

Natalie wanted to know the average number of hours cars were parked in a car park.

She did a survey of 100 cars which were parked in the car park on a particular day.

Her results are shown below.

<i>Parking time</i> (hours)	<i>Frequency</i>	<i>Parking time × frequency</i>
1	28	
2	22	
3	10	
4	15	
5	11	
6	5	
7	9	
	Total = 100	Total =

Complete the above table and find the mean parking time per car.

3

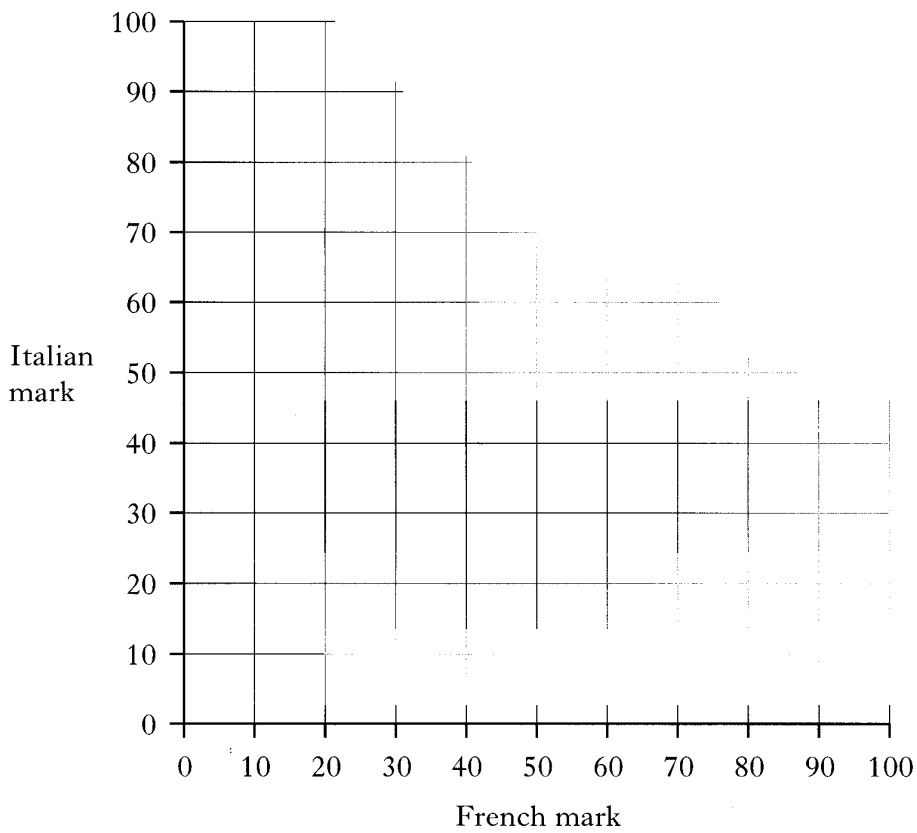
2008 P2 Q10

*Ans* 28 , 44 , 30 , 60 , 55 , 30 , 63    Total = 310    Mean = 3.1hours or 3hours 6 minutes

The table below shows the marks scored by pupils in French and Italian exams.

Pupil	A	B	C	D	E	F	G	H
French Mark	15	23	50	38	40	42	70	82
Italian Mark	28	31	62	54	45	55	85	95

(a) Using these marks, draw a scattergraph.



(b) Draw a best-fitting line on the graph.

(c) A pupil who scored 65 in his French exam was absent from the Italian exam.

Use your best-fitting line to estimate this pupil's Italian mark.

