

Exercises

Directions.

Work on the following problems in groups of 2–3 people.

Each group will present at the end of class for participation grade.

Submit your work to Canvas.

Problems.

Using the dataset at <http://manctsui.github.io/datasets/countries.csv>, complete the tasks below and include your R code.

1. Determine how many Eastern European countries have a positive net migration.
2. List the 3 Eastern European countries with the most positive net migration.
3. List the 3 Eastern European countries with the most negative net migration.
4. Report the countries in the dataset whose net migration data is missing. Interpret the word "missing" more broadly than just NA .
5. A country is **big** if its area is at least 2,000,000 square miles OR if its population is at least twenty-five million. Report the name, population, and area of the **big** countries. (Do not report anything else.)
6. Determine the number of countries where the birthrate is strictly less than the deathrate. Separately, report the countries where either the birthrate or the deathrate is unknown.
7. Write in an extra column of data named "Natural_population_change" which computes the birthrate minus the deathrate.
8. Identify the 3 most populous countries in the dataset.
9. Which countries have a population which is at least 30% the size of the population of the 3rd most populous country?
10. Use the `aggregate` function to determine the typical population size of each region.