- 1. Using read.table with option header=TRUE to read in babiesI.data into R.
 - (a) The data is in ounces. 0.035 ounces is one gram. Convert the data of birthweights in to Kilograms. Call the data as kgbwt
 - (b) Provide the five number summary using fivenum of kgbwt.
 - (c) Provide a boxplot of the kgbwt.
 - (d) Can you list all the outliers of the kgbwt?
 - (e) Decide if kgbwt is from a normal distribution by:
 - i. Find the percentage of babies that have weights within: 1 standard deviation of the average; 2 standard deviation of the average;3 standard deviation of the average.
 - ii. Compute the Skewness and Kurtosis of the birth weights
 - iii. Finally using the qqnorm function construct a Normal-quantile plot.
- 2. Four different death rates -fetal¹, neonatal², perinatal³, and infant⁴ are used by researchers in investigating babies health and development. Neonatal mortality rates per 1000 births by birth weight (grams) for live-born infants of white mothers, according to smoking status are given in table below.

Weight in Grams	Nonsmoker	Smoker
≤ 1500	792	562
1500-2000	406	346
2000-2500	78	27
2500-3000	11.6	6.1
3000-3500	2.2	4.5
3500+	3.8	3.6

- (a) Using the Table can you provide a plot of the neonatal mortality rates for both Nonsmoker and Smoker categories.
- (b) From the Table what can you say about the mortality rate of babies born to smokers against the rate of babies born to non smokers ?
- 3. Distribution of the number of cigarettes smoked per day for 484 mothers in the CHDS subset who smoked during their pregnancy, rounded to the nearest percent is given in the table below.

Number of Cigarettes	Percent of Smoker
0-5	16
5-10	25
10-15	14
15-20	4
20-30	32
30-40	5
40-60	4

(a) Plot the histogram on R for the above table. Label the x and y axes appropriately.

 3 both fetal and neontal period

¹It is time before birth

 $^{^2\}mathrm{Denotes}$ the first 28 days after birth

 $^{^4\,}$ baby's first year