1. Here are the times, in minutes, taken to change some tyres.

5	10	15	12	8	7	20	35	24	15
20	33	15	25	10	8	10	20	16	10

In the space below, draw a stem and leaf diagram to show these times.

(Total 3 marks)

2. Jan measures the heights, in millimetres, of 20 plants in her greenhouse.
Here are her results.

178	189	147	147	166
167	153	171	164	158
189	166	165	155	152
147	158	148	151	172

Complete the stem and leaf diagram to show this information.

Stem	**Leaf**

(Total 3 marks)

3. Anil counted the number of letters in each of 30 sentences in a newspaper.

Anil showed his results in a stem and leaf diagram.

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

Key 4 | 1 stands for 41 letters

(a) Write down the number of sentences with 36 letters.

.....

(1)

(b) Work out the range.

.....

(1)

(c) Work out the median.

.....

(1)
(Total 3 marks)

4. A doctor has 12 000 patients.

4560 of these patients are male.

(a) What percentage of these patients are **female**?

..... %

(3)

Here is the age, in years, of each of the first twenty patients the doctor saw yesterday.

5	20	13	19	27	32	39	26	39	45
56	47	59	52	28	21	10	36	7	27

(b) In the space below, draw a stem and leaf diagram to show these ages.

(3)
(Total 6 marks)

5. Jessica counted the number of words in each of the first 25 sentences of a book.
Here are her results.

24	11	29	28	25	46	19	15	19	18	22	28	22
33	4	1	6	13	30	13	15	2	25	15	6	

In the space below, draw an ordered stem and leaf diagram to show her results.
You should include a key.

(Total 3 marks)

6. Janine recorded the times, in seconds, for each of 15 people to do a puzzle.
Here are her results.

90 81 78 83 68

75 79 81 69 87

76 91 67 73 81

(a) Complete the ordered stem and leaf diagram and key to show these results.

6	
7	
8	
9	

Key

(3)

Janine says "To find the median time, you add all the results and divide by 15"

Janine is **wrong**.

(b) (i) Explain how to find the median.

.....

.....

(ii) Find the median.

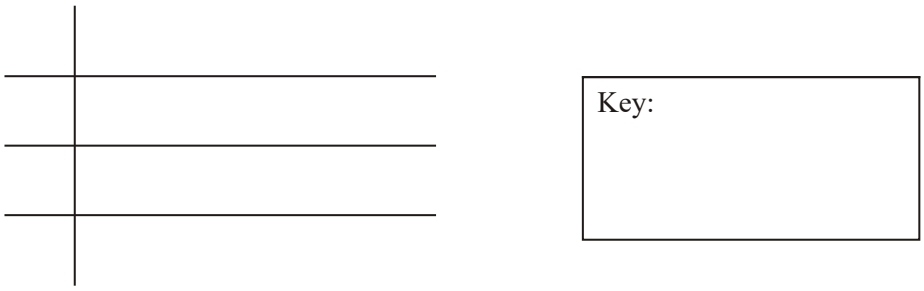
..... s

(2)
(Total 5 marks)

7. Here are the ages, in years, of 15 teachers.

35	52	42	27	36
23	31	41	50	34
44	28	45	45	53

(a) Draw an ordered stem and leaf diagram to show this information.
You must include a key.



(3)

One of these teachers is picked at random.

(b) Work out the probability that this teacher is more than 40 years old.

.....

(2)
(Total 5 marks)

8. Here are the ages, in years, of 15 teachers.

35	52	42	27	36
23	31	41	50	34
44	28	45	45	53

Draw an ordered stem and leaf diagram to show this information.
You must include a key.

Key:

(Total 3 marks)

9. Jason collected some information about the heights of 19 plants.

This information is shown in the stem and leaf diagram.

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

Key: 4|8 means 48 mm

Find the median.

..... mm

(Total 2 marks)

10. Daniel travels to school by bus.
He recorded the journey time, in minutes, each day for fifteen days.
His times are shown below.

21	18	24	31	21	30	19	22
24	32	33	28	22	29	18	

Draw a stem and leaf diagram to show this information.

(Total 3 marks)

11. Shirin recorded the number of students late for school each day for 21 days.
The stem and leaf diagram shows this information.

