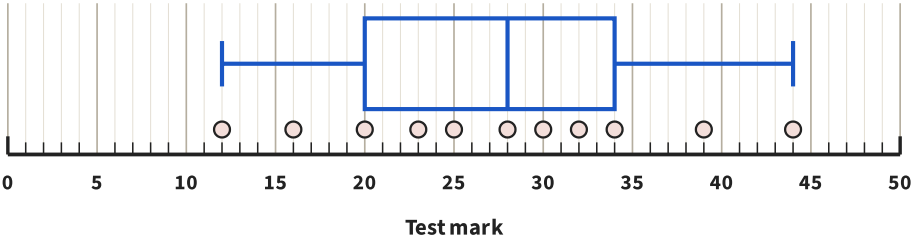


Box Plots

1 The box is the middle half. The whiskers reach the lowest and the highest.
Each dot is one test mark. Draw a box plot for the table.

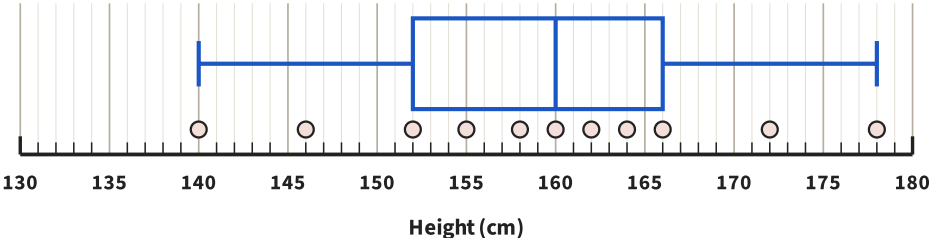
Lowest	Lower quartile	Median	Upper quartile	Highest
12	20	28	34	44



Interquartile range 14

2 Each dot is one height. Draw a box plot for the table.

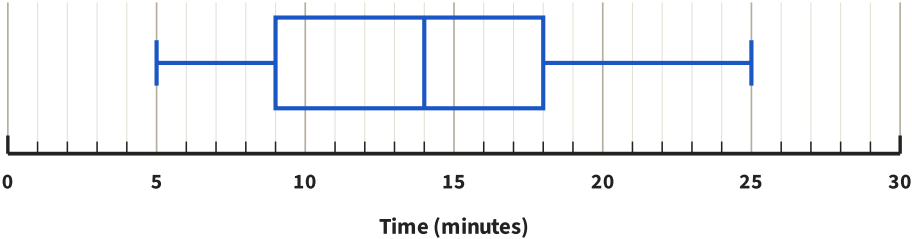
Lowest	Lower quartile	Median	Upper quartile	Highest
140	152	160	166	178



Interquartile range 14

3 Draw a box plot for the table.

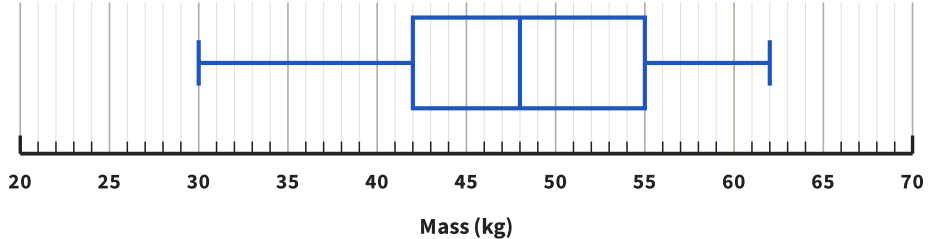
Lowest	Lower quartile	Median	Upper quartile	Highest
5	9	14	18	25



