

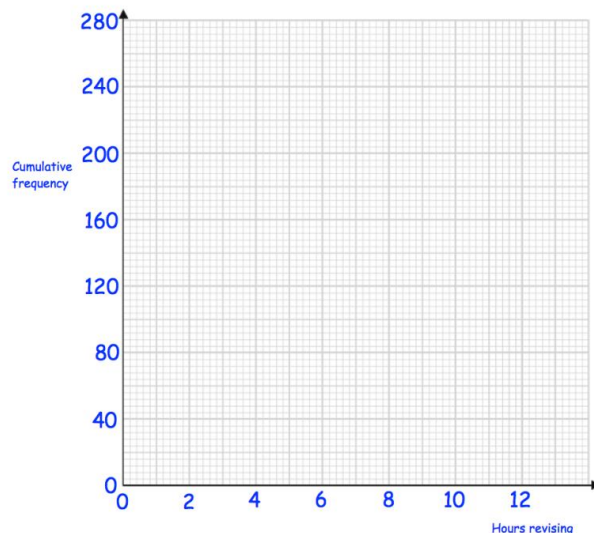
Cumulative frequency

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Worked example

Plot a cumulative frequency graph

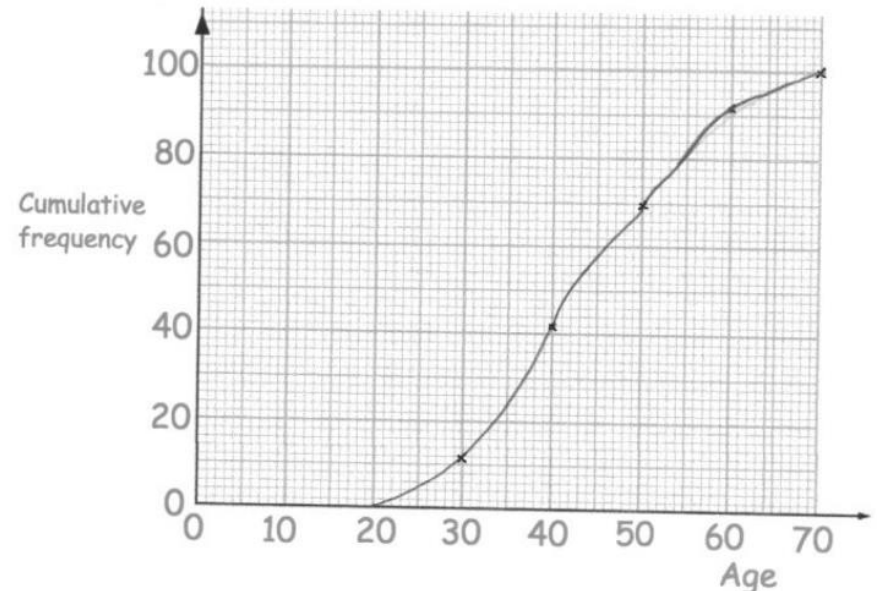
Number of hours (h)	Frequency
$0 < h \leq 2$	20
$2 < h \leq 4$	32
$4 < h \leq 6$	48
$6 < h \leq 8$	120
$8 < h \leq 10$	24
$10 < h \leq 12$	16



Your turn

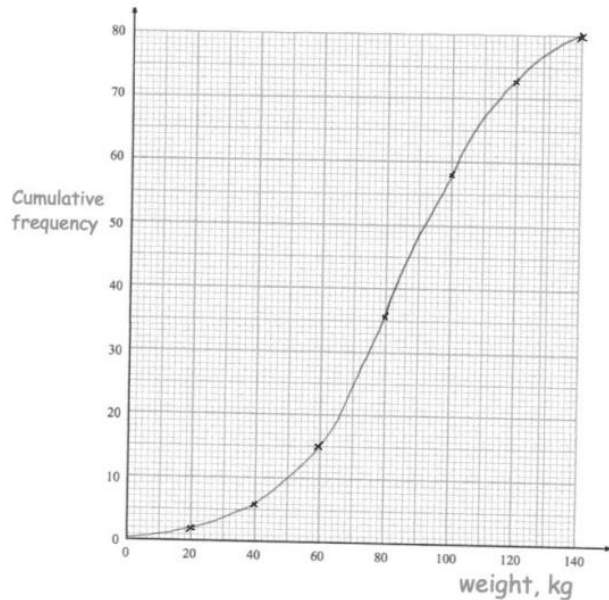
Plot a cumulative frequency graph

Age, x years	Frequency
$20 < x \leq 30$	12
$30 < x \leq 40$	30
$40 < x \leq 50$	28
$50 < x \leq 60$	22
$60 < x \leq 70$	8