Number of students late

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

Key:
1|4 means
14 students late

(a) Find the median number of students late for school.

……

(1)

(b) Work out the range of the number of students late for school.

……

(1)
(Total 2 marks)

12. Here are the times, in minutes, taken to change some tyres.

5 10 15 12 8 7 20 35 24 15

20 33 15 25 10 8 10 20 16 10

(a) In the space below, draw a stem and leaf diagram to show these times.

(3)

The probability that a new tyre will be faulty is 0.05

(b) Work out the probability that a new tyre will **not** be faulty.

.....

(1)

(Total 4 marks)

13. Here are the weights, in kilograms, of 15 parcels.

1.1	1.7	2.0	1.0	1.1	0.5	3.3	2.0
1.5	2.6	3.5	2.1	0.7	1.2	0.6	

Draw a stem and leaf diagram to show this information.

(Total 3 marks)

14. Fifteen players scored goals for Hawkshaw Rovers in the last three years.
Here are the numbers of goals scored by each player.

10	8	13	24	25
33	10	1	21	16
3	24	16	31	20

In the space below, draw a stem and leaf diagram to show this information.

(Total 3 marks)

15. Mark recorded the number of e-mails he received each day for 21 days.
The stem and leaf diagram shows this information.

Number of e-mails

0	4 5 5 6 7 7 8 9	Key
1	0 1 2 3 3 4 6 7 8	2 | 6 means 26 e-mails
2	0 1 3 6	

(a) Find the median number of e-mails that Mark received in the 21 days.

.....

(1)

(b) Work out the range of the number of e-mails Mark received in the 21 days.

.....

(1)

(Total 2 marks)

16. Here are the lengths, in cm, of 20 newborn babies.

34	28	19	22	25	38	41	40	27	32
18	21	35	40	37	24	27	33	35	30

Draw a stem and leaf diagram to show this information.

(Total 3 marks)

17. Here are the ages, in years, of some members of a swimming club.

9	12	18	10	9	7	21	30	23	16
19	32	17	28	15	8	10	15	21	10

Draw an ordered stem and leaf diagram for these ages.
You must include a key.

0	
1	
2	
3	

Key:

(Total 3 marks)

18. Here are the amounts, in £, spent by some shoppers at a supermarket.

37	56	23	40
38	56	31	48
25	49	32	46

Draw an ordered stem and leaf diagram for these amounts.

You must include a key.

2	
3	
4	
5	

Key:

(Total 3 marks)

19. The stem and leaf diagram shows information about the test marks of 17 students.

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

Key: 2 | 5 = 25 marks

(a) Work out the range.

.....

(2)

(b) Find the median.

.....

(1)

(Total 3 marks)

20. Here are the test marks of 18 students in a mathematics class.

48	57	63	29	40	57	29	35	51
65	54	26	31	60	49	57	40	41

Draw an ordered stem and leaf diagram to show this information.
You must include a key.

Key:

(Total 3 marks)

21. Zoe recorded the weight of each of 15 people.
She showed her results in a stem and leaf diagram.

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

Key:

4|6 means 46 kg

(a) Write down the number of people with a weight of more than 70 kg.

.....

(1)

(b) Work out the range of the weights.

..... kg

(2)

(Total 3 marks)

22. Zoe recorded the weights, in kilograms, of 15 people.

Here are her results.

87	51	46	77	74	58	68	78
48	63	52	64	79	60	66	

Complete the ordered stem and leaf diagram to show these results.

4	
5	
6	
7	
8	

Key:

(Total 3 marks)

23. Jane plays some games of ten-pin bowling.

Jane shows her score in each game in a stem and leaf diagram.

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

Key: 8 | 0 = 80

Find the range of her scores.

.....

