

NAME

Time: 50 minutes**Non-Calculator Questions (50 minutes)**

- 1 The table shows the marks gained by 20 children in a spelling test.

Mark	Frequency
6	7
7	5
8	2
9	1
10	5

- a Which mark was the mode?

(1 mark)

- b Find the median mark.

(1 mark)

- c Find the range of the marks.

(2 marks)

- d Work out the mean mark for the 20 children.

(3 marks)



- 2 Five numbers have a median of 8, a mode of 4, a mean of 9 and a range of 11.
Find the five numbers.

(3 marks)



- 3 The stem and leaf diagram shows the distribution of ages of the male and female members of a bridge club.

	Male		Female
2	1 2		3 7 8 9
3	5 5 6		4 5 5 6 7
4	6 7 8		5 2 3 6
5	2 5 6 6 7		6 4 5 5 5 9
6	2 3 8 9		7 0 5

Key: 4 | 6 means 46 years

- a Find the median age for the male members of the bridge club.

(1 mark)

- b Find the median age for the female members of the bridge club.

(1 mark)

c Use the median ages to compare the ages of the male and female bridge club members.

(1 mark)

d Find the modal age for the female members of the bridge club.

(1 mark)

e Lucinda says that the range of the female ages is greater than the range for the male ages.

Is Lucinda correct?

You must show how you get your answer.

(2 marks)

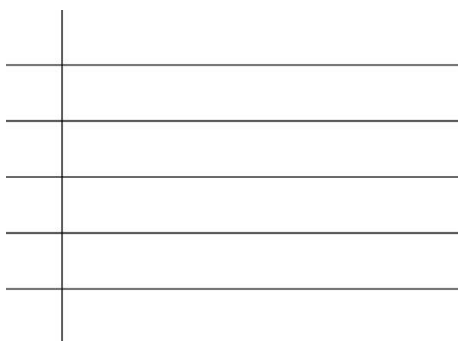


4 Here are the marks gained in a science test by the 20 children in class 6F.

12	9	15	28	38	48	27	45	37	35
8	17	16	29	32	19	28	33	38	50

a Draw a stem and leaf diagram for this data.

(3 marks)



b Find the probability that a student chosen at random from this group gained more than 30 marks in the Science test.

(2 marks)



- 5 A pie chart is drawn to represent the eye colour of 120 students in a year group. 50 of the children have brown eyes.
- a Work out the angle that would represent the number of children with brown eyes.

(2 marks)

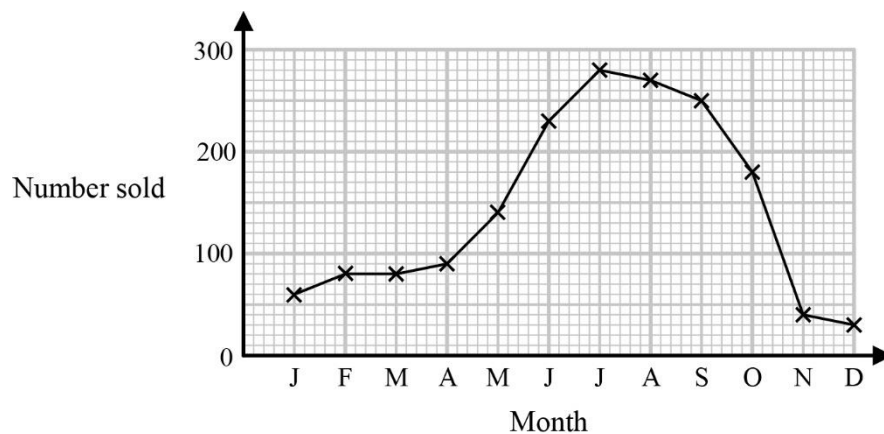
Andy says the angle for children with blue eyes is 32°

- b Explain why Andy cannot be correct.

(1 mark)



- 6 The time series graph gives information about ice-cream sales in a shop in the UK.



- a In how many months were the sales greater than 200?

(1 mark)

- b Which month had the lowest sales?

(1 mark)

c Describe what the time series graph shows about ice-cream sales in the shop.

(1 mark)

d Why do you think the sales of ice-cream were like this?

(1 mark)



7 Four parcels had a mean weight of 400g.

When a fifth parcel was added the mean became 500g.

