Lab 1 - Intro to R and RStudio

Team Tabito, Litzy, Sodjine, Avelardo

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Lab report

```
source("http://www.openintro.org/stat/data/arbuthnot.R")
source("http://www.openintro.org/stat/data/present.R")
```

Load data: (Hint, the `source` command from the lab)

```
arbuthnot$girls
```

Exercise 1:

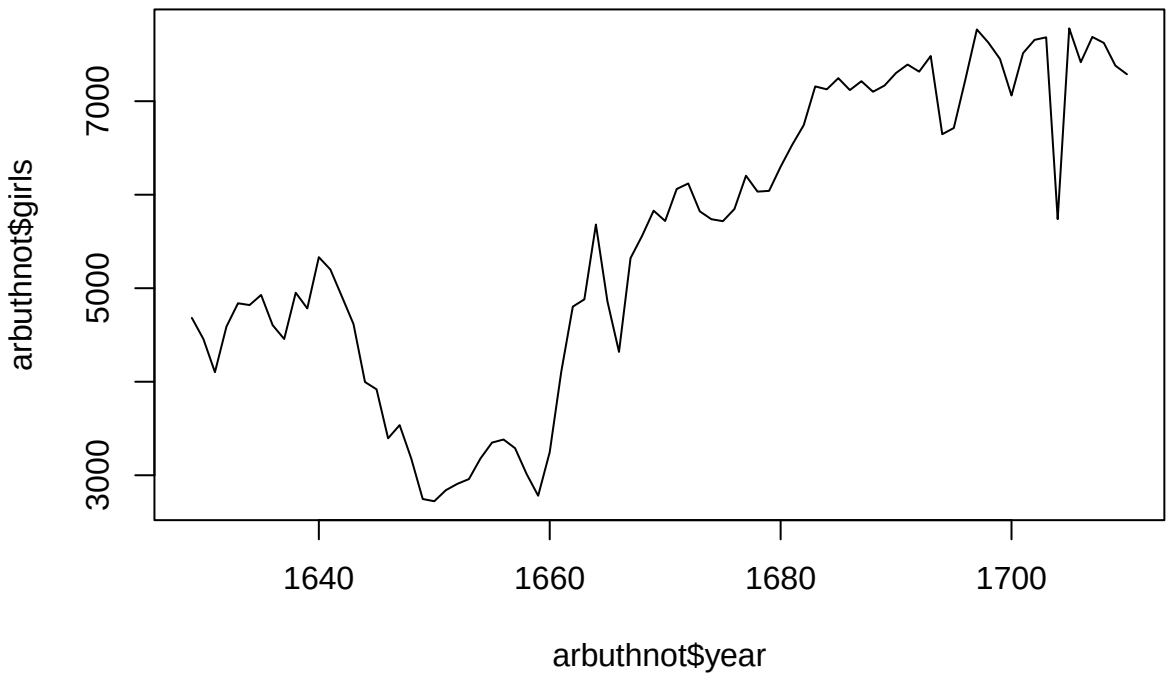
```
##  [1] 4683 4457 4102 4590 4839 4820 4928 4605 4457 4952 4784 5332 5200 4910 4617
## [16] 3997 3919 3395 3536 3181 2746 2722 2840 2908 2959 3179 3349 3382 3289 3013
## [31] 2781 3247 4107 4803 4881 5681 4858 4319 5322 5560 5829 5719 6061 6120 5822
## [46] 5738 5717 5847 6203 6033 6041 6299 6533 6744 7158 7127 7246 7119 7214 7101
## [61] 7167 7302 7392 7316 7483 6647 6713 7229 7767 7626 7452 7061 7514 7656 7683
## [76] 5738 7779 7417 7687 7623 7380 7288
```

```
"There is a general increase of girls being baptized over the years.
However, we can see that there was a significant decline between 1640
to 1660 before returning to its general linear pattern of increasing."
```

