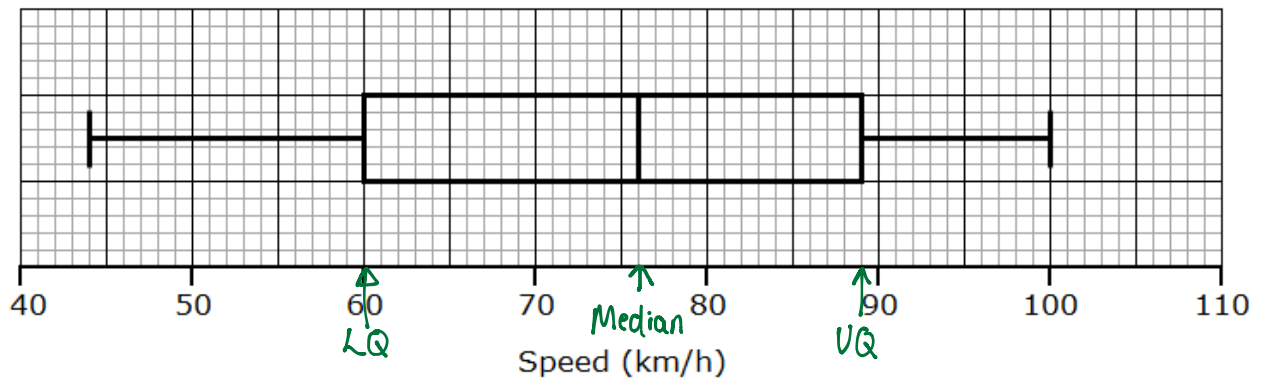


The box plot represents the distribution of the speeds, in km/h of vehicles on a road during the daytime.



(a) (i) What is the median speed?

76 km/h

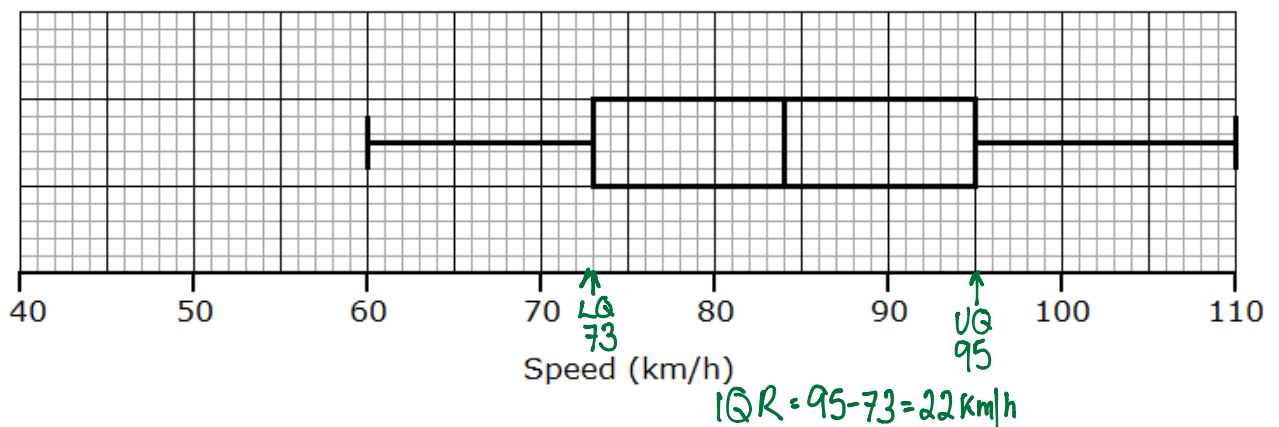
(1)

(ii) Work out the interquartile range of the speeds.

$$89 - 60 = 29 \text{ km/h}$$

(2)

This box plot represents the distribution of the speeds, in km/h, of vehicles on the same road at night.



(b) Make two comparisons between the speeds of vehicles during the daytime and at night.

* median is higher at night.

* IQR is smaller at night (more consistent)

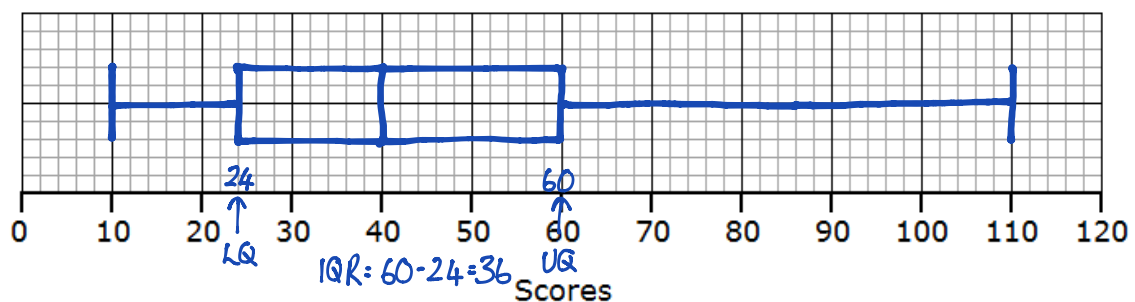
(2)

Four students Adil, Dev, Freddie and Shane, each kept a record of their scores at cricket one season.

