Homework assignment 2

Case 1:

A study recorded the birth weights (in grams) of 30 newborns: 2863, 2995, 3193, 3223, 3285, 3303, 3385, 3400, 3499, 3552, 3596, 3621, 3657, 3658, 3695, 3715, 3745, 3784, 3820, 3921, 3966, 3985, 4095, 4125, 4257, 4298, 4412, 4497, 4503, 4526. Draw a histogram of these data. Calculate a 95% confidence interval for the mean weight of the newborn population.

Case 2:

Infections are among the major causes of neonatal death worldwide. Using the data below, calculate a 95% confidence interval for the population proportion of neonatal death by sepsis.

Cause of neonatal death	**Number of cases**
Sepsis	21
Pneumonia	56
Tetanus	2
Diarrhoea	15
Total	94

Case 3:

A study evaluated the incubation period of a newly emerging infectious disease. Using the data below, calculate a 95% confidence interval for the population mean incubation period.

Incubation period in days	**Number of cases**
1	2
2	12
3	32
4	99
5	121
6	170
7	162
8	236
9	189
10	145
11	132
12	89
13	75
14	71
15	23

Theory:

What are the main factors influencing the sample size estimation?