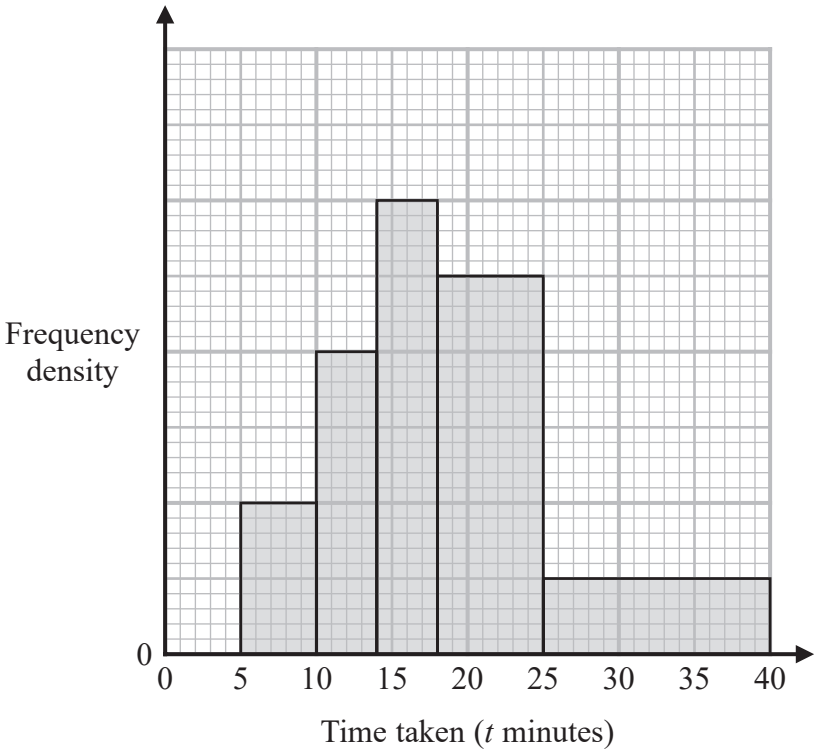
1. The histogram shows the times taken, t minutes, by each of 100 people to swim 500 metres.



(a) Use the histogram to complete the frequency table for the times taken by the 100 people to swim 500 metres.

Time taken (t minutes)	5 – 10	10 – 14	14 – 18	18 – 25	25 – 40
Frequency (f)	10	16	24		

(1)

(b) Estimate the number of people who took less than 16 minutes to swim 500 metres.

(2)

(c) Find an estimate for the mean time taken to swim 500 metres.

(2)

Given that $\sum ft^2 = 41\,033$

(d) find an estimate for the standard deviation of the times taken to swim 500 metres.

(2)

Given that $Q_3 = 23$

(e) use linear interpolation to estimate the interquartile range of the times taken to swim 500 metres.

(3)

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Question 1 continued

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Question 1 continued

(Total for Question 1 is 10 marks)

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