1. Daryl records the number of hours in a week 8 people spend exercising.
   5 2 1.5 3 18 4.5 2 4
   (a) Find the median. [2]
   (b) Find lower quartile [1]
   (c) Explain why the mean may not be a suitable average to use. [1]
   0580/22/O/N/22 Q8)

2. The mass, correct to the nearest kilogram, of each of 11 parcels is shown below.
   24 23 23 26 25 27 18 96 16 17 32
   (a) Find the mode. [1]
   (b) Find upper quartile [1]
   (c) Give a reason why the mean would be an unsuitable average to use. [1]
   0580/22/O/N/19 Q5)

3. Find the median and the inter quartile range for the following data sets
   (a) 1.5,1.5,1.3,1.4,1.6,1.8,1.2
   (b) 1,9,3,9,3,4,5,6,9,0,1,9,9,6,9,2,5,8
   (c) 8,9,9,9,10,10,12,15,16,17,19
   (d) 1.5,1.4,1.3,1.4,1.6,1.8,1.2
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4. In Vienna, the mid-day temperatures, in °C, are recorded during a week in December.
   This information is shown below.
   –2 2 1 –3 –1 –2 0 Calculate
   (a) the difference between the highest temperature and the lowest temperature (range), [1]
   (b) median temperature [1]
   (c) the mean temperature. [2]
   0580/23/O/N/11 Q9)

5. Write down an expression for the range of k consecutive integers.[1]
   0580/22/M/J/21 Q4)

6. Leon scores the following marks in 5 tests. 8 4 8 y 9
   His mean mark is 7.2. Calculate the value of y [2]
   0580/21/M/J/12

7. Six cards are numbered 1, 1, 6, 7, 11 and 12
   A seventh card is added to the six cards shown in the diagram.
   The mean value of the seven numbers on the cards is 6.
   Find the number on the seventh card. [2]
   0580/04/O/N/09 Q3)

8. 5n is the mean of the three numbers 391, n and n - 1.
   Find the value of n [3]
   0580/23/O/N/19 Q10)

9. Amber's mean mark on five tests is 80.
   Her marks on four of these tests are 68, 81, 74 and 89.
   Work out her mark on the fifth test. [2]
   0580/21/O/N/17 Q4)

10. A bag contains 15 potatoes which have a mean mass of 136 g. The farmer puts 3 potatoes which have a mean mass of 130 g into the bag. Calculate the mean mass of all the potatoes in the bag.
    0580/42/O/N/12 Q5(c)

11. Petra records the score in each test she takes.
    The mean of the first n scores is x.
    The mean of the first (n – 1) scores is (x + 1).
    Find the nth score in terms of n and x.
    Give your answer in its simplest form. [3]
    0580/41/M/J/19 Q4 (b)

12. Shahruk plays four games of golf.
His four scores have a mean of 75, a mode of 78 and a median of 77.
Work out his four scores. [3]
0580/22/M/J/16 Q11)

13. The mean mass of four men in a rowing team is 97.5kg. The modal mass is 101 kg.
The range of the masses is 8kg. Find the mass of each of the four men.
0580/23/O/N/22 Q4)

14. 7 9 20 3 9
(a) A number is removed from this list and the median and range do not change.
Write down this number. [1]
(b) An extra number is included in the original list and the mode does not change.
Write down a possible value for this number. [1]
0580/22/M/J/15 Q4)

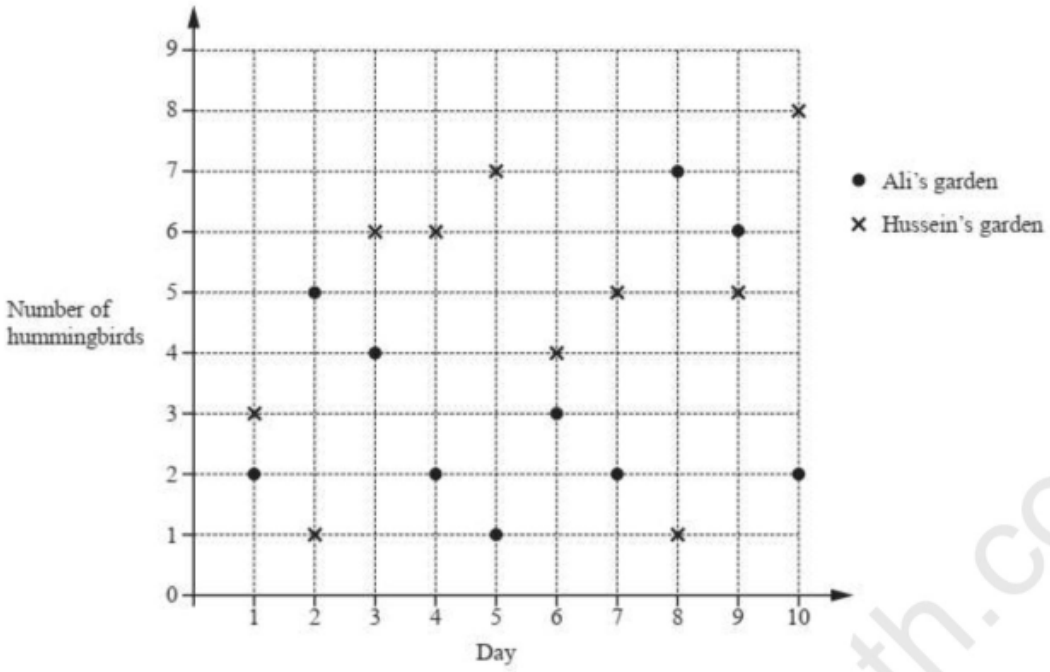
15. For a set of six integers, the mode is 8, the median is 9 and the mean is 10.
The smallest integer is greater than 6 and the largest integer is 16.
Find the two possible sets of six integers. [5]
0580/43/O/N/10 Q10 (a)

