

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**CW # 2-2:** Math IB SL - Standard 22 - 25: Chapter 6 Review for Test

50 points

- 
1. *From January to September, the mean number of car accidents in a city per month was 420. From October to December, the mean was 740 accidents per month. Find the mean number of car accidents per month for the whole year.*



- 
2. *On Monday, 23 students in a chemistry class spent a total of 736 minutes on an experiment.*
- Find the mean number of minutes the students spent on the experiment.*
  - Two students forgot to report their times. One spent 24 minutes and the other spent 15 minutes. Calculate the new mean including these two students.*



- 
3. *A data set has a mean of 48 and a standard deviation of 5.*
- Each value in the data set has 10 added to it. Find the new mean and standard deviation.*
  - Each value in the original data set is multiplied by 10. Find the new mean and variance.*

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**CW # 4:** Math IB SL - Standard 22 - 25: Chapter 6 Review for Test

50 points



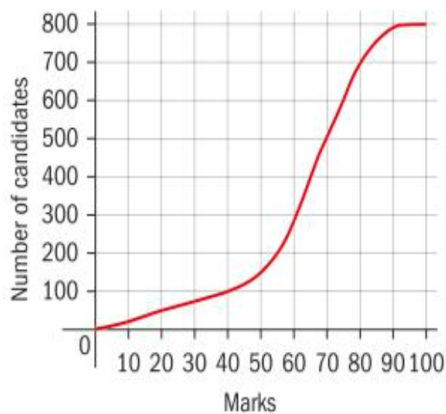
4. The box plot shows the heights, in cm, that a class of 8 year-olds could jump.



- a What is the lowest height?
- b Write down the median.
- c If the range is 50 cm, find the value of  $c$ .
- d Find the value of  $d$  if the interquartile range is 24 cm.



5. The test results for a group of children in a school district are shown on this cumulative frequency diagram.



- a How many students' test scores were recorded?
- b What is the median score?
- c Show that the interquartile range is 20 marks.
- d How many students scored more than 80 marks on the test?
- e If Calvin earned 80 marks, would he be in the 90th percentile? Give reasons for your answer.
- f 100 students scored less than  $k$  marks. Find the value of  $k$ .

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**CW # 4:** Math IB SL - Standard 22 - 25: Chapter 6 Review for Test

50 points

---

6. A survey was conducted of the number of mobile devices that families owned.

<b>Mobile devices</b>	1	2	3	4	5	6
<i>f</i>	41	60	52	32	15	8

- a State whether the data is discrete or continuous.
  - b Write down the mean number of mobile devices per family.
  - c Write down the standard deviation.
  - d Find how many families have a number of mobile devices greater than one standard deviation above the mean.
-

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**CW # 4:** Math IB SL - Standard 22 - 25: Chapter 6 Review for Test

50 points



**24 P1:** Grouped, continuous data for the mass,  $w$  kg, of a group of adults is given in the table below.

Mass	$40 < w \leq 50$	$50 < w \leq 60$	$60 < w \leq 70$	$70 < w \leq 80$	$80 < w \leq 90$	$90 < w \leq 100$	$100 < w \leq 110$	$110 < w \leq 120$
Frequency	5	15	25	30	50	35	25	15

- State the modal interval. (1 mark)
- Construct a labelled cumulative frequency table for this data. (3 marks)
- On graph paper draw a cumulative frequency curve, with 1 cm representing 10 kg on the  $x$ -axis and 1 cm representing 10 adults on the  $y$ -axis. (5 marks)
- Hence, estimate values for the **i** median **ii** lower quartile **iii** upper quartile.  
Draw lines on your graph to indicate how you obtained these values. (4 marks)