The table summarises Adil's scores.

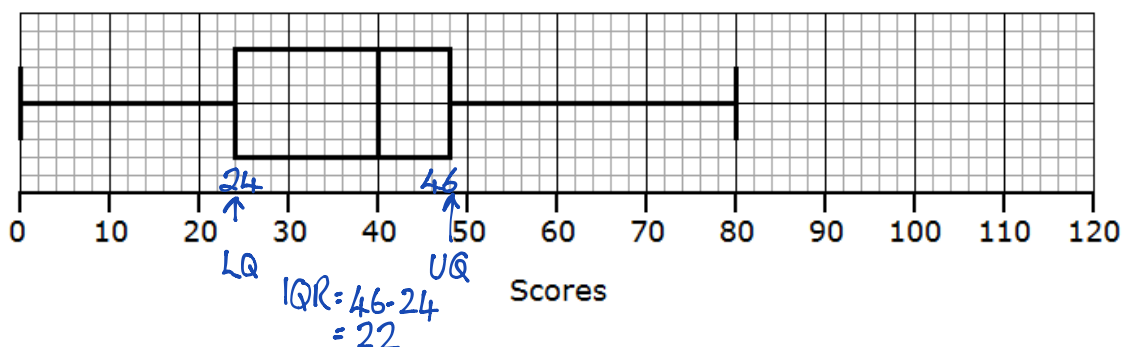
	Score
Lowest	10
Lower quartile	24
Median	40
Upper quartile	60
Highest	110

(a) Draw a box plot to summarise Adil's scores.



(2)

The box plot summarises Dev's scores.



(b) State one similarity and one difference between Adil's and Dev's scores.

Similarity: Both have same median of 40

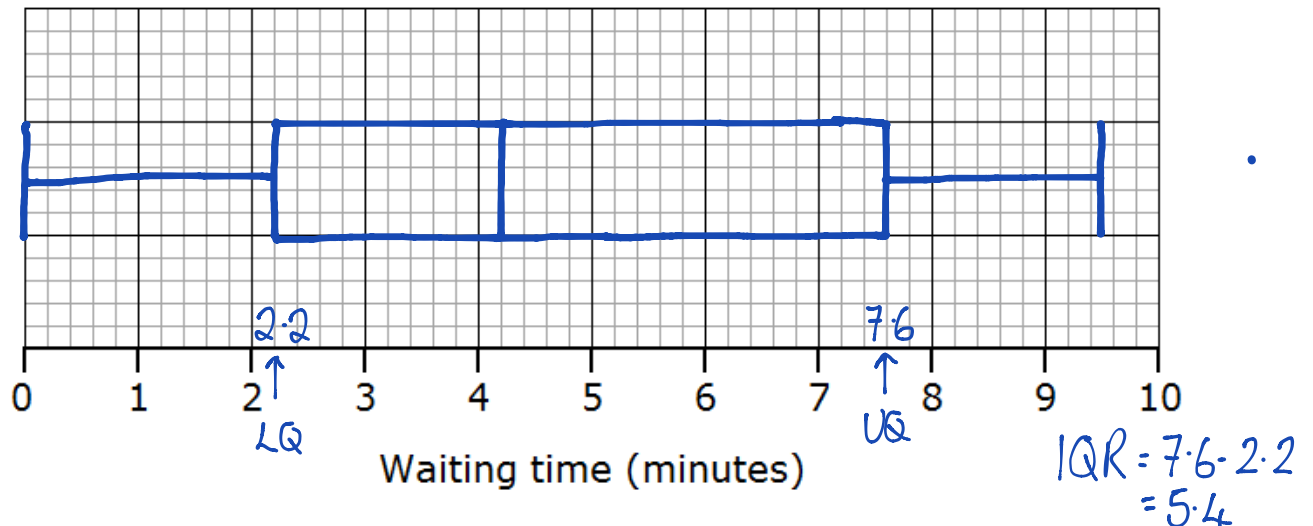
Difference: Dev has smaller IQR (more consistent)

(2)

