

# Homework 4

*Due April 2, 2020 (by 11:59pm)*

## Question 1:

Use the `gapminder` dataset in `library(gapminder)` to answer the following questions:

1. What continent experienced the highest percentage increase in life expectancy in the 1952-2007 period (assign it to `a1`)?
2. What is the maximum gdp per capita in Africa in 2007 (assign it to `a2`)? (in \$ amount, not the country).
3. What is the maximum gdp per capita in Europe in 2007 (assign it to `a3`)? (in \$ amount, not the country).
4. What percentage of countries in Asia had a population of more than 50 million in 2007 (assign it to `a4`)?
5. What percentage of countries in Europe had a gdp per capita over \$30,000 in 2007 (assign it to `a5`)?

## Question 2:

**Height, weight, and age of NBA players.** You work with a sample of NBA players from the 2013-2014 season. You can find the dataset here: [http://users.stat.ufl.edu/~winner/data/nba\\_ht\\_wt.csv](http://users.stat.ufl.edu/~winner/data/nba_ht_wt.csv)

1. Convert the height variable from inches into meters and convert the weight variable from pounds into kilograms.
2. Which player has the maximum BMI in the sample (assign it to `b1`)? The formula to calculate BMI can be found here: [https://www.cdc.gov/healthyweight/assessing/bmi/childrens\\_bmi/childrens\\_bmi\\_formula.html](https://www.cdc.gov/healthyweight/assessing/bmi/childrens_bmi/childrens_bmi_formula.html)
3. What percentage of NBA players in the sample have a BMI over 25, which is considered "overweight" (assign it to `b2`)?
4. Compute the average BMI for players who have age over 30 (assign it to `b3`).
5. Compute the average BMI for players who play Forward position (F) (assign it to `b4`).