2.16 Pop re-Quiz: Descriptive statistics introduction

1. A box contains 100 cards. Each card has a number between one and six written on it. The following table shows the frequencies for each number.

Number	1	2	3	4	5	6
Frequency	6	k	20	30	29	11

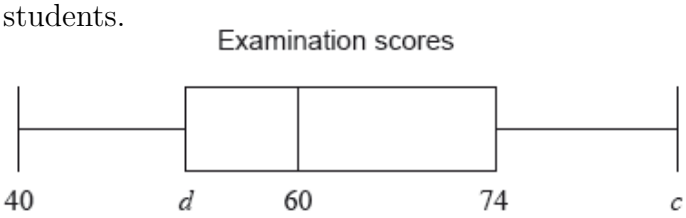
(a) Calculate the value of k. [3 marks]

(b) Find

i. the median; [2 marks]

ii. the interquartile range. [3 marks]

2. The following box-and-whisker plot represents the examination scores of a group of students.



(a) Write down the median score. [1 marks]

The range of the scores is 48 marks, and the interquartile range is 17 marks.

(b) Find the value of

i. c; [2 marks]

ii. d. [2 marks]

3. The scores of 30 students taking an IB Paper 2 are shown in the frequency table below.

Mark (x)	$10 \leq x < 30$	$30 \leq x < 50$	$50 \leq x < 70$	$70 \leq x < 90$
Frequency	6	10	11	3

(a) Write down the modal class. [1 mark]

(b) Estimate the mean score $\overline{x}$. [3 marks]

(c) Estimate the standard deviation of the scores, σ. [3 marks]