frequency	%	cumul. frequency	cumul. percent
10-19	5	$\frac{5 \times 100}{28} = 17,9\%$	5	17,9%
20-29	3	10,7%	8	28,6%
30-39	8	28,6%	16	57,2%
40-49	4	14,3%	20	71,5%
50-59	4	14,3%	24	85,8%
60-69	4	14,3%	28	100%

2. Construct a histogram



3 Construct an ogive



TUTORIAL 2