16. Cheryl recorded the midday temperatures in Seoul for one week in January.

Day	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Temperature (°C)	–4	–5	–3	–11	–8	–3	–1

(a) Write down the mode. [1]
(b) On how many days was the temperature lower than the mode? [1]
0580/21/O/N/14 Q4)

17. The diagram shows the numbers of hummingbirds seen by Ali and Hussein in their gardens each day for 10 days.
(a) Calculate the mean number of hummingbirds seen in Ali's garden each day. [3]
(b) Work out the median number of hummingbirds seen in Hussein's garden each day. [2]
(c) On one of these days there were 4 times as many hummingbirds seen in Hussein's garden as in Ali's garden.
Which day was this? [1]



0580/23/O/N/17 Q21)

18. James is an animal doctor.
The table shows some information about the cats he saw in one week.
One of the cats James saw had a mass of 4 kg.
On which day did he see this cat? [2]

Day	Monday	Tuesday	Wednesday	Thursday	Friday
Number of cats seen	2	4	1	3	2
Mean mass of a cat (kg)	1.9	0.9	2.1	1.8	2

0580/23/O/N/16 Q6)

19. The table shows the different methods of travel for 20 people going to work.
Which type of average, mean, median or mode, can be used for this information? [1]

Method of travel	Frequency
Car	10
Walk	5
Bike	3
Bus	2

0580/23/M/J/19 Q4)

20. The table shows the number of spots on 79 ladybirds.
Find the interquartile range for the data.

No. of spots	2	3	4	5	6	7	8	9	10
Frequency	3	16	9	18	9	6	9	7	2

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21. Steven asked 25 women how many children they have.
The results are summarised in the table below.

Number of children	Frequency
0	7
1	5
2	6
3	4
4	3

(a) Find
(i) the mean, [2]
(ii) the median, [1]
(iii) the mode. [1]
(b) Steven says that the mode is the average that best represents the data.
Explain why Steven is wrong [1]
4024/22/M/J/16 Q3)

22. The table shows information about the numbers of pets owned by 24 students

Number of pets	0	1	2	3	4	5	6
Frequency	1	2	3	5	7	3	3

(a) Calculate the mean number of pets. [3]
(b) Jennifer joins the group of 24 students.
When the information for Jennifer is added to the table, the new mean is 3.44 .
Calculate the number of pets that Jennifer has. [3]
0580/22/O/N/15 Q22)

Answers

Q1) (a)3.5 (b) 2 (c) one extreme value (or 18 is an outlier)	Q12) 68 76 78 78
Q2) (a)23 (b) 27 (c)one extreme value (or 96 is an outlier)	Q13) 93 95 101 101
Q3) (a)1.5 and 0.3 (b)5.5 and 6 (c)10 and 7 (d) 4.5 and 3.5	Q14) (a)7 (b) Any number except 3, 7 or 20
Q4) (a) 5 or −5 (b)-1 (c) −0.714 or -5/7	Q15) (a) 7, 8, 8, 10, 11, 16 and 8, 8, 8, 10, 10, 16
Q5) k-1	Q16) (a)-3 (b)4
Q6) 7	Q17) (a)3.4 (b)5 (c) [Day] 10
Q7) 4	Q18) Thursday
Q8) 30	Q19) Mode
Q9) 88	Q20) 3 (from 7-4)
Q10) 135	Q21) (a)(i)1.64 (ii) 2 (iii)0 (b) 0 is the smallest value in the data (mode should be a central value)
Q11) x − n +1	Q22) (a) 3.5 (b) 2