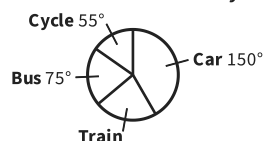


1 Pie charts

How 216 people travelled to a festival.

- a) How many people travelled by train?
b) A pie chart for 300 people at a second festival has Car 120° . Which festival had more by car?



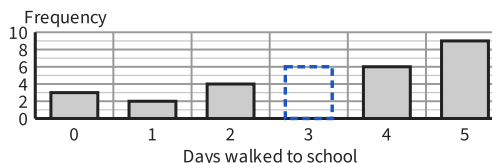
a) $360 - 280 = 80^\circ$, $216 \times 80 \div 360 = 48$

b) first 90, second 100, so the second

2 Bar charts

Days walked to school by 30 students. One bar is missing.

- a) How many students walked on 3 days?
b) Work out the mean number of days.



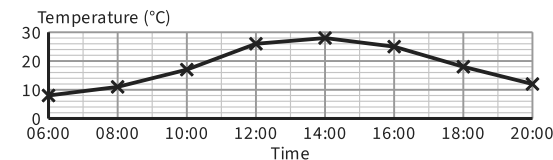
a) $30 - 24 = 6$

b) $97 \div 30 = 3.23$ days

3 Line graphs

The temperature in a greenhouse one day.

- a) Between which two readings did it rise the most?
b) Estimate it at 15:00. Why is this only an estimate?



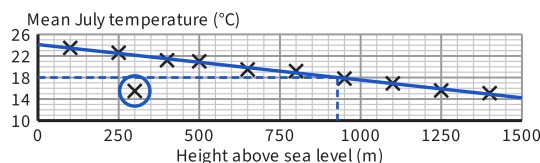
a) 10:00 and 12:00

b) 26.5°C , it may not change steadily

4 Scatter graphs

Height above sea level and July temperature of 11 towns.

- a) Describe the correlation and circle the outlier.
b) Estimate the height of a town with a mean of 18°C .



a) negative correlation

b) about 930 m (850 to 1000 m)

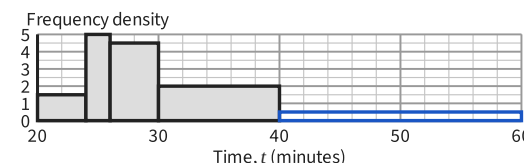
Representing and interpreting data

Higher A

5 Histograms

The times some runners took to finish a race.

- a) How many took between 26 and 30 minutes?
b) 10 took between 40 and 60 minutes. Draw this bar.



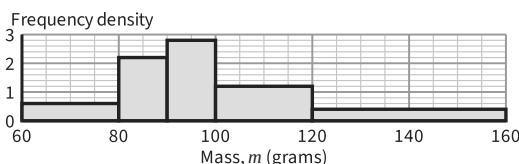
a) $4.5 \times 4 = 18$

b) $10 \div 20 = 0.5$, a bar of height 0.5

6 Histograms

The masses of the apples in a crate.

- a) Estimate how many weigh between 85 g and 110 g.
b) Estimate the median mass.



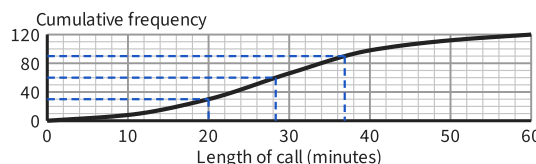
a) $11 + 28 + 12 = 51$

b) 51st: $90 + 17 \div 28 \times 10 \approx 96$ g

7 Cumulative frequency

The lengths of 120 phone calls.

- a) Estimate the median and the interquartile range.
b) Estimate how many calls were longer than 45 minutes.



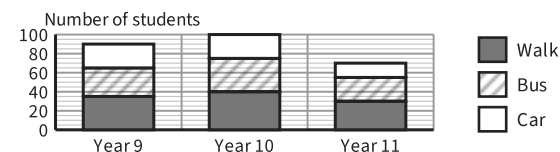
a) median ≈ 28 min, IQR $\approx 37 - 20 = 17$ min

b) $120 - 106 \approx 14$ calls

8 Comparative and composite bar charts

How students in three year groups travel to school.

- a) How many Year 10 students take the bus?
b) Which year has the greatest proportion walking? Why?



a) $75 - 40 = 35$

b) 39%, 40%, 43%: Year 11