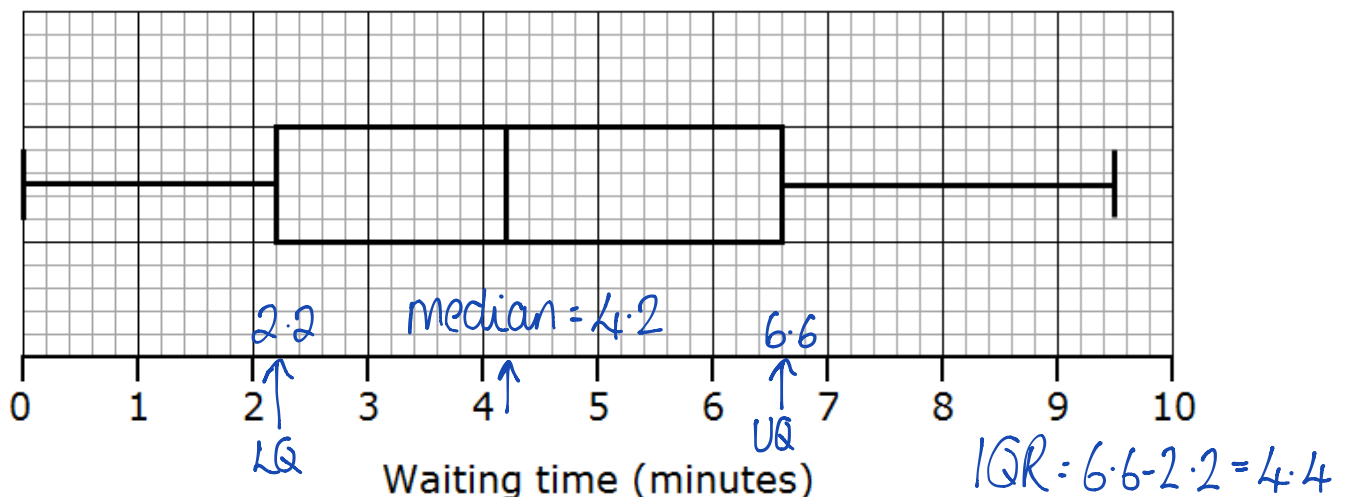
Here is some information about waiting times, in minutes at a school canteen.

Minimum	Lower Quartile	Median	Upper Quartile	Maximum
0	2.2	4.2	7.6	9.5

Draw a box plot to show this information. (2)



A new queuing system is introduced. The box plot shows information about waiting times with the new system.



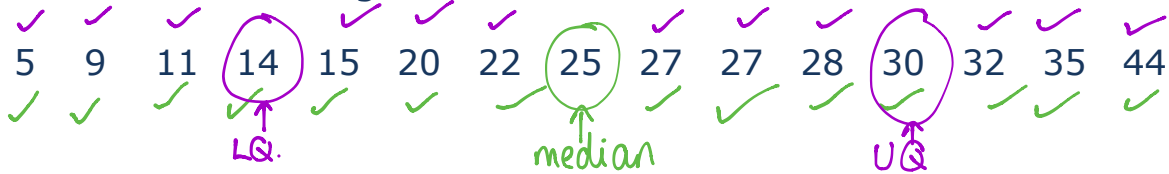
Compare the waiting times of the new and old systems.

* Same median of 4.2 minutes

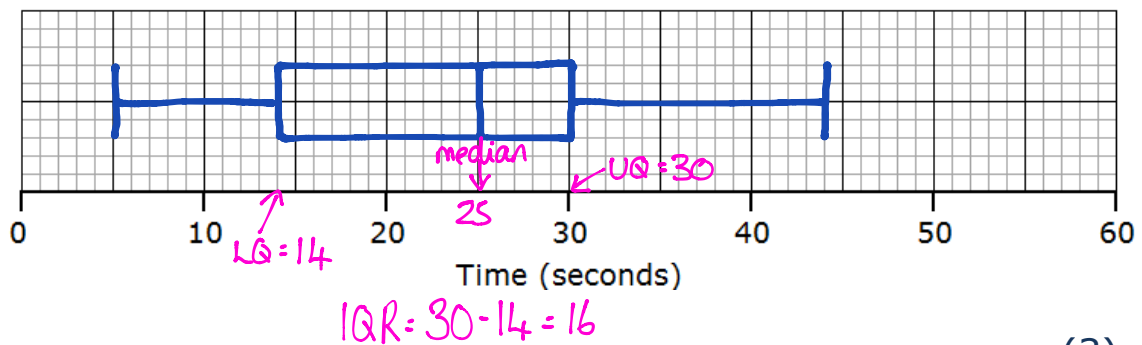
* New system has smaller IQR (more consistent)

(2)

Here are the times, in seconds that 15 people waited to be served at Rose's garden centre.



On the grid, draw a box plot for this information.