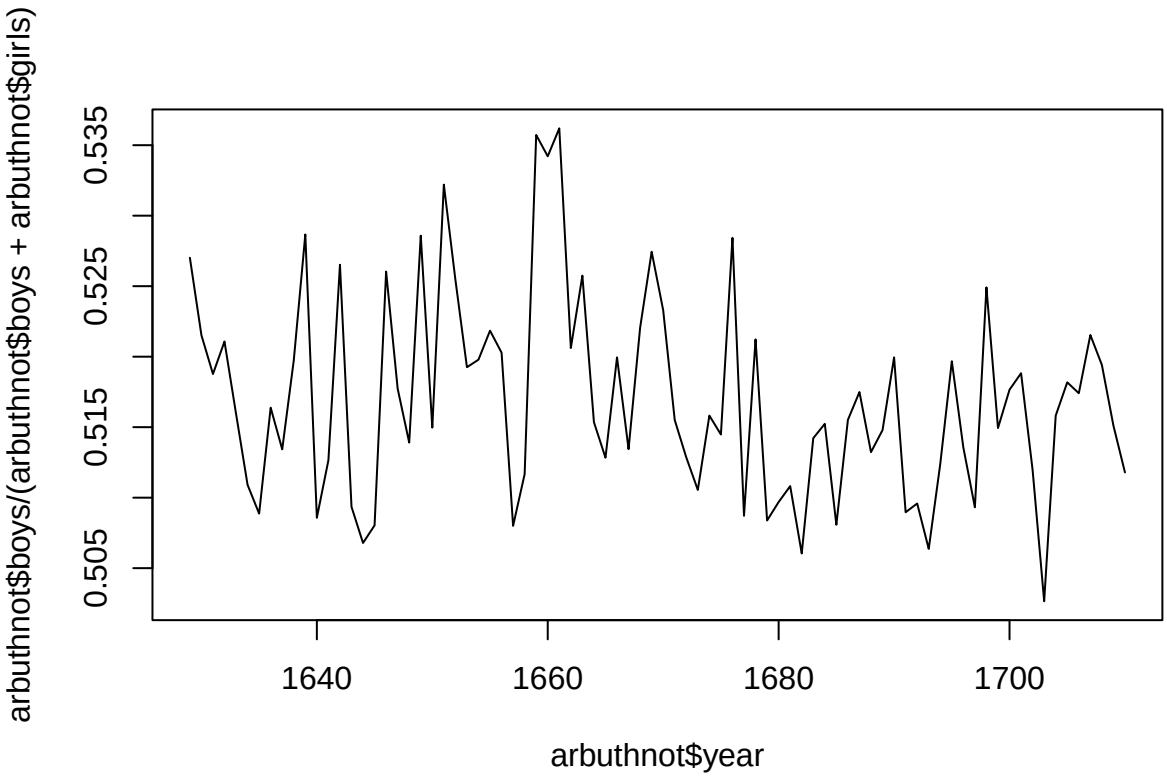
Exercise 2:

```
## [1] "There is a general increase of girls being baptized over the years. \nHowever, we can see that
```

```
plot(x = arbuthnot$year, y = arbuthnot$girls, type = "l")
```




```
plot(arbuthnot$year, arbuthnot$boys / (arbuthnot$boys + arbuthnot$girls), type = "l")
```



Exercise 3:

On your own:

```
"The years included in this data set is from 1940 to 2002.
The column names from the left are year, boys, and girls."
```

1:

```
## [1] "The years included in this data set is from 1940 to 2002. \nThe column names from the left are y
```

```
present$year
```

```
##  [1] 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954
## [16] 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969
## [31] 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984
## [46] 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999
## [61] 2000 2001 2002
```

```
"Compared to the previous data set, the sample size has significantly increased."
```

2:

```
## [1] "Compared to the previous data set, the sample size has significantly increased."
```

```
arbuthnot$boys + arbuthnot$girls
```

```
##  [1]  9901  9315  8524  9584  9997  9855 10034  9522  9160 10311 10150 10850
## [13] 10670 10370  9410  8104  7966  7163  7332  6544  5825  5612  6071  6128
## [25]  6155  6620  7004  7050  6685  6170  5990  6971  8855 10019 10292 11722
## [37]  9972  8997 10938 11633 12335 11997 12510 12563 11895 11851 11775 12399
## [49] 12626 12601 12288 12847 13355 13653 14735 14702 14730 14694 14951 14588
## [61] 14771 15211 15054 14918 15159 13632 13976 14861 15829 16052 15363 14639
## [73] 15616 15687 15448 11851 16145 15369 16066 15862 15220 14928
```

```
present$boys + present$girls
```