Worked example

Using the cumulative frequency graph, estimate the:



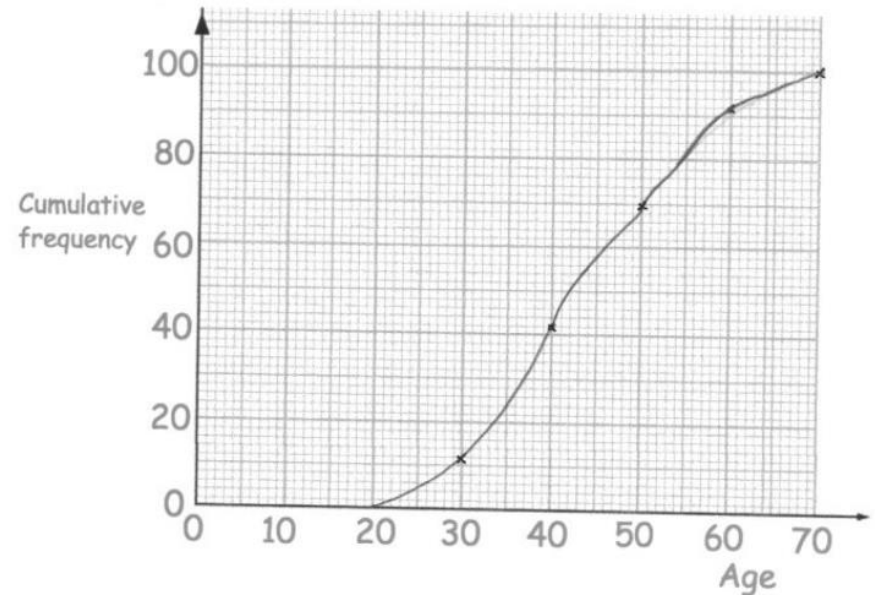
Median Weight

Lower quartile weight

Upper quartile weight

Your turn

Using the cumulative frequency graph, estimate the:



