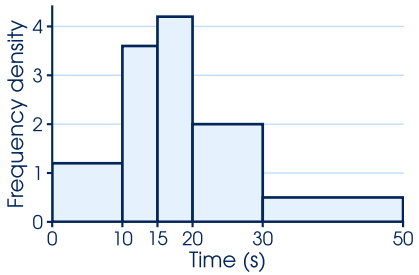
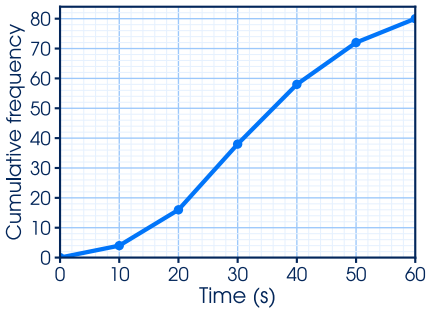
GCSE HIGHER · REVISION MAT 1

Cumulative frequency and histograms

1 Find the frequency of the class $10 < t \leq 15$.

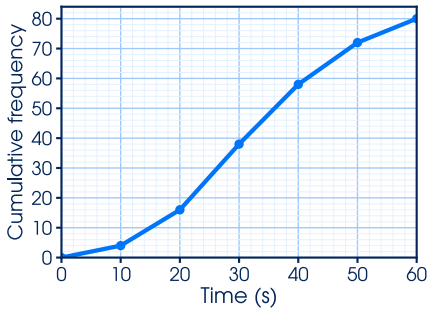


2 Estimate the median.



3 Explain why a histogram with unequal class widths uses frequency density.

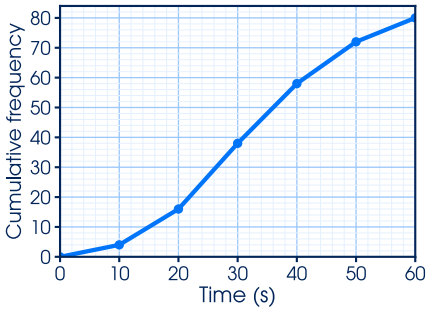
4 Estimate the interquartile range.



5 A class $20 < t \leq 30$ has frequency 20.

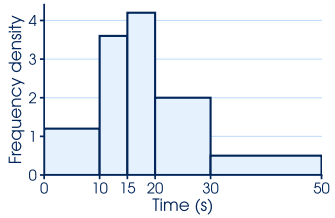
Show that its frequency density is 2.

6 Estimate how many took more than 45 seconds.



7 Explain why points on a cumulative frequency graph are plotted at the upper class boundaries.

8 Estimate the number of values between 12 and 25.



ANSWERS · REVISION MAT 1

Cumulative frequency and histograms

1 5×3.6

18

2 Read at 40

≈ 31 s

3 **Area then shows frequency, so wide classes are not overrepresented.**

4 Q1 at 20 ≈ 21.8, Q3 at 60 ≈ 41.4

≈ 20 s

5 **$20 \div 10 = 2$**

6 Read at 45: about 65

About 15

7 **The cumulative total is only complete at the end of each class.**

8 12–15: $3 \times 3.6 = 10.8$

15–20: 21; 20–25: 10

≈ 42