Data distribution

The doctor of a school has measured the height of pupils in a 5th grade class, and now more pupils were collected. The result (in cm) is as follows:

130	132	138	153	133	110	132	129	135	134	136	133	133	134	135
132	135	134	133	132	130	131	135	134	136	133	133	130	129	128

- Draw the data distribution
- Calculate necessary parameters (mean, median, mode, spread)
- Make a conclusion about the shape of this data distribution.

The weight of those pupils was measured in kg and the results is as follows.

37	40	39	51	41	30	39	38	41	37	39	38	37	40	41
40	37	39	40	41	38	39	40	41	39	40	40	38	39	41

- Draw the data distribution
- Calculate necessary parameters (mean, median, mode, spread)
- Make a conclusion about the shape of this data distribution.

Data Correlation (Advanced)

- Is there any correlation between height and weight of puppils?
- How do we quantify that correlation?

Exercise 02: PCA [Optional]

Given a data set X consisting of 4 patterns (each pattern has 2 features) as follows: (-1,-2), (1,3), (0,1), (2,0.5).

- Perform the PCA on X.
- Draw a graph containing the samples, pricipal components and the projected samples.