

Quarto Basics

For a demonstration of a line plot on a polar axis, see [?@fig-polar](#).

```
“{r global_options, include=FALSE} library(knitr) library(tidyverse) library(openintro)
library(gt) knitr::opts_chunk$set(eval = TRUE, message = FALSE, warning = FALSE)
setwd("/Users/afraser/Documents/src/cuny-datascience/data606-statistics-and-probability/assignments")
```

```
```{r r-interface-2020, echo=FALSE, results="asis"}
knitr::include_graphics("./r-interface-2020.png")
```

The panel on the lower left is where the action happens. It's called the *console*. Everytime you launch RStudio, it will have the same text at the top of the console telling

Note that you can check to see which packages (and which versions) are installed by inspecting the *Packages* tab in the lower right panel of RStudio.

```
“{r install-packages, message=FALSE, eval=FALSE} install.packages("tidyverse") in-
install.packages("openintro") library(tidyverse)
```

To get started, let's take a peek at the data.

```
data('arbuthnot', package='openintro')
```

```
arbuthnot
```

```
glimpse(arbuthnot)
```

It is better practice to type this command into your console, since it is not necessary code to include in your solution file.

This command should output the following

```
{r glimpse-data-result, echo=FALSE, results="asis"} glimpse(arbuthnot)
```

We can see that there are 82 observations and 3 variables in this dataset. The variable names are `year`, `boys`, and `girls`. At this point, you might notice that many of the commands in R look a lot like functions from math class; that is, invoking R commands means supplying a function with some number of arguments. The `glimpse` command, for example, took a single argument, the name of a data frame.

## Some Exploration

Let's start to examine the data a little more closely. We can access the data in a single column of a data frame separately using a command like

```
arbuthnot$boys
```

This command will only show the number of boys baptized each year. The dollar sign basically says “go to the data frame that comes before me, and find the variable that comes after me”.

1. What command would you use to extract just the counts of girls baptized? Try it!

```
{r echo=TRUE, results='hide'} arbuthnot$girls
```

Notice that the way R has printed these data is different. When we looked at the complete data frame, we saw 82 rows, one on each line of the display. These data are no longer structured in a table with other variables, so they are displayed one right after another. Objects that print out in this way are called *vectors*; they represent a set of numbers. R has added numbers in [brackets] along the left side of the printout to indicate locations within the vector. For example, 5218 follows [1], indicating that 5218 is the first entry in the vector. And if [43] starts a line, then that would mean the first number on that line would represent the 43rd entry in the vector.