Name: _____ Date: _____
IB Math Studies / SL Ms. Guarnaccia / Dr. Huson

Statistics Review Problem Set 3

6a. *[3 marks]*

A class of 15 students were asked how many pencils they bring to class. The following results were recorded:

$5,\ 7,\ 4,\ 5,\ 6,\ 7,\ 7,\ 4,\ 6,\ 5,\ 4,\ 6,\ 7,\ 2,\ 11$

For these results, write down

(i) the median;

(ii) the mode.

. . . . . .

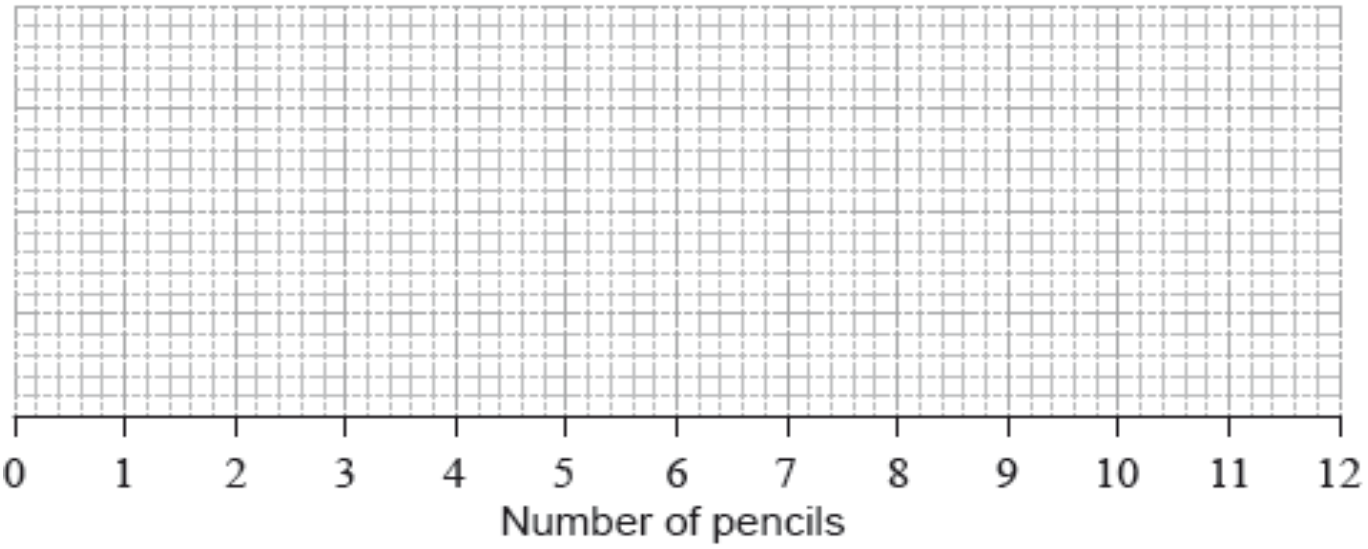
. . . . . .

. . . . . .

6b. *[3 marks]*

The upper and lower quartiles of these results are 4 and 7, respectively.

Draw a box-and-whisker diagram to represent these results.



7a. *[2 marks]*

The IB grades attained by a group of students are listed as follows.

6 4 5 3 7 3 5 4 2 5

Find the median grade.

. . . . . .
. . . . . .
. . . . . .

7b. *[2 marks]*

Calculate the interquartile range.

. . . . . .
. . . . . .
. . . . . .

7c. *[2 marks]*

Find the probability that a student chosen at random from the group scored at least a grade 4.

. . . . . .
. . . . . .
. . . . . .

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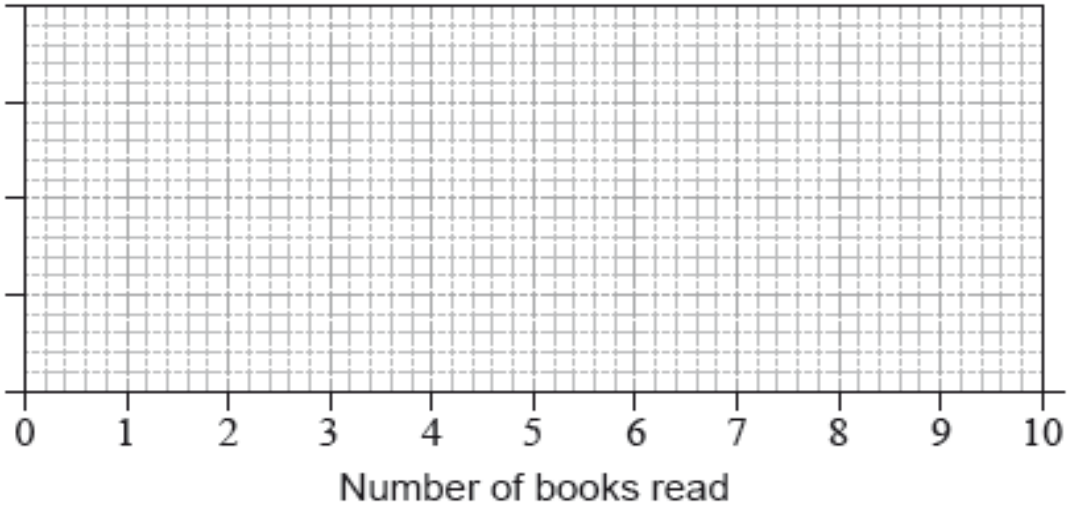
8a. Two groups of 40 students were asked how many books they have read in the last two months. The results for **the first group** are shown in the following table.

Number of books read	Frequency
2	5
3	8
4	13
5	7
6	4
7	2
8	1

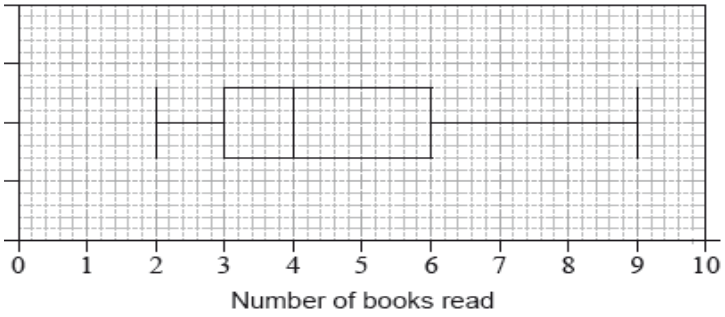
The quartiles for these results are 3 and 5.

Write down the value of the median for these results. *[1 mark]*

8b. Draw a box-and-whisker diagram for these results on the following grid. *[3 marks]*



8c. The results for **the second group** of 40 students are shown in the following box-and-whisker diagram.



Estimate the number of students **in the second group** who have read at least 6 books. *[2 marks]*

9a. *[1 mark]*

A class of 13 Mathematics students received the following grades in their final IB examination.

3 5 3 4 7 3 2 7 5 6 5 3 4

For these grades, find the mode;

. . . . . .
. . . . . .
. . . . . .

9b. *[2 marks]*

For these grades, find the median;

. . . . . .
. . . . . .
. . . . . .

9c. *[1 mark]*

For these grades, find the upper quartile;

. . . . . .
. . . . . .
. . . . . .

9d. *[2 marks]*

For these grades, find the interquartile range.

. . . . . .
. . . . . .
. . . . . .