(Total 2 marks)

01. See working 3

0 | 5 7 8 8
1 | 0 0 0 0 2 5 5 5 6
2 | 0 0 0 4 5
3 | 3 5
Key 1 | 2 = 12 (min)

B1 for stem 0, 1, 2, 3 or 0, 10, 20, 30
B1 for accurate unordered leaves condone 1 error or omission
B1 for key and ordered leaves all correct

[3]

02. 14 | 7 7 7 8
15 | 1 2 3 5 8 8
16 | 4 5 6 6 7
17 | 1 2 8
18 | 9 9

Key 17 | 8 means 178 (mm) 3

B1 stem correct

B1 for accurate unordered leaves (condone 1 error or omission)

B1 for key and ordered and leaves all correct

03. (a) 2 1

B1 cao

(b) 37 1

45 – 8

B1 cao

(c) 27 1

B1 cao

[3]

04. (a) 100 × 4560/12000 = 38%
= 62% 3

M1 for 100 × 4560/12000 (=38) or 12000–4560(=7440)
M1 for 100–"38" or 100 × "7440"/12000
A1 cao

(b) Ages 3

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

Key 5 | 2 = 52 (yrs)

B1 for stem as 0, 1, 2, 3, 4, 5 or 0, 10, 20, 30, 40, 50

B1 for accurate unordered (or ordered) leaves condone 1 error or omission

B1 for key and ordered leaves all correct

[6]

05. 3

0	12466
1	133555899
2	22455889
3	03
4	6

B1 for stem 0, 1, 2, 3, 4 or 0, 10, 20, 30, 40

B1 for accurate leaves – condone 1 error or omission (could be unordered)

eg 1 | 3 represents 13

B1 for key and correct ordered leaves

[3]

06. (a)

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

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

3

M1 for unordered diagram (condone one error)
A1 cao
B1 for key (eg 6 | 7 = 67)

(b) (i) Explanation

B1 for '(order numbers and) select middle value' oe

(ii) 79 2

B1 cao

B1 cao

[5]

07. (a)

2	378
3	1456
4	12455
5	023

2 | 3 = 23 3

M1 for using 2, 3, 4 and 5 as stem
A1 for ordered stem and leaf diagram
A1 for consistent key, e.g. 2 3 = 23 (years)

OR

M1 for using 20, 30, 40 and 50 as stem
A1 for ordered stem and leaf diagram
A1 for consistent key, e.g. 20 | 3 = 23 (years)

(b) $\frac{8}{15}$ 2

B2 ft for $\frac{'8'}{'15'}$ *(ft from stem and leaf diagram)*

(B1 for $\frac{'8'}{a}$*, a > '8', or* $\frac{b}{'15'}$*, b < '15')*

SC: B1 for '8' : '15' or '8' out of '15'

[5]

08.

2	378
3	1456
4	12455
5	023

2 | 3 = 23 3

M1 for using 2, 3, 4 and 5 as stem
A1 for ordered stem and leaf diagram
A1 for consistent key, e.g. 2 | 3 = 23 (years)

OR

M1 for using 20, 30, 40 and 50 as stem
A1 for ordered stem and leaf diagram
A1 for consistent key, e.g. 20 | 3 = 23 (years)
(NB: Condone use of comma between leafs)

[3]

09. 30 2

M1 for finding the middle value or indication of 0, 29, 29.5, 30.5, 31, 31.5, 32 or writing "10th value" oe
A1 cao

[2]

10. 1 | 8 8 9
2 | 1 1 2 2 4 4 8 9
3 | 0 1 2 3
Key 1 | 8 means 18 3

B1 for using (0), 1, 2, 3…,
OR *(0), 10, 20, 30… as a stem*
B1 for unordered leaf, allow 2 errors
B1 cao for correct stem, fully correct ordered leaf and key

[3]

11. (a) 26 1

B1 cao

(b) 22 1

B1 cao

[2]

12. (a) See working column

0 | 5 7 8 8
1 | 0 0 0 0 2 5 5 5 6
2 | 0 0 0 4 5
3 | 3 5
Key 1 | 3 = 13 (min) 3

B1 for stem 0, 1, 2, 3 or 0, 10, 20, 30
B1 for accurate leaves (in any order) (condone one error or omission)
B1 for key ***and*** *ordered leaves all correct*

(b) 0.95 1

1 – 0.05

B1 cao

[4]

13. Stem & leaf 3

0	5 6 7
1	0 1 1 2 5 7
2	0 0 1 6
3	3 5

Key 3 | 5 = 3.5

M1 for stem and unordered leaf (allow 2 errors in leaf)
A1 for correct stem and correctly ordered leaf
B1 for key

14. 3

	0	**1**	**3**	**8**	
1	**0**	**0**	**3**	**6**	**6**
2	**0**	**1**	**4**	**4**	**5**
3	**1**	**3**			

