## **Question 1**

Use the gapminder data set in the gapminder library to recreate a version of Hans Rosling's famous data visualization shown in the *A Grammar of Graphics* slides (a single plot instead of a movie; in other words, for just a single year).

- You can see at a glance which years are available by running count(gapminder, year) in an R chunk.
- In place of fertility rate use GDP per capita.

Constructing this plot requires several distinct steps.

- 1. Determine the correct geometry for the plot and make an initial ggplot with the two variables on the x and y axis.
- 2. Distinguish the continents by either shape or color. Which ever one you do not use, set its value to something other than the default. Hint: use the help\_file for geom\_point() to find options you can set to!
- 3. Alter the x and y axis labels so that they're more descriptive than just the variable given names in gapminder.
- 4. Add an annotation that draws attention to a particular feature of the data (of your choosing).
- 5. Title your plot with a claim based on your data.
- 6. Apply a theme of your choosing.

Use RStudio to write the code and see your visualization. Once you are happy with it, handwrite your code in the space below.

## Question 2

Consider one of the plots that you have thought about or created for Lab 2 (Class Survey). Revisit that plot, but incorporate at least 2 of the elements from the Communicating with Graphics section of the Grammar of Graphics tutorial to polish your plot into one that tells a more focused story. No need to copy that code here but in the space below write a list of the elements that you applied to each plot.