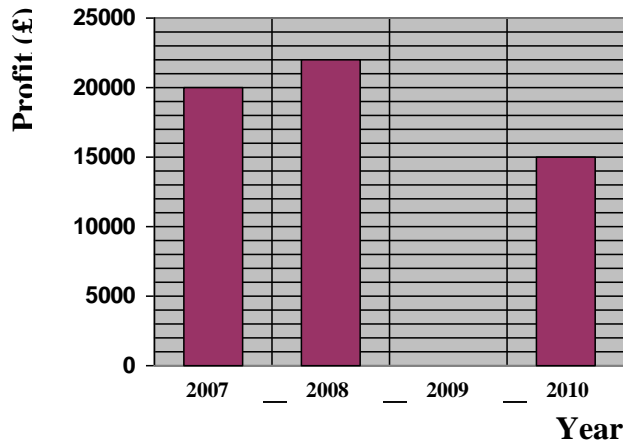


1)

The bar chart shows the annual profit made by Toby's Newsagent Store for 2007, 2008 and 2010.



a) How much profit was made in 2008? £ ..... (1)

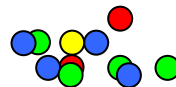
b) For the four years from 2007 to 2010, Toby made a total profit of £75,000. Complete the bar chart by drawing the bar for 2009. (2)

c) In 2010, Toby spent 50% of his profit for that year on a holiday with his family. How much did he spend?

..... (2) 5

2) The table shows the number of coloured marbles produced in a factory each day.

Red (R)	Blue (B)	Green (G)	Yellow (Y)
2000	4000	1000	3000



A marble is chosen at random from the marbles produced that day.

a i) Write down the probability of randomly choosing a green marble.

Write your answer in its simplest form ..... (2)

ii) Sam is a quality controller. He wants to check the quality of the marbles produced. He decides he needs to test 2% of the marbles produced that day. How many marbles should Sam test in total?

..... (2)

iii) Work out how many yellow marbles should be tested if Sam wishes to choose a stratified sample.

..... (2)

b) There are three different sizes of marbles produced; Small (S), Medium (M) and Large (L)

i) List **all** possible combinations of marbles that can be produced. The first has been done for you.

**RS** ..... (3)

ii) The factory produces an equal number of small, medium and large yellow marbles. How many small yellow marbles are produced in a day?

..... (1) 10

3) Is weight discrete or continuous? Tick a box.

☐

Discrete

☐

Continuous

Give a reason for your answer.

.....

..... (1) 1

4)

Books lent	Frequency	
1	5	
2	8	
3	9	
4	4	
5	4	

The number of books lent by a local library to customers is recorded in a table.

a) Calculate the mean number of books lent to customers

.....  
 ..... (3)

b) James says that the modal number of books lent to customers and the median number of books are both 3. Is he correct? Give reasons and working to show how you decide.

.....  
 ..... (2)

5

5) The ratio of boys to girls in a school is given as 4 : 1.

a) Write down the percentage of the school that are girls ..... (2)

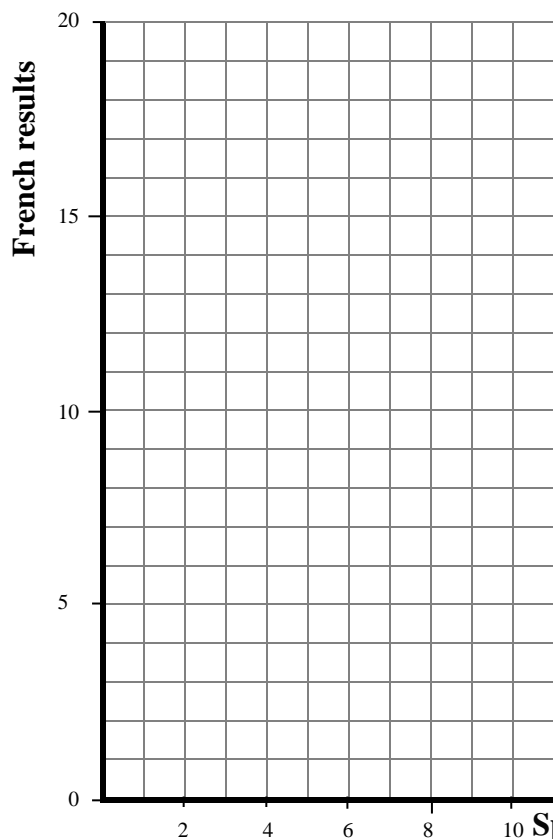
b) There are 440 students in the school. How many of these students are boys?

..... (2)

4

6) Results for a group of 10 students in an English spelling test and a French assessment are recorded in the table.

Spelling errors	4	7	3	1	5	9	2	4	5	10
French results	11	5	15	20	12	6	16	12	14	7



a) Plot a scatter diagram to show the results (2)

b) Draw a line of best fit and describe the type and strength of correlation.