+ key

B2 for stem and ordered leaves, no errors
(B1 for stem and unordered leaves, accept 3 leaf errors)
B1 (indep) for key eg 3/1 = 31

[3]

15. 12
22 2

B1 for 12, accept ½
B1 cao

[2]

16. Key
2/1 = 21 cm 3

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

B3 for complete diagram with ordered leaves and key
(B2 for omission of ordered leaves or key or for one error)
(B1 for correct stem and unordered leaves, condoning one error or B1 for a correct key)

[3]

17. 3

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

1 | 7 = 17 years

B3 for fully correct diagram with correct key

[B2 for ordered leaves (condone one error), key or no key OR unordered leaves (condone one error) + correct key]
[B1 for unordered leaves (condone one omission), no key OR for a correct key (ignore diagram) OR for ordered leaves (no more than 2 errors with a correct key]

NB: "one error" defined as either one number missing, one extra number, or one number misplaced (which may not be two errors); accept commas; key as shown opposite (1 line 7 = 17), but candidate could use different numbers, or give several alternatives; condone missing units.

[3]

18.

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

key 2 | 1 = 21 3

M1 for unordered stem and leaf diagram (condone 2 errors, 1 number misplaced counts as 1 error)
A1 for correctly ordered and fully correct diagram
B1 for key e.g. key 2 | 1 = 21
Note: award marks if there are commas between leaves

[3]

19. (a) 64 – 25
39 2

M1 for sight of 25 and 64
A1 cao

(b) 49 1

B1 cao

[3]

20.

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

Key: 2 | 6 = 26 3

B3 for fully correct diagram with key
(B2 for ordered leaves (with one error or omission) and a key
OR
unordered leaves and key)
(B1 for unordered leaves (with an error or omission)
OR
key)

[3]

21. (a) 5 1

B1 cao

(b) 87 – 46
41 2

M1 for 87 – 46, (accept 46 to 87 and 46 – 87)
A1 cao

[3]

22.

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

3

M1 for unordered leaves (condone two errors or omissions)
A1 for a fully correct ordered stem and leaf diagram
B1 for key, eg 4 | 6 means 46

[3]

23. 98 – 71 = 27 2

M1 for 98 – 71 or 71 – 98 or 8 – 1 or 1 – 8 or – 27 or 2 7 seen
A1 cao

[2]

01. **Paper 2**

This was a new topic to be tested on the specification. Most candidates had no idea how to answer this question and success was very centre dependent. Most candidates actually drew very artistic plants with stems and leaves. Those candidates who could answer this question usually scored 2 out of the 3 marks available - most losing the mark for not writing a key.

Paper 4

This question was answered well by those candidates who knew how to draw a stem and leaf diagram although the key was frequently omitted. Unfortunately many candidates were not familiar with stem and leaf diagrams and there were numerous attempts at frequency tables and box plots as well as drawings of plants. Some candidates did not attempt to answer this question.

02. Although this question was better answered than the stem and leaf question in June 2003 Paper 4 there were still many candidates who were not familiar with stem and leaf diagrams. Numerous attempts at tally charts and grouped frequency tables were seen. Candidates who did know what was required generally gained two marks but few remembered to include a key. Some did not order the leaves.

03. This question assessed the ability of candidates to interpret stein & leaf diagrams. Most candidates gained the mark in (a) for reading off a value correctly. In parts (b)and (c) fewer than half the candidates gained the mark, mainly due to their not understand the terms “range” and “median”.

04. In part (a) most candidates identified that 7440 patients were female but many then had little idea how to write this as a percentage of 12000. 7440 ÷ 100 = 74.4% was a common incorrect response. Candidates who wrote a correct fraction were usually successful but those who started with 12000 = 100%, 6000 = 50%, etc. rarely gained any more marks. About 50% of candidates gained at least two of the three marks in part (b), but relatively few provided a key and some left the leaves unordered. Surprisingly, a significant number of candidates did not appear to be familiar with stem and leaf diagrams. Frequency tables and drawings of stems and leaves were frequently seen and some candidates made no attempt at all.

