1. The table shows some information about five children.

Name	Gender	Age	Hair Colour
Aaron	Male	6	Black
Becky	Female	10	Brown
Kim	Female	6	Brown
Darren	Male	9	Blonde
Emily	Female	4	Red

(a) Write down the colour of Darren's hair.

.....

(1)

(b) Write down the name of the oldest child.

.....

(1)

(c) Work out the mean of the ages of the children.

.....

(2)

(Total 4 marks)

2. The two-way table gives some information about how 100 children travelled to school one day.

	Walk	Car	Other	Total
Boy	15		14	54
Girl		8	16	
Total	37			100

(a) Complete the two-way table.

(3)

One of the children is picked at random.

(b) Write down the probability that this child walked to school that day.

.....

(1)

One of the girls is picked at random.

(c) Work out the probability that this girl did **not** walk to school that day.

.....

(2)
(Total 6 marks)

3. The two-way table gives some information about how 100 children travelled to school one day.

	Walk	**Car**	**Other**	**Total**
Boy	15		14	54
Girl		8	16	
Total	37			100

(a) Complete the two-way table.

(3)

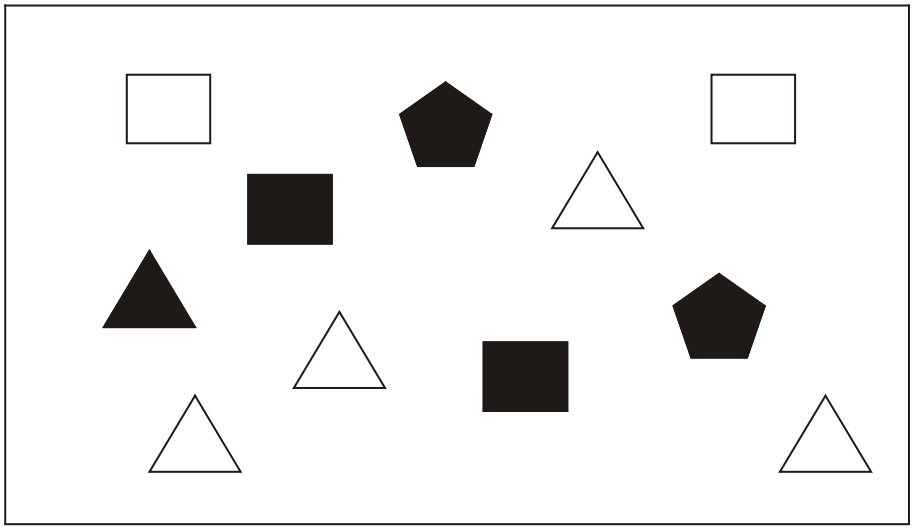
One of the children is picked at random.

(b) Write down the probability that this child walked to school that day.

.....

(1)
(Total 4 marks)

4.



The diagram shows some 3-sided, 4-sided and 5-sided shapes.

The shapes are black or white.

(a) Complete the two-way table.

	Black	White	Total
3-sided shape		4	5
4-sided shape	2		
5-sided shape		0	
Total			11

(3)

Ed takes a shape at random.

(b) Write down the probability the shape is white **and** 3-sided.

.....

(2)
(Total 5 marks)

5. The two-way table shows some information about the number of students in a school.

	Year Group			**Total**
	9	**10**	**11**	
Boys			125	407
Girls		123		
Total	303	256		831

Complete the two-way table.

(Total 3 marks)

6. A factory makes three sizes of bookcase.
The sizes are small, medium and large.

Each bookcase can be made from pine or oak or yew.

The two-way table shows some information about the number of bookcases the factory makes in one week.

	Small	Medium	Large	Total
Pine	7			23
Oak		16		34
Yew	3	8	2	13
Total	20		14	

Complete the two-way table.

(Total 3 marks)

7. 80 children went on a school trip.
They went to London or to York.

23 boys and 19 girls went to London.
14 boys went to York.

(a) Use this information to complete the two-way table.

	London	**York**	**Total**
Boys			
Girls			
Total			

(3)

One of these 80 children is chosen at random.

(b) What is the probability that this child went to London?

.....

(1)
(Total 4 marks)

01. (a) Blonde 1

B1 for blond or blonde
Accept different spelling as long as intention is clear.

(b) Becky 1

B1 cao
Accept different spelling as long as intention is clear.

(c) $(6 + 10 + 6 + 9 + 4) \div 5$
7 2

M1 for attempt to add the 5 ages (condone 1 error) and divide by 5
A1 cao

[4]

02. (a)

15	**25**	14	54
22	8	16	**46**
37	**33**	**30**	100

Table 3

B3 for all 5 correct
(B2 for 3 or 4 correct)
(B1 for 1 or 2 correct)

(b) $\frac{37}{100}$ 1

B1 $\frac{37}{100}$ *oe*

(c) $\frac{24}{46}$ 2

B2 for $\frac{"'46'-'22'"}{'46'}$ *oe, ft from no of girls*
(B1 16 + 8 or 24 or '46' seen)

[6]

03. (a)

15	**25**	14	54
22	8	16	**46**
37	**33**	**30**	100

Table 3

B3 for all 5 correct
(B2 for 3 or 4 correct)
(B1 for 1 or 2 correct)

(b) $\frac{37}{100}$ 1

B1 $\frac{37}{100}$ *oe*

[4]