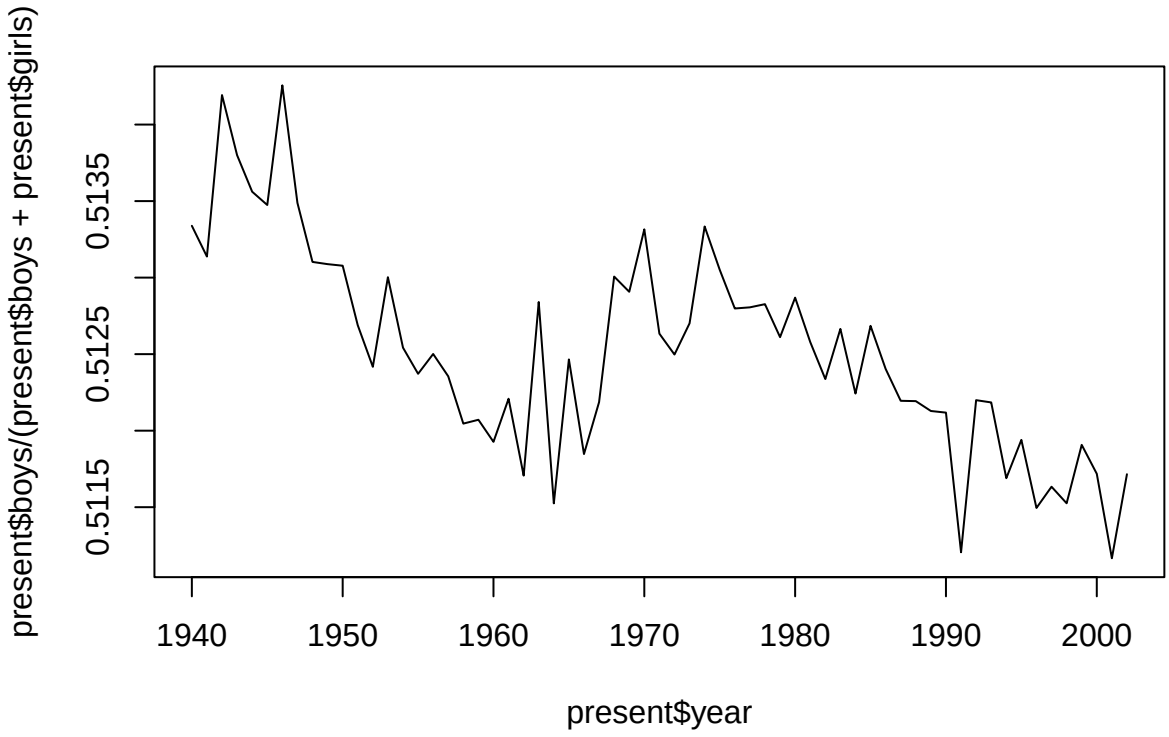
```
##  [1] 2360399 2513427 2808996 2936860 2794800 2735456 3288672 3699940 3535068
## [10] 3559529 3554149 3750850 3846986 3902120 4017362 4047295 4163090 4254784
## [19] 4203812 4244796 4257850 4268326 4167362 4098020 4027490 3760358 3606274
## [28] 3520959 3501564 3600206 3731386 3555970 3258411 3136965 3159958 3144198
## [37] 3167788 3326632 3333279 3494398 3612258 3629238 3680537 3638933 3669141
## [46] 3760561 3756547 3809394 3909510 4040958 4158212 4110907 4065014 4000240
## [55] 3952767 3899589 3891494 3880894 3941553 3959417 4058814 4025933 4021726
```

```
"Arbuthnot's observation still stands but if the decreasing trend continues, it may change."
```

3:

```
## [1] "Arbuthnot's observation still stands but if the decreasing trend continues, it may change."
```

```
plot(present$year, present$boys / (present$boys + present$girls), type = "l")
```




```
"The most babies born in one year was 4268326 babies in the year 1961."
```

4:

```
## [1] "The most babies born in one year was 4268326 babies in the year 1961."
```

```
max(present$boys + present$girls)
```

```
## [1] 4268326
```

```
present$year[which.max(present$boys + present$girls)]
```

```
## [1] 1961
```

Teamwork report

Team member	Attendance	Author	Contribution %
Tabito Sakamoto	Yes / No	Yes / No	25%
Name of member 2	Yes / No	Yes / No	25%
Name of member 3	Yes / No	Yes / No	25%
Name of member 4	Yes / No	Yes / No	25%
Total			100%