Ans

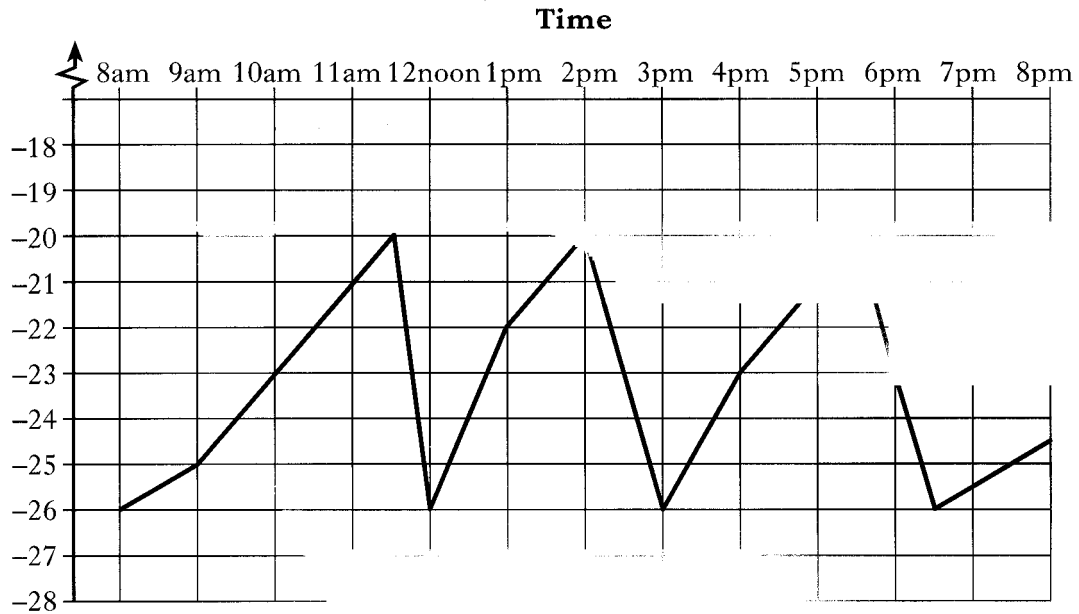
2

1

1

The temperature in a supermarket freezer during a 12-hour period is shown in the graph below.

**Temperature of Supermarket Freezer**



- (a) From 8am, how long did it take for the temperature to rise to  $-20^{\circ}\text{C}$ ?
- (b) For how long, in **total**, was the temperature rising during the 12-hour period?

1  
3

2006 P1 Q7

Ans

The marks of a group of pupils in a maths test are shown below.

43 17 25 25 29 31 32 11 26 20  
25 42 32 33 25 28 41 35 32 26

- (a) Illustrate this data in an ordered stem and leaf diagram.
- (b) What is the mode for the above data?

