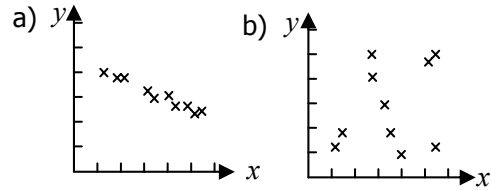
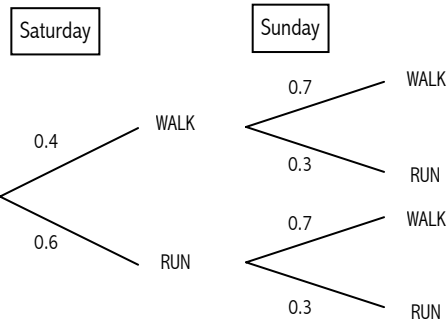


DIAGNOSTIC Handling Data TEST 1 of 2

- 1) Describe the correlation and where appropriate draw the lines of best fit in pencil.



- 2) i) A biased die is thrown 50 times and lands on six 5 times. Calculate the relative frequency of the die landing on six.



- ii) From the tree diagram shown, calculate the probability that the person walks on exactly one day.

- iii) The probability that Kylie skips breakfast on a weekday is 0.1, and on a weekend day is 0.2. Calculate the probability that she does not skip any breakfasts in the next 7 days.

- iv) Box A contains 10 ice creams. 1 vanilla, 2 toffee and 7 strawberry.
Box B contains 20 ice creams. 18 vanilla, 1 toffee and 1 strawberry

Jane takes one ice cream from each box.

Work out the probability that the two ice creams are not of the same type.

- 3) i) a) State one way in which bias can be introduced in questionnaires.
b) Jenny is told to take a random sample from a population. She takes a sample of 100 people. Amit is also told to take a random sample from the same population. How can Amit devise a sample, different to Jenny's, that is more likely to represent the population as a whole.

- ii) A and B below represent two different types of data.
Name the two types and indicate which is type A and which is type B.
A: Tomorrow you collect data from your own survey and then analyse it.
B: After collecting your data you also see some similar data in your local newspaper (which you also then choose to analyse).

- iii) The table on the right shows the number of people in three villages. Calculate the number of people from each village required for a stratified sample of 200.

Village	Number of People
AbieTree	20,000
BellyBean	5,000
CatHouse	5,000

Weight, w	Frequency
$0 \leq w < 20$	2
$20 \leq w < 40$	40
$40 \leq w < 60$	8
$60 \leq w < 80$	50

- 4) i) Calculate an estimate of the mean for the data in the weight table on the left.

Number of Goals	Frequency
0	26
1	4
2	7
3	13

- ii) Calculate the median and mode for the data in the number of goals table on the right.
iii) Calculate the lower and upper quartile for the data in the number of goals table.

Now mark your work and then mark your grid to see which sections you need to revise. For each question you got COMPLETELY correct mark a ✓ in that section. For example if you got both parts of Q1 correct then put a ✓ in section HD1, else but a ✗. Revise each of your ✗ sections by working through the revision material provided.

DIAGNOSTIC Handling Data TEST 2 of 2

- 5) i) Calculate the 5 point moving average for the rugby points scored where the last 7 weeks results in date order are: 29, 29, 52, 45, 68, 80, 90.
- ii) The original data is plotted with 'game in week' on the horizontal-axis (numbered 1 to 7) and score on the vertical-axis. The moving averages are then plotted onto the same axis. Where on the horizontal axis would the first moving average be plotted?

- 6) 20 pupils in a class took a mathematics test out of 30. Their scores are grouped and set out in the frequency table on the right.

Score, S	Frequency
$0 \leq S < 5$	2
$5 \leq S < 10$	3
$10 \leq S < 15$	5
$15 \leq S < 20$	5
$20 \leq S < 25$	3
$25 \leq S < 30$	2

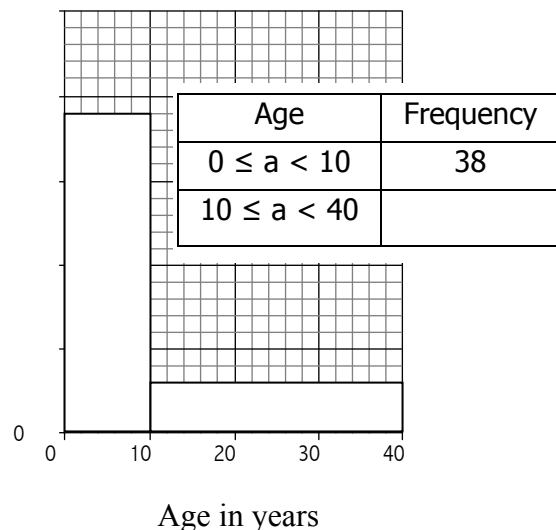
Draw a cumulative frequency graph using a suitable scale, marking on your graph the lower quartile, median and upper quartile values.

- 7) Draw a box plot showing the heights of 'goddess' plants in cm where the lowest value is 2cm, the greatest value is 7cm, the lower quartile is 3.5cm, the upper quartile is 5cm and the median is 4cm.

- 8) 80 pupils in a class took a mathematics test. Their scores are grouped and set out in the frequency table on the left. Draw a histogram to represent the data.

Score (%)	Frequency
$0 \leq \% < 30$	30
$30 \leq \% < 50$	10
$50 \leq \% < 60$	20
$60 \leq \% < 100$	20

- 9) 38 children in a playground are aged between 0 and 10 years. Using the partially completed table and the histogram, which shows age in years, calculate how many people are in the playground aged between 10 and 40 years.



Now mark your work and then mark your grid to see which sections you need to revise. For each question you got COMPLETELY correct mark a ✓ in that section. For example if you got both parts of Q5 correct then put a ✓ in section HD5, else but a ✗. Revise each of your ✗ sections by working through the revision material provided.