

Subject 1 :

Please, do not write on the exam paper.

Low birth weight has been defined by the World Health Organisation(WHO) as weight at birth of less than 2,500 grams (5.5 pounds) . This practical cut-off for international comparison is based on epidemiological observations that infants weighing less than 2,500 g are approximately 20 times more likely to die than heavier babies.

A baby's low weight at birth is either the result of pre-term birth (before 37 weeks of gestation) or due to restricted foetal growth.

In South-East Asia the low birth weight is estimated about 27 % but in those countries 74 % of births are not weighed, this large proportion of infants not weighed at birth constitutes an impediment to reliable monitoring of low birth weight.

Publication : LOW BIRTHWEIGHT- UNICEF and WHO-2004

Exercise :

In a maternity hospital in France, they recorded the birth weight (in kg) of 103 babies who were born in April 2011. We have only some data.

Weight (kg)	2.5	2.6	...	3.1	3.2	3.3	....	5
Frequency	12	14	....	9	17	9	....	1
Cumulative frequency			....		69	78	....
Cumulative frequency in percentage			....				....

Part 1 :

- 1) Complete the coloured boxes of the table. Give approximative values at 2 d.p. (decimal places).
- 2) Give the frequency of the babies whose weight was less than 3.1 kg.
- 3) What is the percentage of the babies whose weight was greater than 2.5 kg but did not exceed 3.2 kg?

Part 2 :

- 1) Determine the minimum, maximum, median and quartiles of this sample of data.
- 2) In a town of India, the same year, the birth weight of 100 babies has been measured. The data collected gives the following results :
Min = 990 g , Q1 = 2,100 g , Me = 2,600g , Q3 = 2,800 g , Max = 4,000 g .

You'll find on a separate sheet the box and whiskers diagram corresponding to these results.

Complete the sheet with the diagram for France.

Compare the two samples.

Separate sheet: box and whiskers plots

