**Background**

Greenhouse gas emissions are considered the main cause of global warming. The common measurement of total greenhouse gas emissions is “kt (kilotonnes) of CO2 equivalent.” Under the United Nations Framework Convention for Climate Change (UNFCCC), all Parties are invited to submit their emissions of Greenhouse Gases (GHG). With the Paris Agreement of December 2015, all countries are encouraged to report frequent updates of emissions and nationally determined mitigation options.

The dataset “Total\_GHG.txt” is collected through The World Bank ([data.worldbank.org](http://data.worldbank.org/)) and contains total greenhouse gases emissions in kt of CO2 equivalent for different countries/regions from year 1994 to 2012. Please use this together with “CountryCode.txt” to answer the following questions.

* 1. (3 pts) Out of the countries in “High income” group, which two countries had the **highest average** GHG emissions from year 2008 to year 2012? Write down these two countries.

* 1. (3 pts) In year 2012, which region has the highest GHG emission in the High Income group? What is the corresponding value?

Month \_\_\_\_\_\_\_\_\_ \_\_\_\_ Corresponding value \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* 1. (3 pts) For each country, calculate the percentage increase of GHG from year 2008 to 2012, in other words, the increase from 2008 to 2012 divided by GHG of 2008. There is a belief that countries with high income tend to have better control of GHG and therefore should have, on average, the lowest increase out of all income groups. Is this true for all regions around the world? Justify your answer quantitatively.