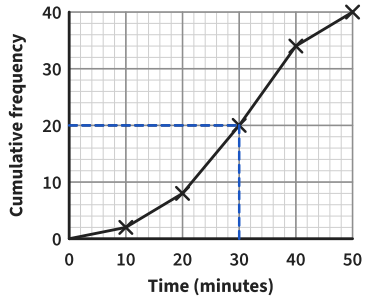
Median and quartiles from a graph

ANSWERS

1

The times of 40 runners. Find the median.

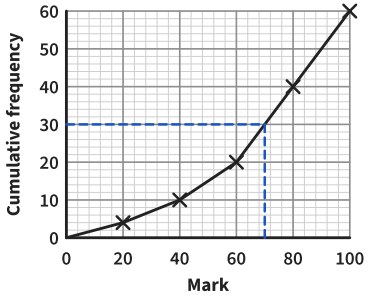


½ of 40 = 20

Median 30

2

The marks of 60 students.
Find the median.

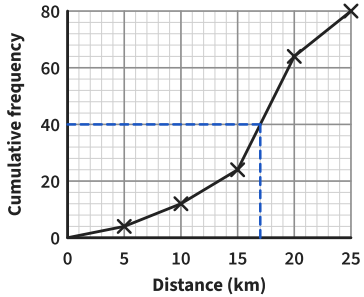


½ of 60 = 30

Median 70

3

How far 80 people drive to work.
Find the median.

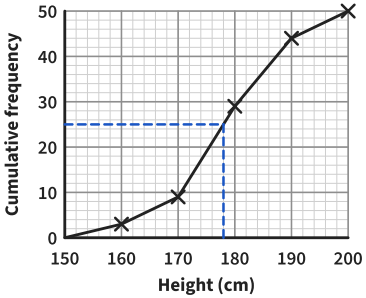


½ of 80 = 40

Median 17

4

The heights of 50 students.
Find the median.

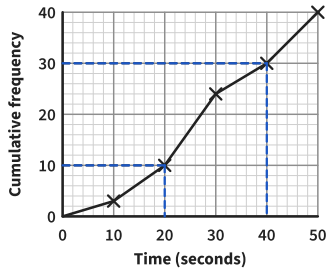


½ of 50 = 25

Median 178

5

The times of 40 swimmers.
Find the interquartile range.



¼ of 40 = 10

¾ of 40 = 30

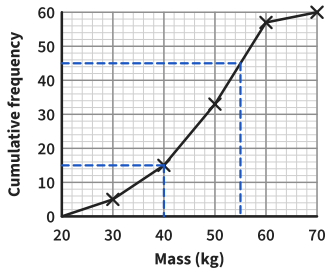
Lower quartile 20

Upper quartile 40

Interquartile range 40 – 20 = 20

6

The masses of 60 suitcases.
Find the interquartile range.



¼ of 60 = 15

¾ of 60 = 45

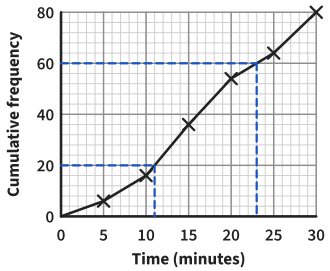
Lower quartile 40

Upper quartile 55

Interquartile range 55 – 40 = 15

7

How long 80 people spent at a museum.
Find the interquartile range.



¼ of 80 = 20

¾ of 80 = 60

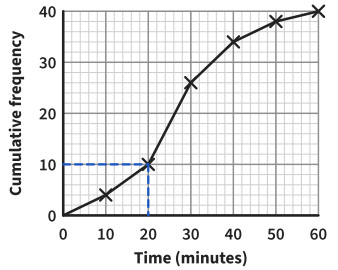
Lower quartile 11

Upper quartile 23

Interquartile range 23 – 11 = 12

8

Sam says the lower quartile is 15, because 15 is a quarter of the way along the time axis. Explain his mistake.
Find the lower quartile.



a quarter of the way up, not along: 10

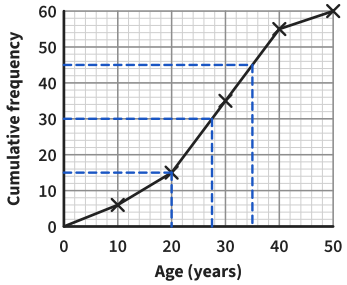
Lower quartile 20

Median and quartiles from a graph *further practice*

ANSWERS

9

The ages of 60 people at a wedding.
Find the median and the interquartile range.



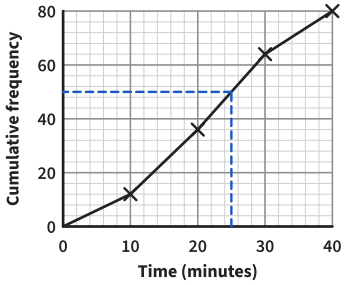
median at 30: 27.5

35 – 20 = 15

Answer *median 27.5, IQR 15*

10

80 people queued for a ride.
How many queued for less than 25 minutes?

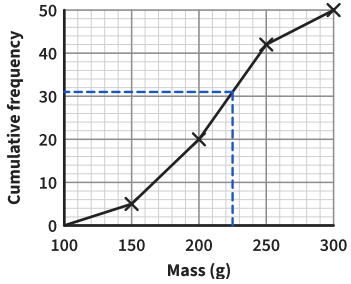


read up from 25: 50

Answer *50*

11

50 letters were weighed.
How many weigh more than 225 g?



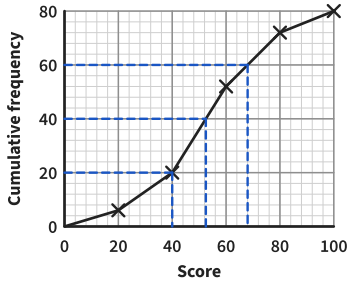
read up from 225: 31

50 – 31 = 19

Answer *19*

12

The scores of 80 players.
Find the median, the quartiles and the interquartile range.



median 52.5

LQ 40, UQ 68

Answer *IQR 28*

13

Class A: median 34 minutes, interquartile range 12 minutes.
Class B: median 29 minutes, interquartile range 20 minutes.
Compare the times of the two classes.

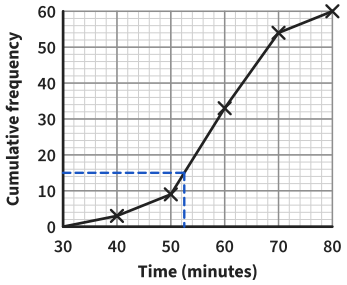
A has the higher median: longer on average

A has the smaller IQR: more consistent

Answer *A: longer, more consistent*

14

60 runners race. The fastest quarter win a prize. Estimate the slowest time that wins a prize.



a quarter of 60 = 15

read across from 15: 52.5

Answer *52.5 minutes*

15

The median of 60 values is 38.
How many values are more than 38?
How many lie between the lower and the upper quartile?

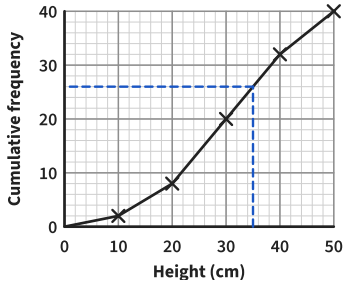
half of 60 = 30

from a quarter to three quarters: 45 – 15 = 30

Answer *30; 30*

16

The heights of 40 seedlings.
Estimate the percentage of seedlings taller than 35 cm.



read up from 35: 26

40 – 26 = 14; 14 out of 40 = 35%

Answer *35%*