3  
1

2005 P2 Q2

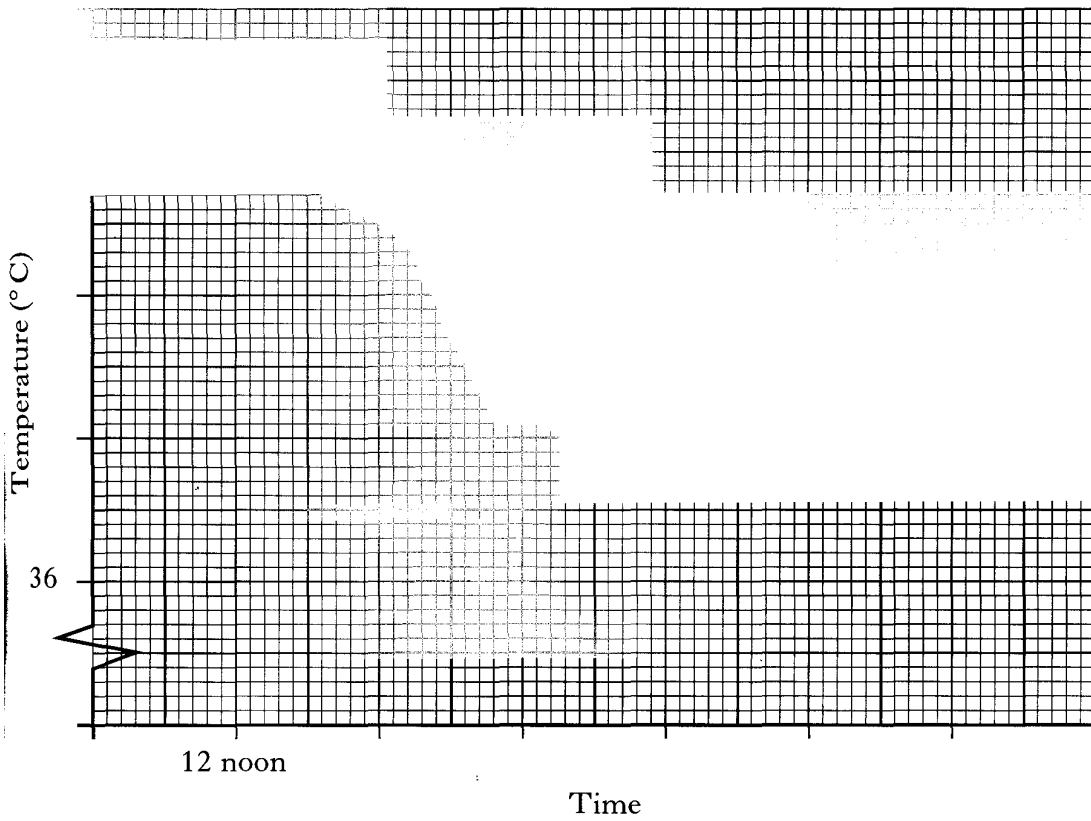
Ans

A patient in hospital had his temperature checked every two hours.  
 The results are shown in the table below.

Time	12 noon	2 pm	4 pm	6 pm	8 pm	10 pm
Temperature ( $^{\circ}\text{C}$ )	38.2	38.6	38.1	37.9	37.5	36.9

Illustrate this data on the grid below using a line graph.

**Temperature Chart**



2004 P1 Q5

Ans

2004 P2 Q1	<p>100 grams of wholemeal bread contain the following:</p> <table border="1" data-bbox="328 259 863 488"> <tr> <td>Protein</td> <td>10 grams</td> </tr> <tr> <td>Carbohydrates</td> <td>55 grams</td> </tr> <tr> <td>Fibre</td> <td>9 grams</td> </tr> <tr> <td>Fat</td> <td>3 grams</td> </tr> <tr> <td>Other</td> <td>23 grams</td> </tr> </table> <p>A pie chart is to be drawn to show this information. What size of angle should be used for the carbohydrates?</p> <p><b>DO NOT DRAW A PIE CHART.</b></p>	Protein	10 grams	Carbohydrates	55 grams	Fibre	9 grams	Fat	3 grams	Other	23 grams	2																		
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Ans																														
2004 P2 Q2	<p>A company manufactures boxes of tacks and claims that there are “on average” 60 tacks per box. This claim is tested by counting the number of tacks in a sample of 100 boxes. The results are shown below.</p> <table border="1" data-bbox="248 1010 1190 1413"> <thead> <tr> <th>Number of tacks</th> <th>Frequency</th> <th>Number of tacks × Frequency</th> </tr> </thead> <tbody> <tr> <td>57</td> <td>7</td> <td></td> </tr> <tr> <td>58</td> <td>13</td> <td></td> </tr> <tr> <td>59</td> <td>21</td> <td></td> </tr> <tr> <td>60</td> <td>24</td> <td></td> </tr> <tr> <td>61</td> <td>19</td> <td></td> </tr> <tr> <td>62</td> <td>12</td> <td></td> </tr> <tr> <td>63</td> <td>4</td> <td></td> </tr> <tr> <td>Totals</td> <td>100</td> <td></td> </tr> </tbody> </table> <p>(a) Find the mean number of tacks per box. (b) Is the company’s claim reasonable? <b>You must give a reason for your answer.</b></p>	Number of tacks	Frequency	Number of tacks × Frequency	57	7		58	13		59	21		60	24		61	19		62	12		63	4		Totals	100		3	1
Number of tacks	Frequency	Number of tacks × Frequency																												
57	7																													
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Totals	100																													
Ans																														

2003 P1 Q5

The number of hours of sunshine was recorded daily in a city during a three-week period in June.