04. (a)

1	(4)	(5),
(2)	**2**	**4**,
2	(0)	**2**,
5	**6**	(11)

3

B3 for all 7 missing values correct
(B2 for 5 or 6 missing values correct)
(B1 for 3 or 4 missing values correct or 2 bottom row numbers total to 11)

(b) $\frac{4}{11}$ 2

(B2 accept as recurring decimal 0.3636…)

(B1 for denominator of 11, $\left(\frac{n}{11}\right)$ *or numerator of 4,* $\left(\frac{4}{n}\right)$ *or decimal written as 0.36)*

[5]

05. **149**, **133** 125, 407
154, 123, **147**, **424**
303, 256, **272**, 831 3

B3 for fully correct table.
(B1 for 2 or 3 correct entries)
(B2 for 4 or 5 correct entries)

[3]

06.

7	**12**	**4**	23
10	16	**8**	34
3	8	2	13
20	**36**	14	**70**

3

B3 for fully correct table
(B2 for 4 or 5 correct entries,
B1 for 2 or 3 correct entries)

[3]

07. (a)

23	**14**	37
19	24	43
42	38	**80**

3

B3 for all correct
(B2 for 5, 6, 7 or 8 correct)
(B1 for any 2 of the 4 given correctly placed)

(b) $\frac{42}{80}$ 1

B1 for $\frac{"42"}{"80"}$ *oe*

[4]

01. The first two parts of this question were well answered with about 99% of candidates giving correct answers. Part (c) proved to be much more of a challenge with a large proportion of candidates giving “6” as their answer. This seemed to indicate confusion between the mean and median or the mean and mode. A small but significant number of candidates gave the sum of the ages (35) as their answer. Some candidates gave “31.8” as their answer here without working, which seemed to indicate a misuse of their calculator.

02. Foundation

The two-way table in part (a) was usually completed accurately, although a number of arithmetic errors were in evidence. In the table, the car column caused the most problems for candidates.

In part (b), the correct answer of $\frac{37}{100}$ (or 0.37 or 37%) was the most common response. Answers of 37 and 1/37 were also seen. There were also several who did not realise a numerical answer was required, responding with "unlikely"

In part (c), most candidates scored at least one mark for using either 46 or 24 in their working. Many failed to score full marks with answers of 1/46 and 24/100 being common errors. Some failed to see "not", giving an answer of 22/46. Following the correct answer in (b), many candidates gave $\frac{63}{100}$ as their answer in (c), having not fully read the question correctly.

There were less candidates giving unacceptable notation but ratio and 'out of' were still seen on several occasions.

Higher

Points were usually plotted correctly although a few candidates clearly missed this part of the question. A number initially misread the table horizontally and so plotted (65, 80) but then realised and rectified their mistake when unable to plot (100, 110) on the axes provided. In part (b) the majority of candidates chose to describe a dynamic relationship along the lines of "the taller the sheep, the longer it is" rather than just stating positive correlation. Incorrect answers most commonly seen involved "direct proportion" or an expression of the difference between the variables. A number referred to weight of sheep rather than height. In part (c) neither a line of best fit nor vertical line at 76cm was usually seen. Instead candidates judged the value by eye and in most cases gained full marks by being within the acceptable range of answers. Errors that did occur were due to the 2 axes being confused or misreading of the vertical scale.

03. This question was answered well by the vast majority of candidates.

The most common errors in part (a) were due to the failure to carry out simple additions and subtractions accurately with incorrect entries seen most often in the 'Car' column. Some candidates failed to notice the empty space in the 'Total' column and left this blank. In these cases it was apparent that candidates had not carried out a horizontal check as well as a vertical one. The probability in part (b) was usually correct.

04. Again this was a well-understood question with 91% of candidates able to complete the two-way table using the information given in the question. There was less success in part (b) though 53% of candidates scored both marks and 23% gained partial credit for writing 4 over a denominator or a numerator over 11. When candidates wrote the probability as "4 out of 11" they scored no marks. Fortunately these occurrences are becoming less common though it was alarming to see many candidates writing the probability as "4"!

05. About two thirds of candidates scored full marks by giving a fully correct and complete two-way table. 7% of candidates scored 2 marks (for 4 or 5 correct entries) with a further 12% scoring 1 mark (for 2 or 3 correct entries).

06. About two thirds of the candidates were able to score full marks for completing the two-way table accurately. Calculation slips were the most frequent cause for errors, but a significant number of candidates lost a mark for writing 140 in the bottom right hand corner of the table.

07. Questions on two-way tables are often to be found on these papers and this paper was no exception. However, the success rate was not as high as on previous papers because this time the candidates had to fill in ALL the numbers on the table rather than just fill in the gaps. This resulted in many not having a correct table because they either did not read the wording correctly or misunderstood what was given.
Many students did not read the first line of information and so many did not put the number 80 on the table. Others saw that 14 boys went to York and then assumed that this meant that no girls went to York.
By far the most common error was to have the second row of the table as 19, 0, 19 which generally meant that they had a total of 56 children on the school trip.

In part (b) there were quite a few correct answers or correct from their table but there were still those students who scored no marks because they gave their probability as a ratio which is not acceptable.
Over 31% scored all 4 marks with a further 36% scoring 3 marks and another 25% scoring 2 marks.