Practical 2

Bootstrap method for non-normal estimate

The weight and height of 100 healthy men are stored in the file "BMI.csv", which can be loaded via

```
bmi <- read.csv("YOUR PATH/BMI.csv")
```

It can be assumed that height is normally distributed. However, the variable at interest (BMI) and weight are not normally distributed. [BMI = weight (kg) / height^2 (m^2)].

(a) Calculate the BMI of the 100 healthy men and plot the distribution of weight, height and BMI in a panel.

(b) Assess the normality of the three variables (weight, height and BMI).

(c) Calculate the bootstrap estimate of the mean and the corresponding 95% percentile bootstrap confidence interval for BMI, from 1000 bootstrap samples

(d) Obtained the 95% BCa confidence interval for BMI.