.....  
 .....  
 .....  
 ..... (2)

c) Another student, Brett, had 6 errors in the English Spelling test. Use your diagram to estimate his result in the French test.

..... (1)

5

7) There are 30 flights which land at Jersey airport on Thursday. 17 planes are late.

a) What percentage of flights are late on the Thursday? Give your answer to 1 decimal place.

.....  
 ..... (3)

b) The air traffic controller records the number of minutes late for each of the 17 planes.

6 10 5 15 25 30 21 7 5 12 20 18 15 38 19 25 15

i) Draw an **ordered** stem and leaf diagram for this data. Complete the key.

.....  
 .....  
 .....  
 ..... (4)

Key

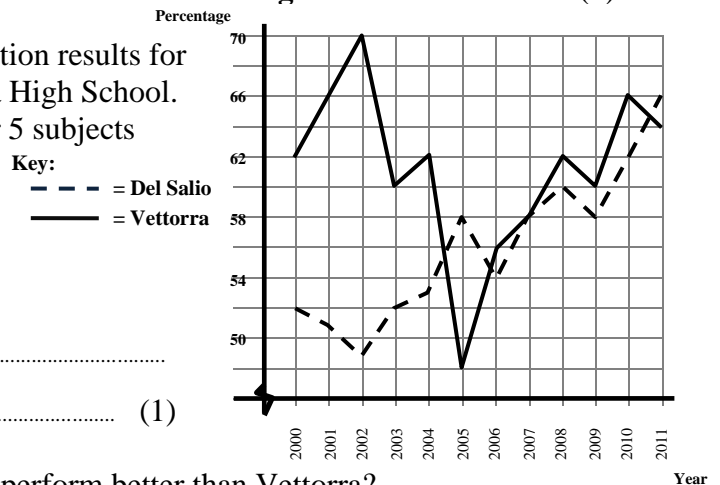
..... represents ..... minutes late

ii) Write down the modal number of minutes late ..... (1)

iii) Write down the modal number of minutes late **for all 30 flights** ..... (1)

9

8) The line graph shows information about examination results for two schools, Del Salio High School and Vettorra High School. Each line shows the percentage A\* to C rates for 5 subjects including English and Maths. All rates are recorded as integer values.



a) Which school has the most consistent results?  
 Explain your answer

.....  
 ..... (1)

b) In which two years did Del Salio High School perform better than Vettorra?

Answer: ..... and ..... (1)

c) Work out the **mean** score from **2005** to **2008** for both schools and hence explain which school performed better on the measure of A\* to C rates between those 4 years. Show full working.

.....  
 .....  
 .....  
 ..... (3)

d) Work out the median A\* to C rate for Vettorra High School from 2000 to 2011

.....  
 ..... (2)

7

9) Samantha invests £3,000 in a bank account. She earns **annual** interest of 2%.  
Assuming she invests her money for 6 years, work out the **total interest earned** over the 6 year period.

.....

.....

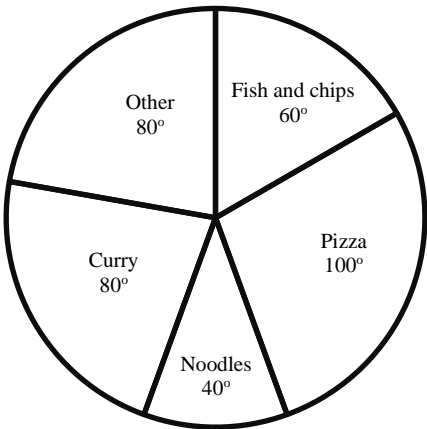
.....

.....

.....(4)

4

10)



- The pie chart shows results from a survey about favourite takeaway food. The angles used for each sector are included.
- a) Write the proportion of people who chose fish and chips as a fraction in its simplest form ..... (1)
- b) 20 people chose noodles. Work out the number of people who chose Pizza.  
..... (2)
- c)  $\frac{1}{4}$  of the ‘Other’ responses were for sushi. How many people chose sushi?  
.....  
.....(2)
- 5

11) The table shows the heights of teachers in a school. A study on evolution suggests that the human race is getting gradually taller. The study specifically suggests that young people today will be taller than their parent’s generation. A group of researchers have collected data from the local school for the heights of sixth formers and the heights of teaching staff in the school. The group has already calculated an estimate for the mean height of sixth formers to be 178.4 centimetres and the modal group to be between 170 and 180 cm in height. The grouped frequency table shows the data collected for teachers in the school. Investigate the suggestion made in the study.

Height, $h$ (cm)	Frequency
$150 \leq h < 160$	2
$160 \leq h < 170$	8
$170 \leq h < 180$	9
$180 \leq h < 190$	6
$190 \leq h < 200$	3

.....

.....

.....

.....

.....(5)

5