### R Exercises

### Introduction to R

### Exercise 1: Creating Objects

### 1. You have a patient with a height (inches) of 73 and a weight (lbs) of 203. Create r objects labeled 'height' and 'weight'.

### 2. Convert 'weight' to 'weight\_kg' by dividing by 2.2. Convert 'height' to 'height\_m' by dividing by 39.37.

### 3. Calculate a new object 'bmi' where BMI = weight\_kg / (height\_m\*height\_m)

### Exercise 2

### 1. See ?abs and ?sqrt. Calculate the square root of the absolute value of -4\*(2550-50).

### 2. What’s the range of ages represented in the NHANES data? (hint: range()).

### 3. Within the NHANES dataset, how many distinct values are there in the Gender variable and the Education variable (hint: ?n\_distinct()).

### Exercise 3

### 1. Create a variable, nhanes\_manyRooms, that is equal to "Yes" if there are more than 7 rooms in their house (see the HomeRooms variable). How many patients fall into this category?

### 2. Create an indicator variable, nhanes\_InsuredHomeOwn, that is equal to 1 if the patient is Insured and Owns a Home and 0 otherwise (See the Insured and HomeOwn variables). How many patients fall into this nhanes\_InsuredHomeOwn category?

### DPLYR

### Exercise 4

1. Which countries and years have life expectancies of more than 80 years (>80)?
2. Which countries had a low GDP per capita (< 500) in 2007?

### Exercise 5

### TIDYR/STRINGR

Create a plot to show the relationship between continent and life expectancy. If there is time add color, axis labels, and a title

# Further Resources

* <http://tryr.codeschool.com/>: TryR - an interactive, browser-based R tutor.
* <http://swirlstats.com/>: An R package that teaches you R (and statistics!) from within R.
* <https://stat545-ubc.github.io/>: Jenny Bryan’s Stat 545 “Data wrangling, exploration, and analysis with R” course material – excellent resource for learning R, dplyr, and ggplot2.
* <https://www.datacamp.com/courses/free-introduction-to-r>: DataCamp’s free introduction to R.
* <https://cran.r-project.org/doc/contrib/Short-refcard.pdf>: Printable R command reference card.
* <https://www.rstudio.com/resources/cheatsheets/>: Printable cheat sheets for many different tasks within R.
* <http://rseek.org/>: Rseek - a custom Google search for R-related sites.