

Representing Data

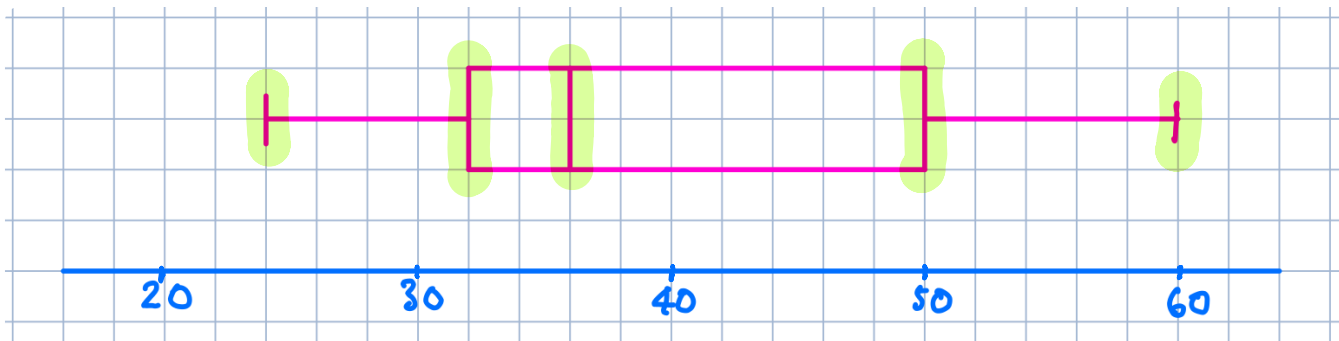
Box Plots

(or Box Whisker Diagrams)

Representing Data: Box Plots - or Box Whisker Diagrams

Example 1

Lowest Value 24 Lower Quartile 32 Median 36 Upper Quartile 50 Highest Value 60

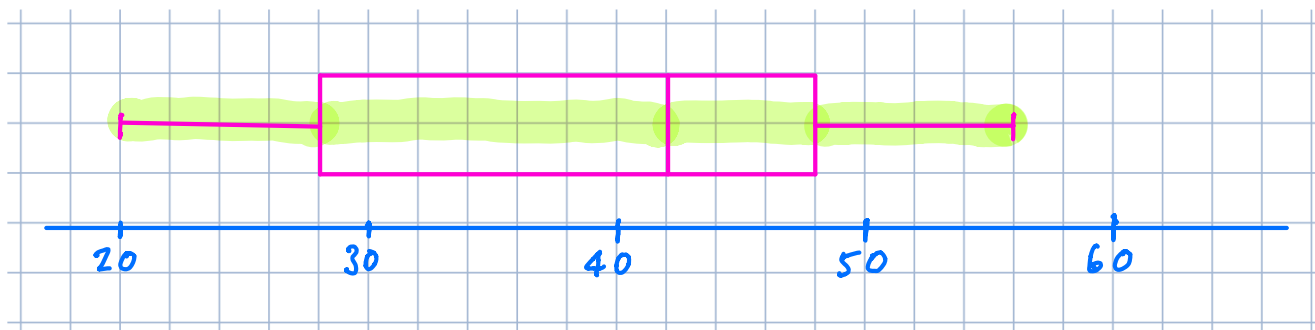


Measure of Location: Median = 36

Measure of Spread: IQR = $50 - 32 = 18$

Example 2

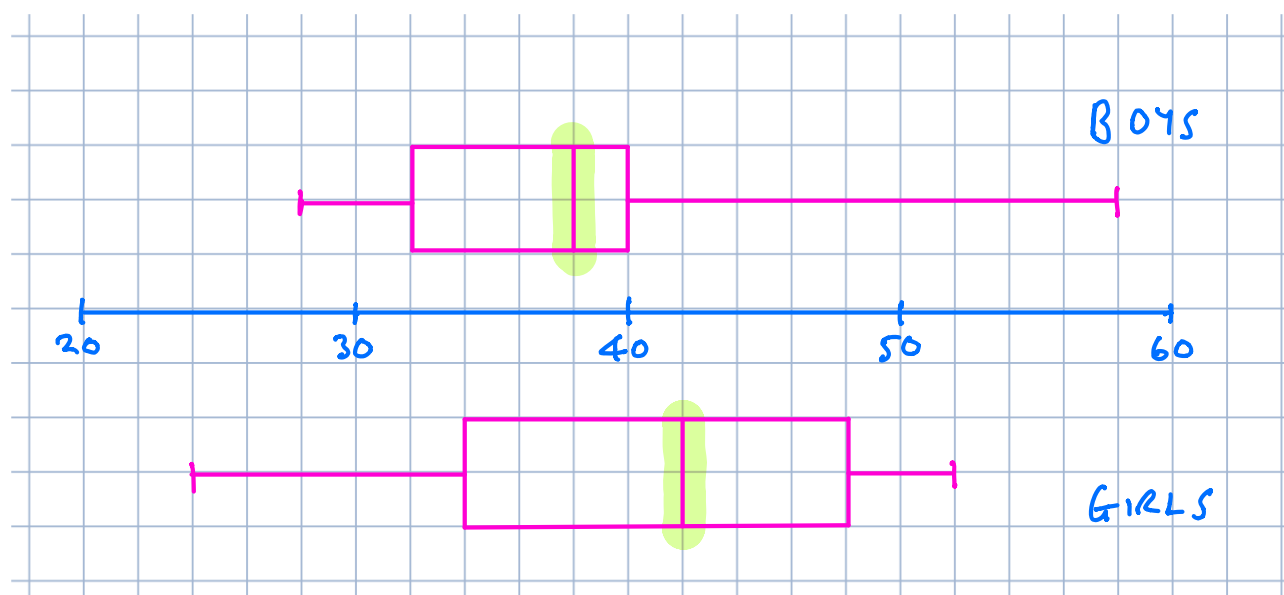
Lowest Value 20 Lower Quartile 28 Median 42 IQR 20 Range 36



Upper Quartile = Lower Quartile + IQR = $28 + 20 = 48$

Highest Value = Lowest Value + Range = $20 + 36 = 56$

Comparing Box Plots of Exam Results For Boys and Girls



We always compare the medians as a measure of location and the IQRs as a measure of spread.

On average the girls performed better than the boys since they had a higher median, 42 compared with 38.

The boys results were more consistent than the girls results since they had a lower IQR, 8 compared to 14.