05. Candidates need to be aware that presentation of data requires accuracy. There were far too many candidates who lost the final mark due to the absence of at least one item of data, or the failure to include a key, even though this was requested in the question. It is disappointing the proportion of candidates who still fail to understand what a stem & leaf diagram looks like.

06. This type of question is being tackled more successfully than in the past and the majority of candidates were able to gain some marks in part (a). Many completely correct diagrams together with key were seen. Some candidates did not transfer all the data into the diagram and some forgot to order the leaves. A common misconception was to include the tens component of the number in the leaf section of the diagram and write 67 68 69 instead of 7 8 9. Many candidates did not understand the concept of a key. Some groups of candidates appeared to be unfamiliar with stem and leaf diagrams and did not attempt this part of the question.

Part (b) was answered quite well. In (i) most candidates knew that the median is the middle value but some then gave incorrect or ambiguous explanations of how to find this value. The most common error in (ii) was to divide 15 by 2 and give the 7.5^{th} value (78.5) as the median. Some candidates identified the correct value in their diagram but gave the answer as 9 instead of 79. Surprisingly some candidates (even those with a correct stem and leaf diagram) proceeded to list the numbers again in a line in order to find the median.

07. Those candidates who were familiar with stem and leaf diagrams usually answered part (a) quite well although many did not understand how to complete the key. Some candidates made no attempt to order the leaves but many who did were careless and made one error in the ordering or omitted one or two leaves. A significant number of candidates did not know what was meant by a stem and leaf diagram and many tally charts and pictograms were seen. The probability in part (b) was often correct even when the diagram in part (a) was incorrect or not attempted and it was pleasing that most candidates expressed the probability in a correct form. Many candidates did not understand that to find the number of teachers over 40 years old they must include those over 50 as well so $\frac{5}{15}$ was a common incorrect answer. Some showed $\frac{5}{15}$ in their working, gaining one mark, and then simplified it to $\frac{1}{3}$ but those who gave an answer of $\frac{1}{3}$ with no working got no mark.

08. This question was done well by the majority of the candidates. Most were able to draw an ordered stem and leaf diagram. Typical errors included omitting a number, usually the 0 in 50 or the 5 in the repeated 45s; or drawing an incorrect key. A surprising number of candidates gave more than one example for the key.

09. Foundation

It was pleasing to see how many candidates could not only interpret data from a stem and leaf diagram but also find the median correctly (over 45%). Many scored 1 mark for writing their median as 29, 29.5, 30.5, 31, 31.5 or 32 and a few scored 1 mark for realising that 0 was the middle value but then failed to write this as 30. The most common incorrect response was to list the single digit numbers from the table in order, and then find the middle value. This did not score any marks.

Higher

Approximately 65% of candidates were able to gain full marks. A further 17% gained one mark for demonstrating a correct method to find the median. Common errors were to list the numbers given as the leaves in order and find the median of these or to find the mean.

10. It was clear that many centres had not taught stem and leaf diagrams. Where this topic had been taught most candidates scored at least two marks. Most lost the final mark for not providing a key.

11. Paper 11

Many candidates ignored the stem in the Stem and Leaf diagram with 6 being the most popular answer. 26 in (a) and 22 in (b) were rarely seen.

Paper 12

Success at this question was centre dependant with many candidates unable to interpret a stem and leaf diagram. Many considered merely the units digits and used these to determine the median and the range; answers of 6 and 9 were common. Some of those who were familiar with stem and leaf diagrams gave 14 – 36 or 36 – 14 as their range instead of the required single figure.

12. Part (a) of this question was very centre dependant, many centres showing evidence of not having taught this topic at all. Those candidates who understood stem and leaf diagrams usually gained 2 marks only, failing to give a key to their diagrams or leaving the leaves unordered. Very many candidates were successful in part (b) although a significant number worked out 100 – 0.05 or 10 – 0.05. A few candidates read 0.05 as a half and offered the same as their answer.

13. Hardly any candidates scored the full 3 marks on this question. Candidates should see this type of question requiring a 3-part answer… sorting out the values into various categories (stem and unordered leaf), putting the values in order (stem and ordered leaf) and finally a key to interpret the diagram. Candidates are to be encouraged to check their figures at the end as many candidates lost the second mark by omitting one or more of the digits. In this question candidates appeared to have little experience of handling the decimal values and were at a loss as to how to deal with the decimal point. The key was rarely given which meant that most candidates did not have access to the final accuracy mark.
There are still a significant number of candidates who spend a considerable amount of time carefully drawing a diagram of a plant, with leaves on stems, occasionally in a plant pot, which would be more in place in an art gallery!

