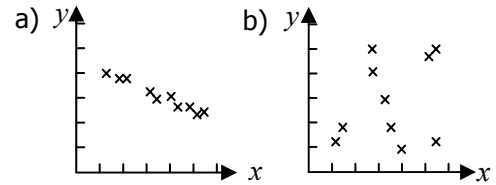


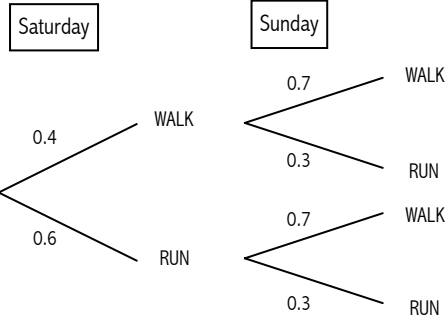
# DIAGNOSTIC Handling Data TEST 1 of 1

Questions numbers 8 and 9 are omitted because they refer to material for Higher Students only.

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.

- 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) You analyse data from A) a newspaper report and B) a survey you carried out. One of these would be called **Primary Data**. a) Which one? b) What type of data is the other called?

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.

- 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.

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.