

1. The table shows information about the heights of 80 children.

| Height (h cm) | Frequency |
|--------------------|-----------|
| $130 < h \leq 140$ | 4 |
| $140 < h \leq 150$ | 11 |
| $150 < h \leq 160$ | 24 |
| $160 < h \leq 170$ | 22 |
| $170 < h \leq 180$ | 19 |

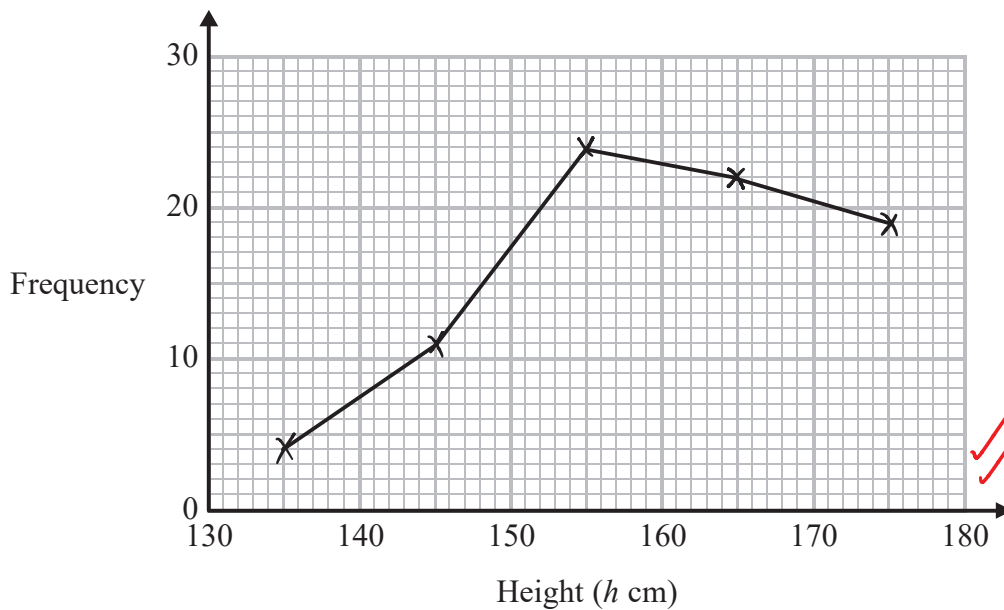
15 $130 < h \leq 150$
 39 $130 < h \leq 160$
 61 $130 < h \leq 170$

(a) Find the class interval that contains the median.

median = middle value when arranged in ascending order

 $160 < h \leq 170$ ✓
 (1)

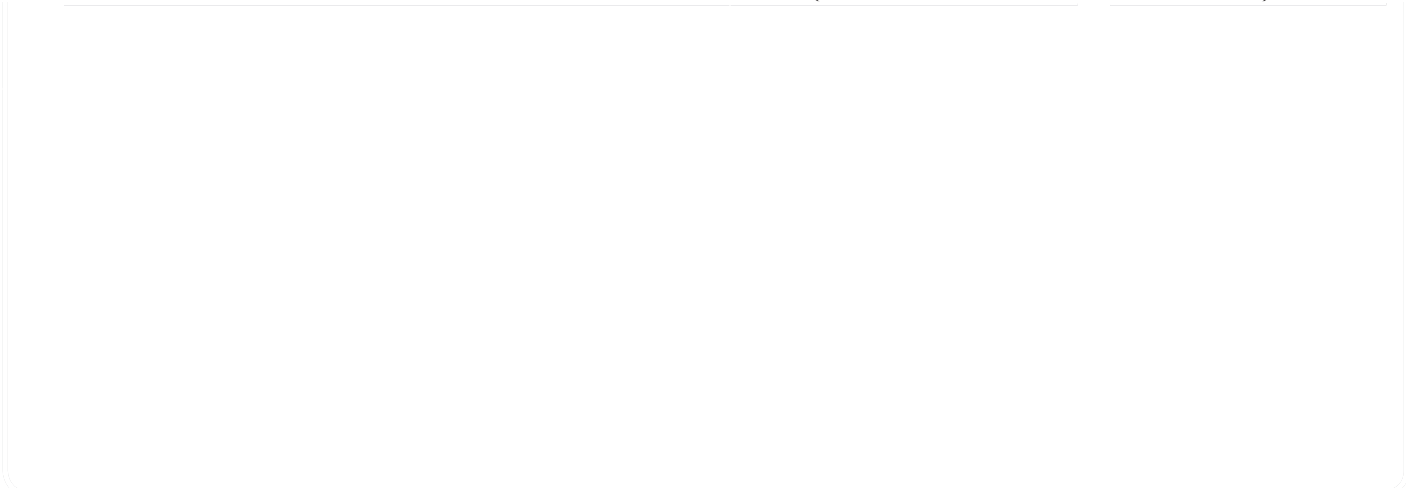
(b) Draw a frequency polygon for the information in the table.



✓
 ✓

(2)

(Total for Question 1 is 3 marks)



2. The table gives information about the times taken, in seconds, by 18 students to run a race.

| Time (t seconds) | Frequency | |
|---------------------|-----------|---------------|
| $5 < t \leq 10$ | 1 | middle 7.5 |
| $10 < t \leq 15$ | 2 | 12.5 |
| $15 < t \leq 20$ | 7 | 17.5 |
| $20 < t \leq 25$ | 8 | 22.5 |

Work out an estimate for the mean time.

Give your answer correct to 3 significant figures.

$$1 \times 7.5 + 2 \times 12.5 + 7 \times 17.5 + 8 \times 22.5$$

$$= 335 \quad \checkmark$$

$$\frac{335}{18} = 18.6111\dots$$

$$= 18.6 \text{ (3.s.f.)}$$

..... 18.6 \checkmark seconds

(Total for Question is 3 marks)

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