The results are shown in the stem and leaf diagram below.

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

$n = 21$

$3 \mid 2$  represents 3.2 hours

Using the above diagram:

- (a) calculate the range;
- (b) find the median number of hours.

2  
1

Ans

2003 P2 Q3

The number of letters in each of the first one hundred words of a news story were counted.

The results are shown in the table below.

<i>Number of letters</i>	<i>Frequency</i>	<i>Number of letters × frequency</i>
1	5	
2	12	
3	18	
4	26	
5	18	
6	11	
7	7	
8	3	
	Total =	Total =

Find the mean number of letters per word.

Give your answer correct to one decimal place.

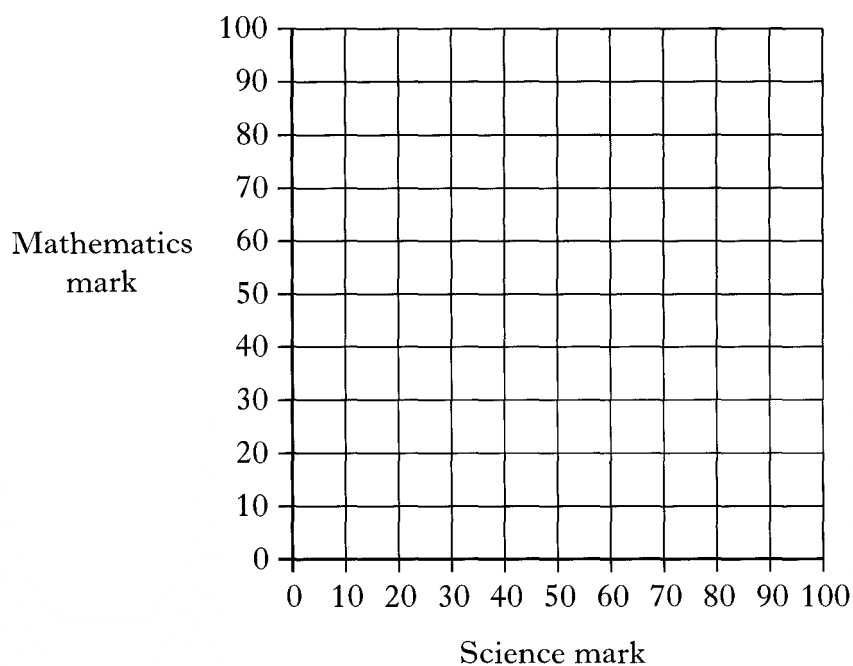
4

Ans

The Science and Mathematics marks for 10 students are shown in the table below.

Student	A	B	C	D	E	F	G	H	I	J
Science mark	35	45	65	70	57	25	80	85	10	34
Mathematics mark	41	52	65	75	60	28	84	90	11	37

(a) Using these marks draw a Scattergraph.



(b) Draw a best-fitting line on the graph.

(c) A student whose Science mark is 50 was absent from the Mathematics exam.

Using the best-fitting line, estimate this student's Mathematics mark.