Interquartile range 9

4 Draw a box plot for the table.

Lowest	Lower quartile	Median	Upper quartile	Highest
30	42	48	55	62



Interquartile range 13

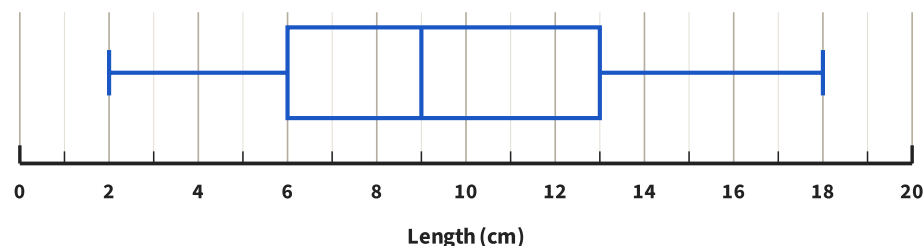
Box Plots

ANSWERS

5

Draw a box plot for the table.

Lowest	Lower quartile	Median	Upper quartile	Highest
2	6	9	13	18

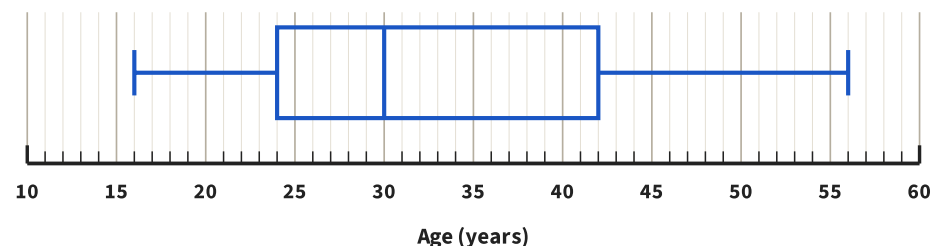


Interquartile range 7

6

Draw a box plot for the table.

Lowest	Lower quartile	Median	Upper quartile	Highest
16	24	30	42	56

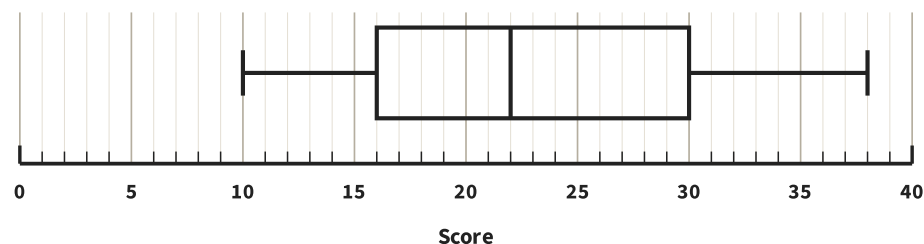


Interquartile range 18

7

Complete the table from the box plot.

Lowest	Lower quartile	Median	Upper quartile	Highest
10	16	22	30	38

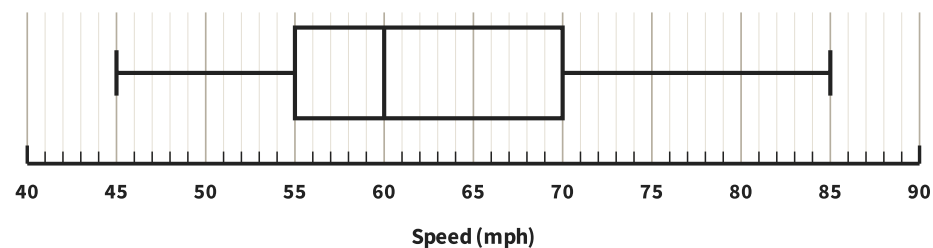


Interquartile range 14

8

Complete the table from the box plot.

Lowest	Lower quartile	Median	Upper quartile	Highest
45	55	60	70	85



Interquartile range 15

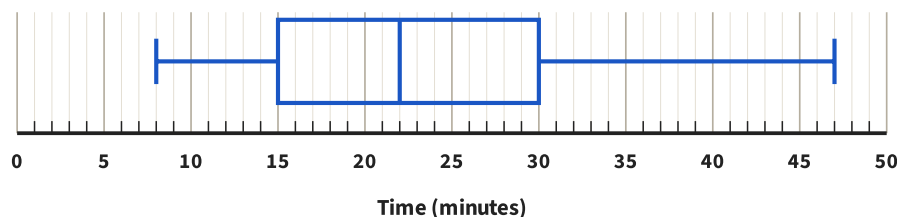
Box Plots *further practice*

ANSWERS

9

The times staff at a hospital take to get to work. Draw a box plot. Work out the interquartile range and the range.

