

1. The test scores of 14 students are shown below.
   21 21 23 26 25 21 22 20 21 23 23 27 24 21
   Find the range, mode, median , interquartile range and mean of the test scores. [6]
   0580/41/M/J/19 Q4

2. The total number of passengers on the train is 640.
   160 passengers have tickets which cost $255 each.
   330 passengers have tickets which cost $190 each.
   150 passengers have tickets which cost $180 each.
   Calculate the mean cost of a ticket.[3]
   0580/43/M/J/12 Q1(b)

3. Some of the students were asked how much time they spent revising for the test.
   10 students revised for 2.5 hours, 12 students revised for 3 hours and n students revised for 4 hours. The mean time that these students spent revising was 3.1 hours. Find n. [4]
   0580/41/M/J/11 Q8 (c)

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4. The mean mass of 20 oranges is 70g.
   One orange is eaten.
   The mean mass of the remaining oranges is 70.5g.
   Find the mass of the orange that was eaten. [3]
   0580/42/M/J/14 Q7 (b)

5. Roberto records the value of each of the coins he has at home.
   The table shows the results.

Value (cents)	1	2	5	10	20	50
Frequency	3	1	3	2	4	2

   (i) Find the range. [1]
   (ii) Find the mode. [1]
   (iii) Find the median. [1]
   (iv) Work out the total value of Roberto's coins. [2]
   (v) Work out the mean [1]
   0580/41/O/N/19 Q6 (b)

6. (b)The marks of 30 students in a spelling test are shown in the table below.

Mark	0	1	2	3	4	5
Frequency	2	4	5	5	6	8

   Find the mean, median, mode and range of these marks. [7]
   (c) The table shows the marks gained by some students in their English test.

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Mark	52	75	91
Number of students	x	45	11

The mean mark for these students is 70.3 .
Find the value of x.[3]
0580/43/M/J/17 Q8

7. The frequency table below shows information about the number of books read by some students in a reading marathon.

Number of books read	1	2	3	4	5	6	7	8
Frequency	2	2	16	10	9	4	x	2

(i) The mean number of books read is 4.28 . Find the value of x.
[3]
(ii) Write down the mode [1]
(iii) Write down the median [1]
580/42/F/M/19 Q7

8. A normal die, numbered 1 to 6, is rolled 50 times.
The results are shown in the frequency table

Score	1	2	3	4	5	6
Frequency	15	10	7	5	6	7

(a) Write down the modal score. [1]
(b) Find the median score. [1]

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(c) Calculate the mean score. [2]

(d) The die is then rolled another 10 times.

The mean score for the 60 rolls is 2.95.

Calculate the mean score for the extra 10 rolls. [3]

0580/04/M/J/09 Q2)

9. 40 students are asked about the number of people in their families.

The table shows the results

Number of people in family	2	3	4	5	6	7
Frequency	1	1	17	12	6	3

(a) Find

(i) the mode, [1]

(ii) the median, [1]

(iii) the mean. [3]

(b) Another n students are asked about the number of people in their families.

The mean for these n students is 3. Find, in terms of n, an expression for the mean number for all (40 + n) students. [2]

0580/41/M/J/10 Q2)

10. The heights, in metres, of 200 trees in a park are measured

Height (h m)	$2 < h \leqslant 6$	$6 < h \leqslant 10$	$10 < h \leqslant 13$	$13 < h \leqslant 17$	$17 < h \leqslant 19$	$19 < h \leqslant 20$
Frequency	23	47	45	38	32	15

(a) Find the interval which contains the median height. [1]

(b) Calculate an estimate of the mean height [4]

0580/22/M/J/13 Q20 (a)

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11. The time taken for each of 120 students to complete a cooking challenge is shown in the table

Time (t minutes)	$20 < t \leqslant 25$	$25 < t \leqslant 30$	$30 < t \leqslant 35$	$35 < t \leqslant 40$	$40 < t \leqslant 45$
Frequency	44	32	28	12	4

(i) Write down the modal time interval. [1]

(ii) Write down the interval containing the median time. [1]

(iii) Calculate an estimate of the mean time. [4]

0580/42/M/J/18 Q2)(a)

12. Kai and Ann carry out a survey on the distances travelled, in kilometres, by 200 cars. Kai completes this frequency table for the data collected.

Distance ($d$km)	$80 < d \leqslant 100$	$100 < d \leqslant 150$	$150 < d \leqslant 200$	$200 < d \leqslant 300$	$300 < d \leqslant 400$
Frequency	7	33	76	52	32

(a) (i) Calculate an estimate of the mean.[4]

(ii) Ann uses this frequency table for the same data.

Distance ($d$km)	$80 < d \leqslant 100$	$100 < d \leqslant 150$	$150 < d \leqslant 200$	$200 < d \leqslant 300$	$300 < d \leqslant 360$
Frequency	7	33	76	52	32

Without calculating an estimate of the mean for this data, find the difference between Ann's
and Kai's estimate of the mean. You must show all your working
[2]

0580/42/O/N/22 Q3)(a)

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13. There is a different interval for the final group.

The table shows information about the time, t minutes, taken for each of 150 girls to complete an essay.

