

1. The partially completed table below summarises the times taken by 120 job applicants to complete a task.

Time, t (minutes)	$5 < t \leq 7$	$7 < t \leq 10$	$10 < t \leq 14$	$14 < t \leq 18$	$18 < t \leq 30$
Frequency	10	23	51		

A histogram is drawn.

The bar representing the $5 < t \leq 7$ has a width of 1 cm and a height of 5 cm.

- (a) Given that the bar representing the group $14 < t \leq 18$ has a height of 4 cm, find the frequency of this group.

(2)

- (b) Showing your working, estimate the mean time taken by the 120 job applicants.

(3)

The lower quartile of the times is 9.6 minutes and the upper quartile of the times is 15.5 minutes.

For these data, an outlier is classified as any value greater than $Q_3 + 1.5 \times \text{IQR}$.

- (c) Showing your working, explain whether or not any of the times taken by these 120 job applicants might be classified as outliers.

(2)

Candidates with the fastest 5% of times for the task are given interviews.

- (d) Estimate the time taken by a job applicant, below which they might be given an interview.

(2)