Lowest	Lower quartile	Median	Upper quartile	Highest
8	15	22	30	47

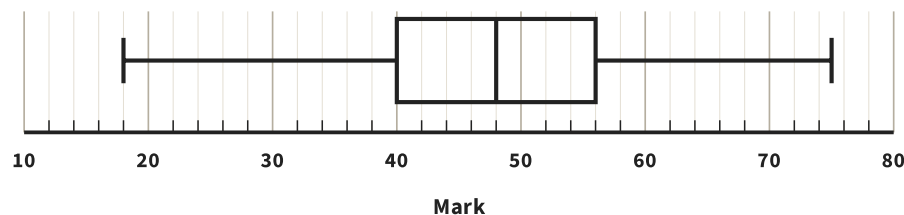


Interquartile range $30 - 15 = 15$

Range $47 - 8 = 39$

11

The box plot shows the test marks of 80 students.



About how many students scored more than 56? *a quarter of 80: about 20*

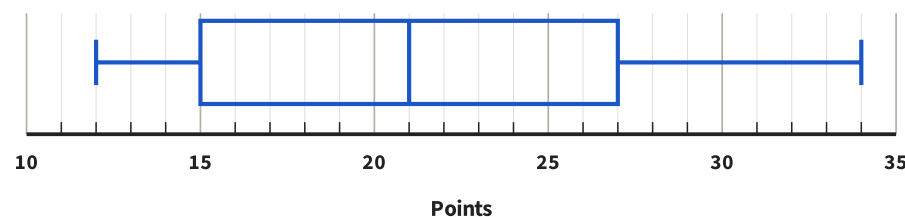
About how many scored between 40 and 56? *half of 80: about 40*

10

The points a basketball player scored in 11 games, in order. Find the five values, then draw a box plot.

12, 15, 15, 18, 20, 21, 23, 24, 27, 30, 34

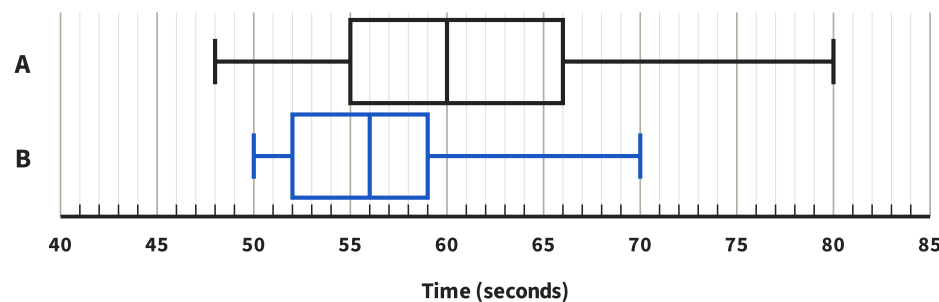
Lowest	Lower quartile	Median	Upper quartile	Highest
12	15	21	27	34



12

The box plot shows team A's times in a 400 m race. Draw team B's box plot on the same axis, then compare the teams.

	Lowest	Lower quartile	Median	Upper quartile	Highest
Team B	50	52	56	59	70



Compare *B: lower median (56), so faster; smaller IQR (7), so more consistent*

Box Plots *further practice*

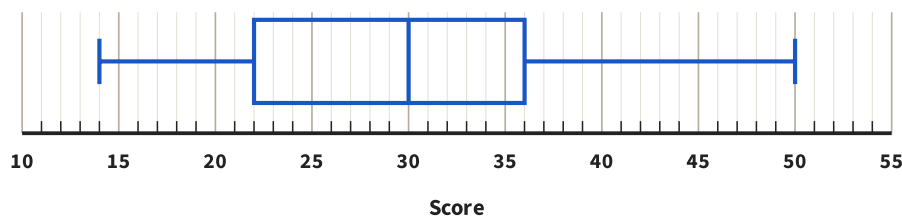
ANSWERS

13

Use the clues to draw the box plot.