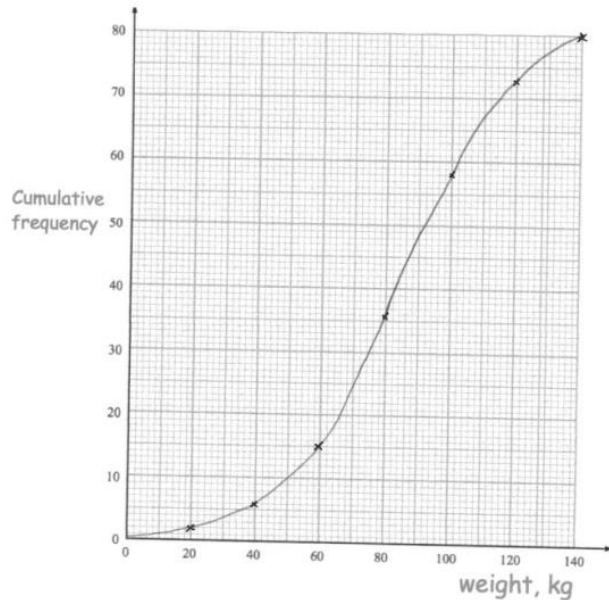
Median age 42

Lower quartile age 35

Upper quartile age 53

Worked example

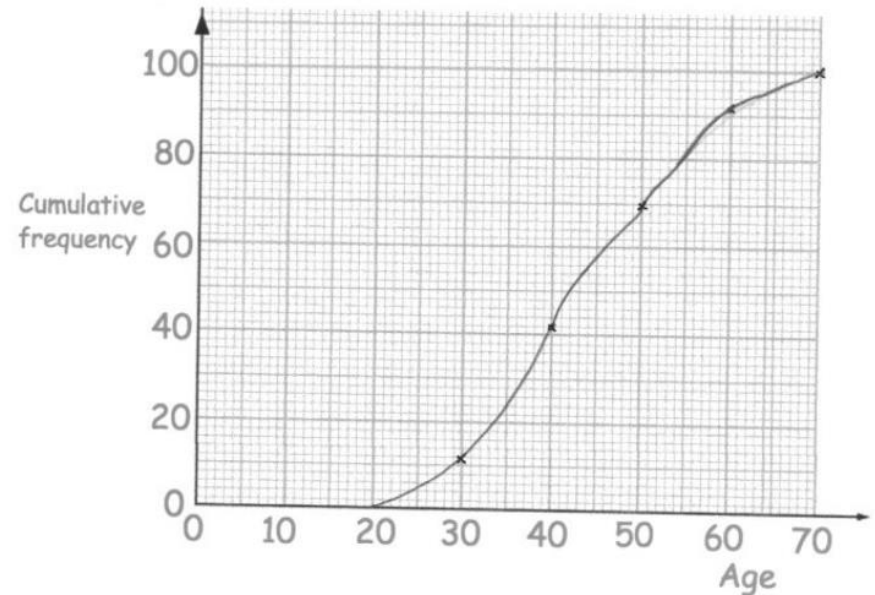
Using the cumulative frequency graph, estimate the:



Interquartile range of the weights

Your turn

Using the cumulative frequency graph, estimate the:

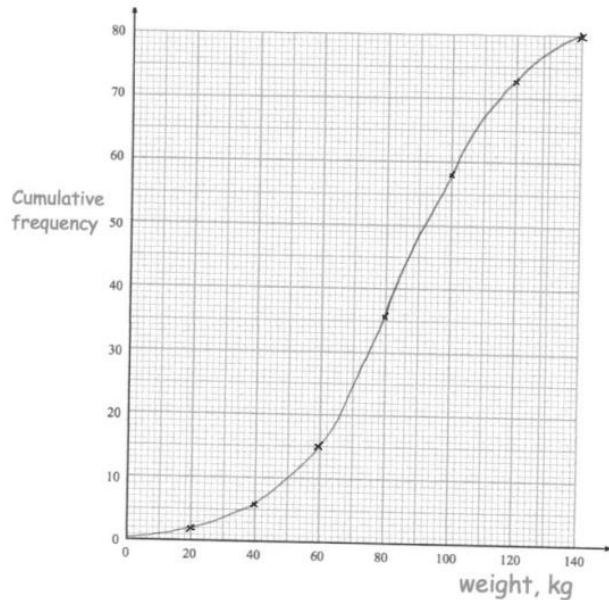


Interquartile range of the ages

18

Worked example

Using the cumulative frequency graph, estimate the:

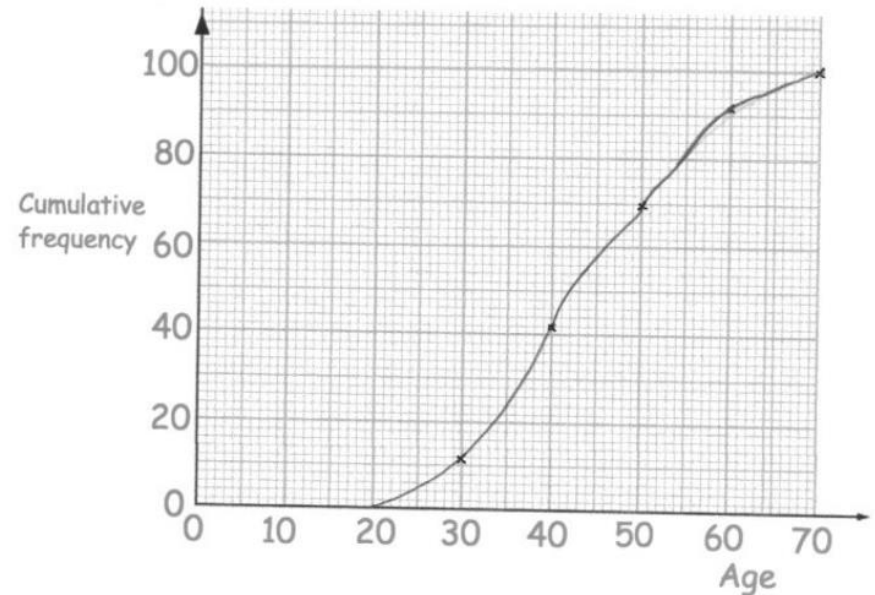


Number of people who weight less than 40 *kg*

Number of people who weigh more than 100 *kg*

Your turn

Using the cumulative frequency graph, estimate the:



Number of people younger than 35

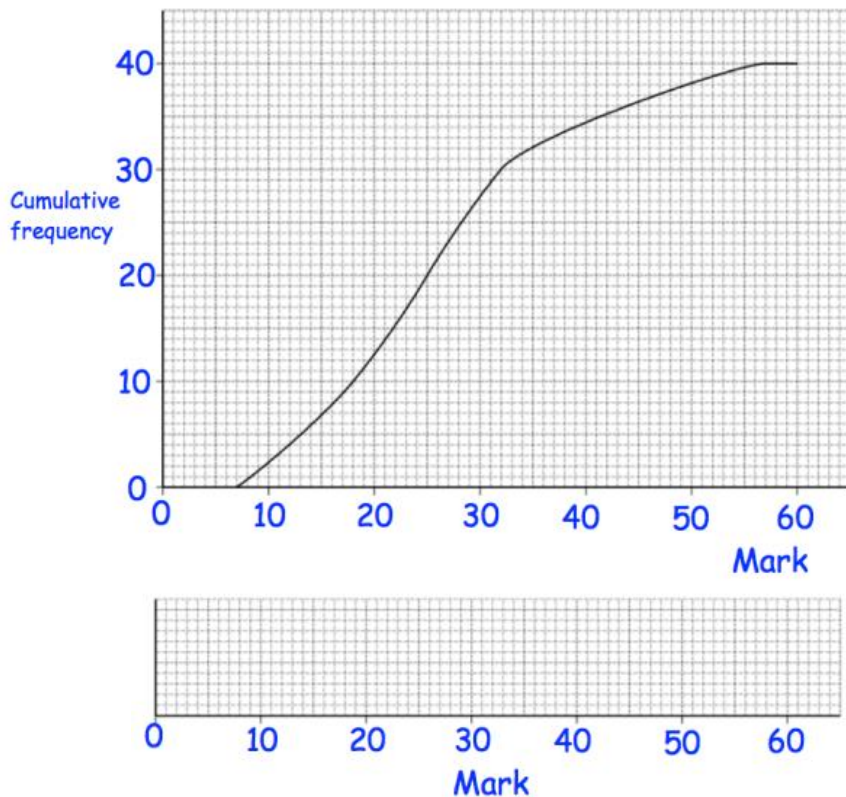
25

Number of people older than 62

7

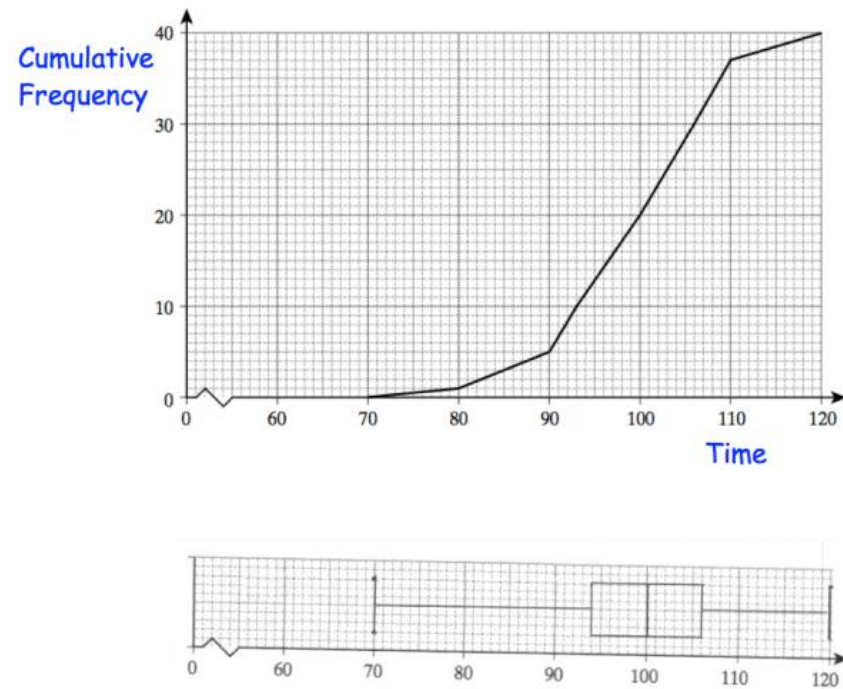
Worked example

Using the cumulative frequency graph, draw a box plot



Your turn

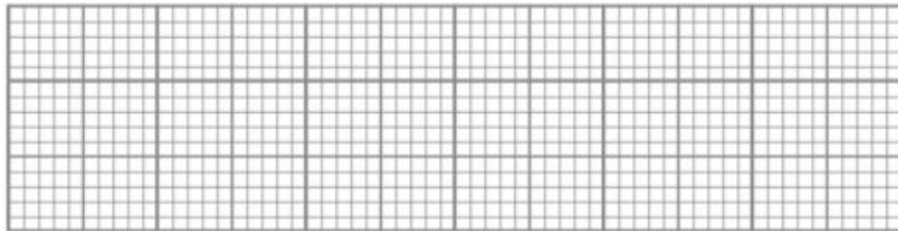
Using the cumulative frequency graph, draw a box plot



Worked example

Draw a box plot to show this information.

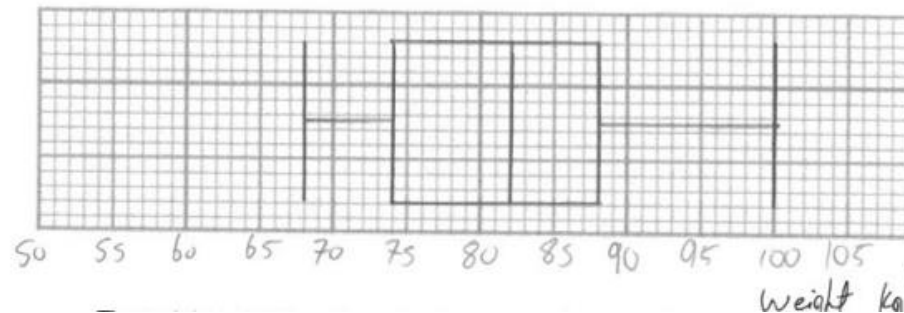
Lowest	51 kg
Lower Quartile	60 kg
Median	71 kg
Upper Quartile	74 kg
Highest	83 kg



Your turn

Draw a box plot to show this information.

Lowest	68kg
Lower Quartile	74kg
Median	82kg
Upper Quartile	88kg
Highest	100kg



Worked example

Estimate the number of people with weight greater than 115 *kg*

Weight (w kg)	Frequency
$80 < w \leq 90$	3
$90 < w \leq 100$	5
$100 < w \leq 110$	7
$110 < w \leq 120$	4
$120 < w \leq 130$	1

Your turn

Estimate the number of people who travelled a distance greater than 17.5 *km*

Distance travelled (d km)	Frequency
$0 < d \leq 5$	28
$5 < d \leq 10$	32
$10 < d \leq 15$	20
$15 < d \leq 20$	14
$20 < d \leq 25$	6

13

Worked example

Draw a frequency polygon for the information

Weight (w kg)	Frequency
$80 < w \leq 90$	3
$90 < w \leq 100$	5
$100 < w \leq 110$	7
$110 < w \leq 120$	4
$120 < w \leq 130$	1

Your turn

Draw a frequency polygon for the information

Age (a years)	Frequency
$20 < a \leq 30$	6
$30 < a \leq 40$	16
$40 < a \leq 50$	14
$50 < a \leq 60$	22
$60 < a \leq 70$	2

