1. The marks of a group of 31 students in a Statistics test are summarised by the stem and leaf diagram below.

Mark		Totals
1	8	(1)
2	6	(1)
3	2 4 7	(3)
4	0 6 6 7 8 9	(6)
5	0 0 1 2 3 5 6 7 9	(9)
6	2 2 3 3 5 8	(6)
7	2 4 8	(3)
8	5	(1)
9	0	(1)

Key: 2 | 6 represents 26 marks

(a) Find the median and the interquartile range of the marks of these students.

(3)

An outlier is defined as a mark that is

either more than 1.5 × interquartile range above the upper quartile
or more than 1.5 × interquartile range below the lower quartile

(b) On the grid provided on page 3, draw a box plot to represent the marks of the students, indicating clearly any outliers.

(5)

Three students asked for their marks to be checked.

- The mark for student A was changed from 47 to 43
- The mark for student B was changed from 49 to 43
- The mark for student C was changed from 90 to 94

(c) Explain the effects that these three changes would have on the box plot drawn in part (b).

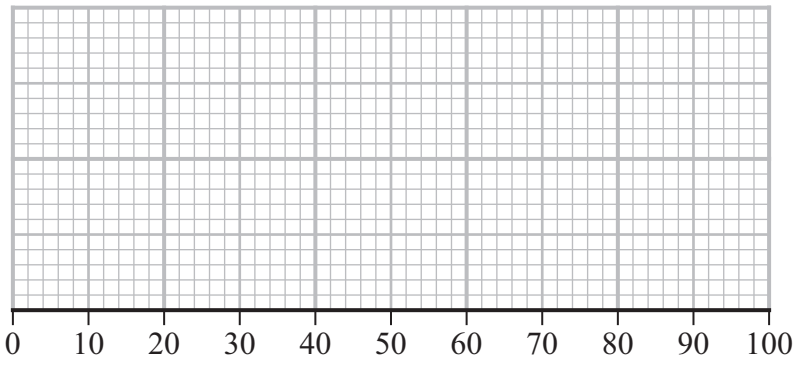
- Show your calculations clearly
- You do **not** need to draw the new box plot

(4)

DO NOT WRITE IN THIS AREA DO NOT WRITE IN THIS AREA DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

Question 1 continued



Turn over for a spare grid if you need to redraw your box plot.

Question 1 continued

DO NOT WRITE IN THIS AREA

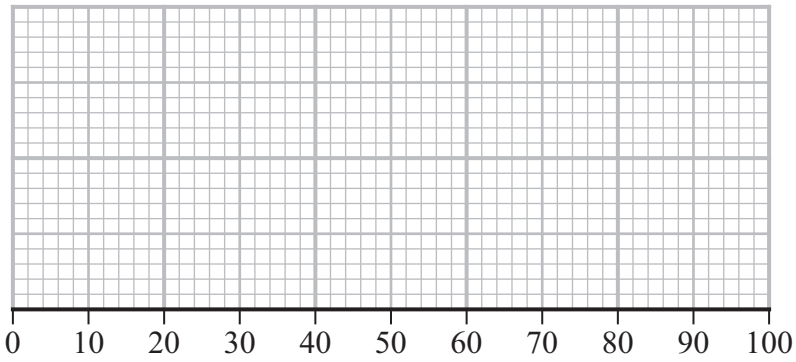
DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

Question 1 continued

Only use this grid if you need to redraw your box plot.



(Total for Question 1 is 12 marks)