The lowest value is 14. The range is 36. The median is 30.
The lower quartile is 8 less than the median. The interquartile range is 14.

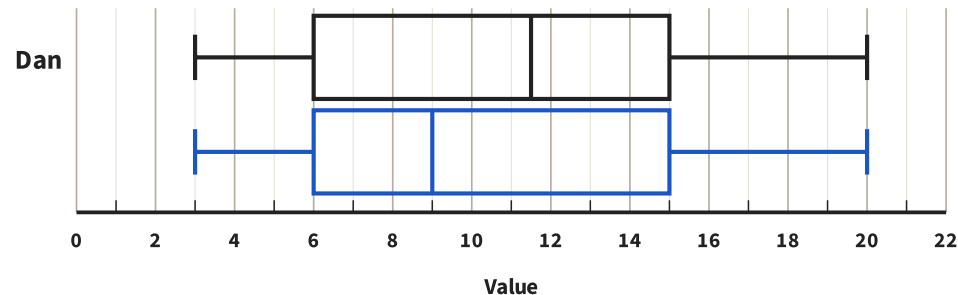
Lowest	Lower quartile	Median	Upper quartile	Highest
14	22	30	36	50



14

Dan drew a box plot for these 11 values. Find his mistake. Draw the correct box plot underneath.

3, 4, 6, 7, 8, 9, 12, 14, 15, 17, 20



Mistake the median is 9, the middle value; Dan used 11.5, halfway between 3 and 20

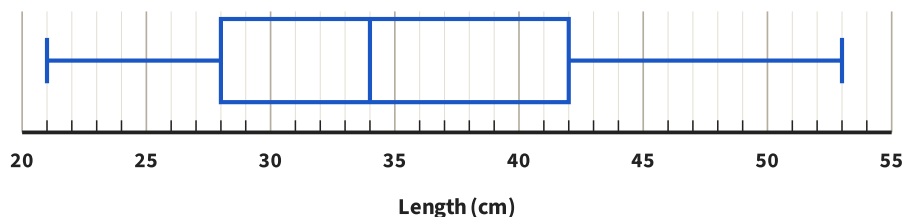
15

The stem-and-leaf diagram shows the lengths of 15 fish. Draw a box plot.
Work out the interquartile range.

2 | 1 4 5 8
3 | 0 1 3 4 6 8 9
4 | 2 5 7
5 | 3

Key: 2 | 1
means
21 cm

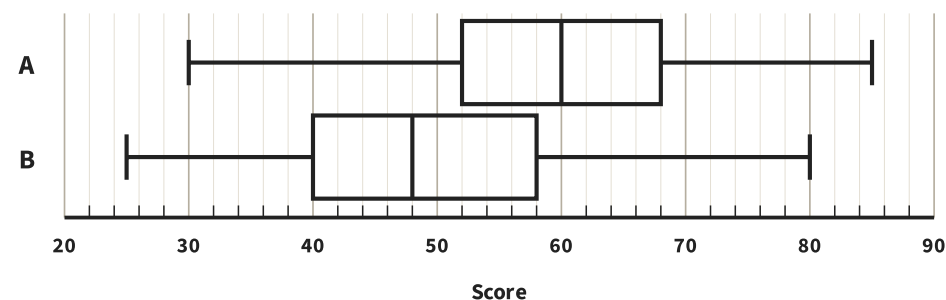
Lowest	Lower quartile	Median	Upper quartile	Highest
21	28	34	42	53



Interquartile range 42 - 28 = 14 cm

16

The box plots show the scores of two groups in a quiz. At least three quarters of group A scored over 50, but less than half of group B did. Ella says more students in group A scored over 50 than in group B. Is she right? Explain.



Answer Not necessarily: a bigger fraction of A did, but we do not know how many are in each group