(3)

All the students in Mathstown School had a test.

The lowest mark was 18 ✓

The highest mark was 86 ✓

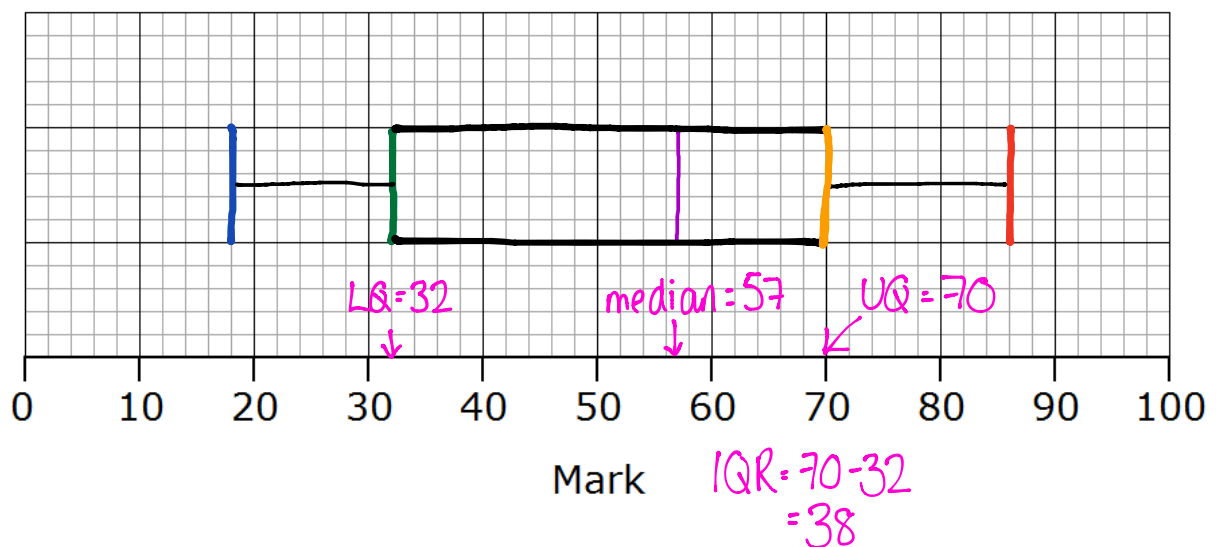
The median was 57 ✓

The lower quartile was 32 ✓

The interquartile range was 38

Be careful...
 $70 - 32 = 38$
 UQ → 70 - 32 = 38

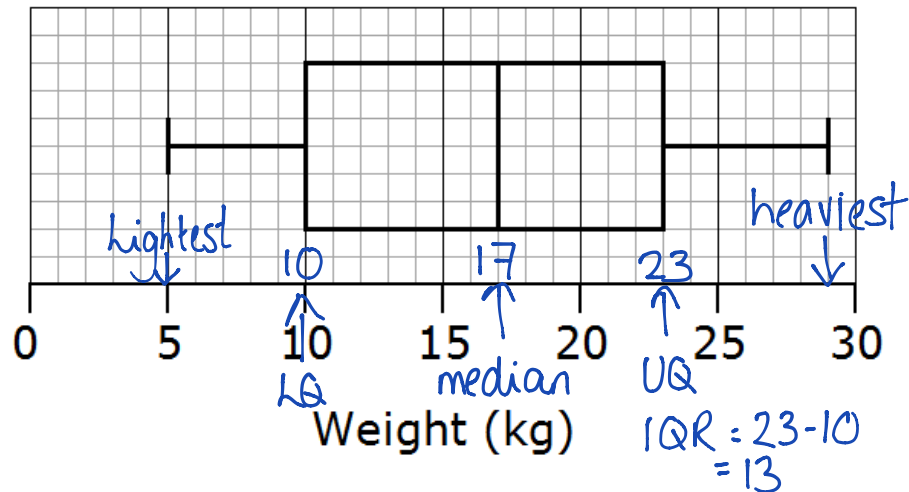
On the grid, draw a box plot to show this information.



(3)

I like to write the median, LQ and UQ everytime... I also work out the IQR too 😊

The box plot gives information about the distribution of the weights of bags on a plane.



- (a) Jean says the heaviest bag weighs 23 kg.
She is **wrong**. Explain why.

it is 29 kg.

(1)

- (b) Write down the median weight.

17 kg (1)

- (c) Work out the interquartile range of the weights.

$$23 - 10 = 13$$

13 kg (1)

There are 240 bags on the plane.

- (d) Work out the number of bags with a weight of 10 kg or less.

$$\frac{1}{4} \text{ of } 240 = \underline{\underline{60 \text{ bags}}}$$

(2)