14. The stem and leaf diagram has been a regular feature in the modular papers and yet many candidates appeared to be seeing it for the first time. Over 70% of the candidature scored no marks on this question. An ornate drawing of a tropical plant with numbers draped on the leaves has no place on a mathematics paper. For those using a mathematical approach the single digit values caused difficulty but this could have been overcome by writing, say, the value '8' as '08' giving rise to the nought or zero in the stem. Most now realise that the leaf values need to be presented in numerical order rather than randomly arranged. Full marks for this question was rare (just over 3% of the candidates) as the greatest omission was the lack of a key to indicate the interpretation of the diagram.

15. Interpretation of the stem and leaf diagram was not good. In part (a) many candidates simply ordered the numbers in the leaves and selected the median from this list giving an answer of 5. Some gave 1 (median of 0, 1 and 2) as their answer, some found the mean by mistake and some were mislead by the key giving 13 (26 ÷ 2) as the median. In part (b) understanding of range varied. Common responses were 2 (2 – 0), 9 (9 – 0) and 26 – 4 while less than a half of candidates gained the mark for the correct answer.

16. Understanding of stem and leaf diagrams is still centre dependant. Candidates who did make reasonable efforts often either omitted a key or left the leaves in an unordered form. Only just over one in ten candidates gave a fully correct diagram. Several candidates gave correct stems but then gave complete numbers in the leaves.

17. Candidates were frequently inaccurate in re-writing or ordering the numbers for the stem & leaf diagram. Many failed to notice that an ordered stem & leaf diagram was required. Overall this question was better attempted than previous sessions, but a significant minority still fail to understand that only the units digit was required on the right hand side. The acceptable way of showing the key is still not well understood; many failed to show a key at all.

18. Candidates understanding of stem and leaf diagrams is improving over time and there were fewer pictures of plants with leaves and numbers put on the leaves. Some included the stem digit on the right e.g. 2 | 23, 24 etc., some did not even bother to order the numbers. 66% of candidates scored at least 2 marks with the Key being a problem some simply put a number like 2 | 3 in the key but did not show 2 | 3 = 23 whilst others left the box empty. Some of the weaker candidates arranged the amounts correctly in order whilst others failed to order the leaves.

19. This question was often badly answered, even by candidates achieving success in the other four questions in this section. The success rate for each part of the question was about 40%. It seems that some candidates are unfamiliar with using a stem and leaf diagram.

Common errors in part (a) included identifying 0 and 9 as the smallest and largest marks rather than 25 and 64, identifying 62 as the largest number and the inability to subtract 25 from 64 accurately. “41” was a commonly seen answer.

In part (b) many candidates tried to find the mode rather than the median and as a result “56” and “6” appeared frequently as incorrect answers.

20. 79% of candidates were able to give a fully correct answer to this question. Some candidates may have avoided careless errors by using the space provided to construct an unordered stem and leaf diagram before presenting their answers in the framework given. Some candidates did not give a correct key.

21. Only 66% of the candidates were able to write that 5 people had a weight of more than 70 kg. The most common incorrect responses were 2 (two 7’s in the leaves) and 4 (probably from sight of 4 numbers in the 70s).

In part (b) over half the candidates could provide 41 as the range of the weights with another 5% scoring one mark for identifying 87 and 46. It was surprising how many of these candidates made arithmetic errors in working out the difference between the two numbers. A significant number of candidates calculated the median value rather than the range.

22. Candidates are becoming more and more familiar with stem and leaf diagrams as shown by this question where over 92% of the candidates scored 2 or 3 marks. The most common error was to lose a mark for an incorrect key although 75% of the candidates did score all available marks. There were a substantial number of candidates who did not realise the diagram required the numbers to be ordered.

23. 77% of the candidates were able to interpret the stem and leaf diagram providing the correct range of 27. A common incorrect response to (a) was 9 – 0 = 9. Other candidates demonstrated that they knew they had to work out the range but wrote
'98 − 79 = 19' or '92 − 71 = 21'.