Time (t minutes)	$60 < t \leqslant 65$	$65 < t \leqslant 70$	$70 < t \leqslant 80$	$80 < t \leqslant 100$	$100 < t \leqslant 150$
Frequency	10	26	34	58	22

(a) Write down the modal time interval. [1]

(b) Write down the interval that contains the median time. [1]

(c) Calculate an estimate of the mean time. [4]

(d) Rafay looks at the frequency table.

(i) He says that it is not possible to work out the range of the times.

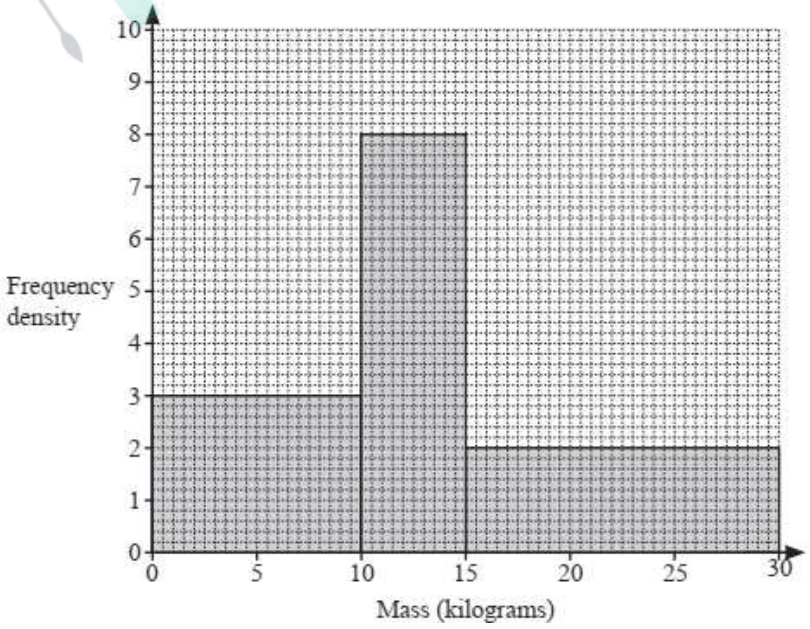
Explain why he is correct. [1]

(ii) He draws a pie chart to show this information.

Calculate the sector angle for the interval **)** 65<t ≤70 minutes.[2]

0580/43/O/N/17 Q4(a)

14. The histogram shows information about the masses of 100 boxes.

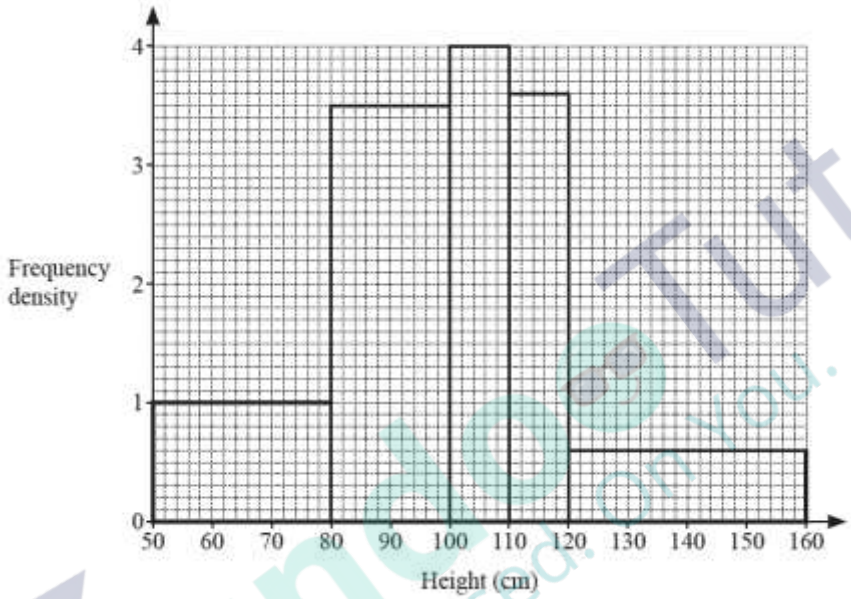


Calculate an estimate of the mean. [6]

0580/41/O/N/19 Q6 (c)

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15. The height, in cm, of each of 200 plants is measured.
The histogram shows the results.



Calculate an estimate of the mean height.
You must show all your working. [6]

0580/43/M/J/21 Q3(d)

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Answers

Q1) (a) 0580/41/M/J/19 Q4(a) range = 7, mode = 21, median = 22.5, IQR = 3 , ,mean = 22.7	Q9) (a)(i)4 (ii)5(iii) 4.75 (b) (190+ 3n)/(40 + n)
Q2) 204 or 203. 9	Q10) (a) 10 < h ≤ 13 (b) 12.1
Q3) 3	Q11) (i) 20 [< t ⩽] 25 (ii) 25 [< t ⩽] 30 (iii) 28.3
Q4) 60.5	Q12) (i)211.275 (ii)3.2
Q5) (i)49 (ii)20 (iii)10 (iv)220 (v) 14.7	Q13) (a) 80<t ≤100 (b) 80<t ≤100 (c) 86 (d)(i) Reference to not knowing the individual values so we do not know the highest or the lowest values (ii) 62.4
Q6) 3.1 , 3 , 5, 5 (c) 24	Q14) 13.25
Q7) (i)5 (ii)3 (iii)4	Q15) 99.75
Q8) (a)1 (b)2.5 (c)2.96 (d)2.9	

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