3

1

1

2002 P1 Q8

Ans

2001 P1 Q3	Brian checks the five day weather forecast for Paris.																																		
	<table border="1" style="margin: auto;"> <thead> <tr style="background-color: black; color: white;"> <th colspan="4">PARIS – FORECAST for 15 January</th> </tr> <tr style="background-color: black; color: white;"> <th></th> <th>Maximum (°C)</th> <th>Minimum (°C)</th> <th></th> </tr> </thead> <tbody> <tr> <td>Saturday</td> <td style="text-align: center;">3</td> <td style="text-align: center;">–3</td> <td>Cloudy</td> </tr> <tr> <td>Sunday</td> <td style="text-align: center;">2</td> <td style="text-align: center;">0</td> <td>Sunny</td> </tr> <tr> <td>Monday</td> <td style="text-align: center;">7</td> <td style="text-align: center;">4</td> <td>Cloudy</td> </tr> <tr> <td>Tuesday</td> <td style="text-align: center;">7</td> <td style="text-align: center;">2</td> <td>Sunny</td> </tr> <tr> <td>Wednesday</td> <td style="text-align: center;">5</td> <td style="text-align: center;">–2</td> <td>Sunny</td> </tr> </tbody> </table>						PARIS – FORECAST for 15 January					Maximum (°C)	Minimum (°C)		Saturday	3	–3	Cloudy	Sunday	2	0	Sunny	Monday	7	4	Cloudy	Tuesday	7	2	Sunny	Wednesday	5	–2	Sunny	
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	Calculate the <b>mean</b> minimum temperature for the five day weather forecast.						3																												
<i>Ans</i>																																			
2001 P2 Q2	The number of passengers travelling by bus from Glasgow to Edinburgh was recorded for 20 journeys.																																		
	29	45	36	27	41	38	14																												
	48	31	39	24	17	23	34																												
	29	38	42	12	32	36																													
	(a) Display the information in an ordered stem and leaf diagram.						3																												
	(b) Find the median number of passengers.						1																												
<i>Ans</i>																																			

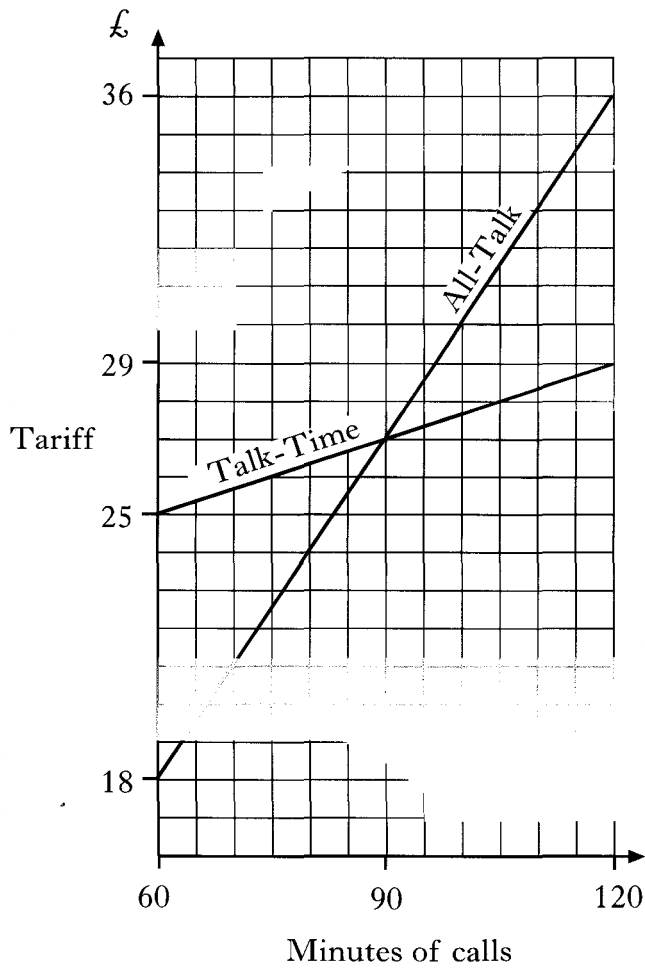


Shona is planning to buy a new mobile phone.

She knows that she makes between 60 and 120 minutes of calls each month.

Her local phone shop advises that the “All-Talk” or “Talk-Time” tariff are best for her.

They give her the graph below to help her decide.



Shona chooses the All-Talk tariff.

Comment on her choice.

2000 P2 Q2

A survey of the word lengths in a passage of 100 words was taken from a newspaper.  
The results are shown in the table below.

Number of letters per word	Frequency	Number of letters per word $\times$ frequency
1	5	
2	12	
3	18	
4	26	
5	18	
6	11	
7	7	
8	3	
Total = 100		

Complete the table above and find the **mean** length of a word.

3

Ans