What was the weight of the fifth parcel?

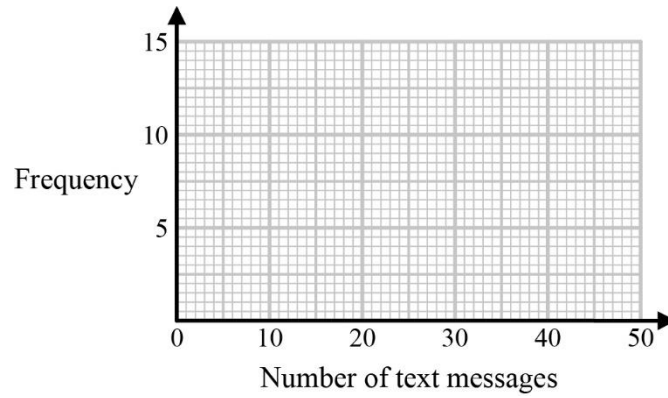
(3 marks)

8 The table shows information about the number of text messages Iona made each day during September.

Number of text messages (T)	Frequency
$0 \leq T < 10$	5
$10 \leq T < 20$	6
$20 \leq T < 30$	11
$30 \leq T < 40$	6
$40 \leq T < 50$	2



a Draw a frequency polygon for this data.



(2 marks)

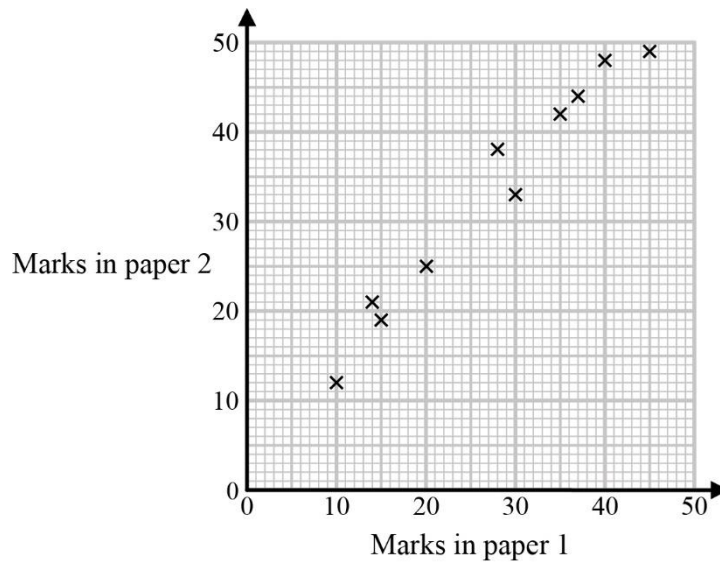


b Work out the percentage of days in September when Iona made 10 or more but fewer than 20 text messages.

(2 marks)



9 The scatter diagram shows information about the marks of 10 students on paper 1 and paper 2 in an English test.



a Here are two more results. Plot them on the scatter graph.

(1 mark)

Mark in paper 1	38	25
Mark in paper 2	41	28

b What type of correlation does the scatter graph show?

(1 mark)

A student was absent for paper 1 but gained 40 marks on paper 2

c Use the graph to estimate the mark the student could have gained on paper 1

(2 marks)

Abdul did his test later and told his friends he got 38 marks on paper 1 and 25 marks on paper 2.

d Do you think that Abdul remembered his marks correctly?

You must give a reason for your answer.

(1 mark)



10 At a party all of the children chose to eat either pizza or chicken or lasagne.

Of the 80 children at the party, 45 were boys.

A total of 15 children chose chicken, nine of whom were girls.

10 boys chose pizza.

Altogether, 40 children chose lasagne.

Find the number of girls who chose lasagne.

(4 marks)



- 11 The table shows information about the distribution of weekly wages, in £, for the 20 people who work for a company.

Wage (£ w)	Frequency
$0 \leq w < 200$	5
$200 \leq w < 400$	6
$400 \leq w < 600$	1
$600 \leq w < 800$	7
$800 \leq w < 1000$	1

- a Find the modal class interval.

(1 mark)

- b Find the class interval that contains the median.

(2 marks)

- c Work out an estimate for the mean wage of the 20 employees.

(3 marks)

Overall mark	/50
--------------	-----