Cumulative Frequency Diagrams

We use cumulative frequency diagrams to consider the running totals of / people/ things up to a given value. They are useful for estimating the median and quartiles.

Example: The table below shows the time taken for a group of runners to run 50m. Draw a Cumulative Frequency curve for the data. Use your graph to estimate the median, LQ, UQ and IQR.

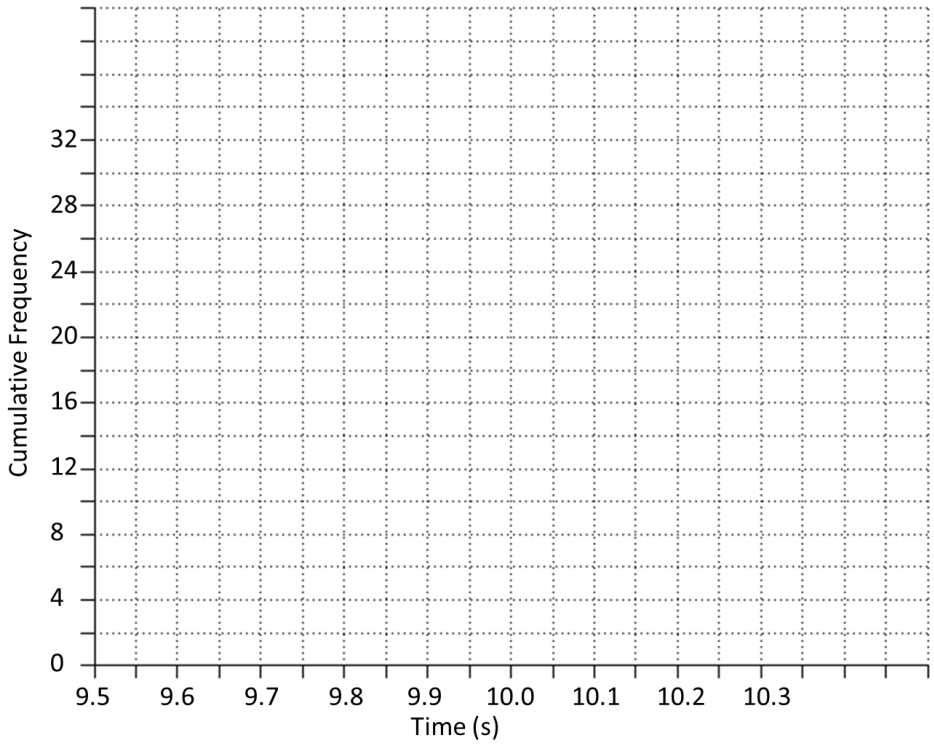
Time (s)	Frequency	C. Freq
$9.6 < t \leq 9.7$	1	1
$9.7 < t \leq 9.9$	4	5
$9.9 < t \leq 10.05$	10	15
$10.05 < t \leq 10.2$	17	32

Median =

LQ =

UQ =

IQR =



Estimate how many runners had a time less than 10.15s.

Estimate how many runners had a time more than 9.95

Estimate how many runners had a time between 9.8s and 10s

Ex 3C Pg 47/48