

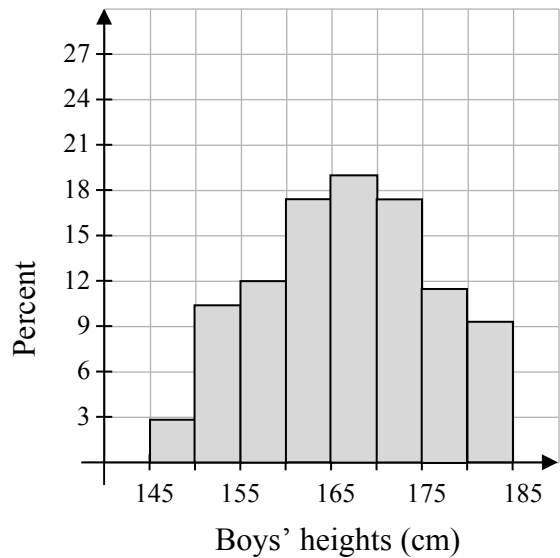
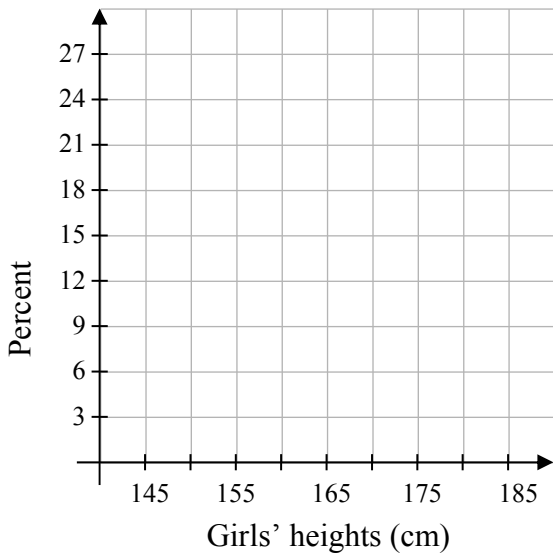


- (c) (i) Use the data in Table 1 to complete Table 2 by finding the percentage of girls in each of the height categories.

Table 2 (Girls, %)								
Height (cm)	145-150	150-155	155-160	160-165	165-170	170-175	175-180	180-185
Percentage of girls				22.4	25			



- (ii) Use the data in Table 2 to draw a histogram showing the percentage of girls in each height category.



- (iii) A histogram showing the percentage of boys in each height category is given above. John examines both histograms and comments that “There are roughly twice as many boys as girls in the 175 to 180 cm category”. Do the histograms support his claim? Explain your answer.

Answer:

Reason:


- (iv) Mary examines both histograms and comments that “I see that there are more tall girls than tall boys”. Do the two histograms support her claim? Explain your answer.

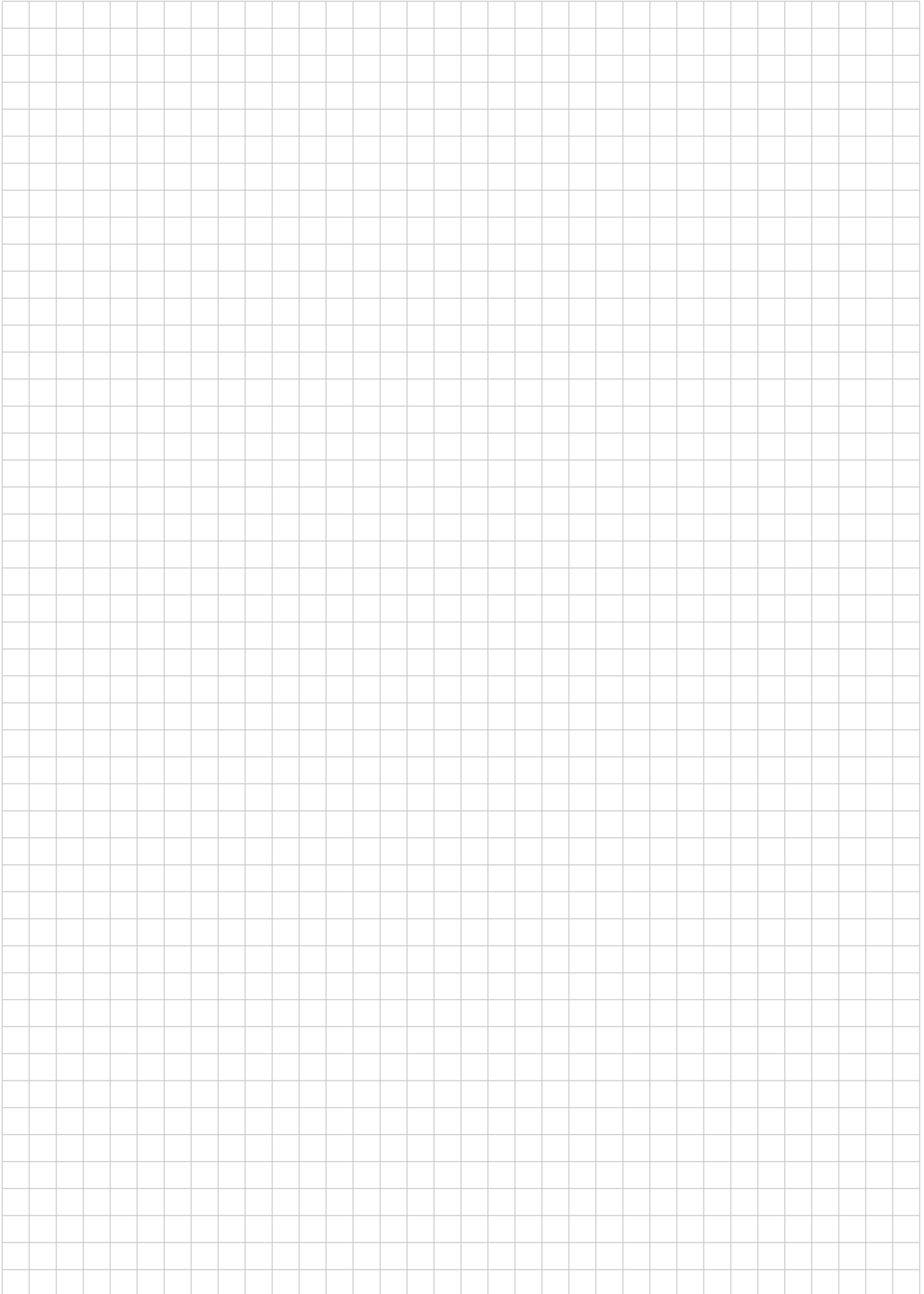
Answer:

Reason:


- (d) (i) The mean height of the boys in the sample is 166.7 cm and the standard deviation of their height is 8.9 cm. Assuming that boys’ heights are normally distributed, use the Empirical Rule to find an interval that will contain the heights of approximately 95% of all boys.


- (ii) The standard deviation of the heights of the girls in the sample is 7.7 cm while the standard deviation of the heights of the boys is 8.9 cm. Interpret this difference in the context of the data.


You may use this page for extra work.



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