IS606 Lab 0

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Question 1:

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

```
##  [1] 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953
## [15] 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967
## [29] 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981
## [43] 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995
## [57] 1996 1997 1998 1999 2000 2001 2002
```

```r
dim(present)
```

```
## [1] 63  3
```

```r
names(present)
```

```
## [1] "year"  "boys"  "girls"
```

Question 2:

```r
mean(present$boys)/mean(arbuthnot$boys)
```

```
## [1] 319.2092
```

```r
mean(present$girls)/mean(arbuthnot$girls)
```

```
## [1] 324.1246
```

The values in the *present* dataframe are on average 320x greater than the valuesi n the *arbuthnot* dataframe and, therefore, these are not on the same scale.

Question 3:

First make both plots with the same scale on Y axis to allow direct comparison between plots:

```r
plot(x = arbuthnot$year, y = arbuthnot$boys/arbuthnot$girls, type = "l", ylim = c(1,1.20), xlab = "Year
title("Arbuthnot Boy/Girl Ratio")
```

Arbuthnot Boy/Girl Ratio
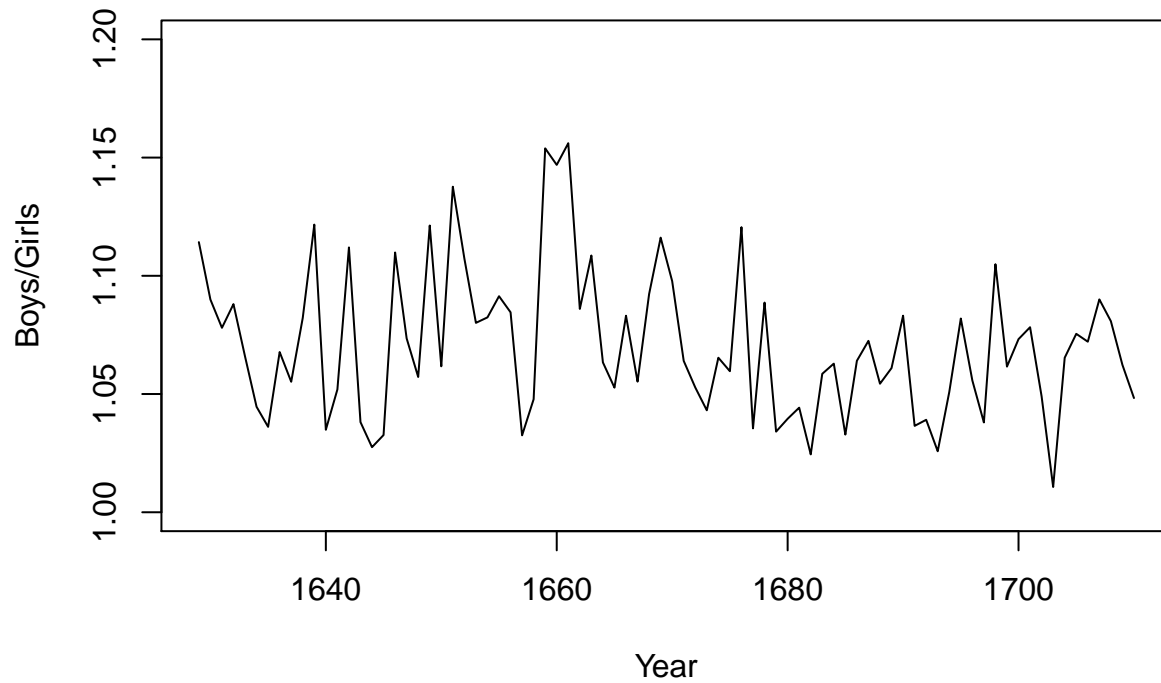

```
plot(x = present$year, y = present$boys/present$girls, type = "l", ylim=c(1,1.20), xlab = "Year", ylab =
title("Present Boy/Girl Ratio")
```

Present Boy/Girl Ratio
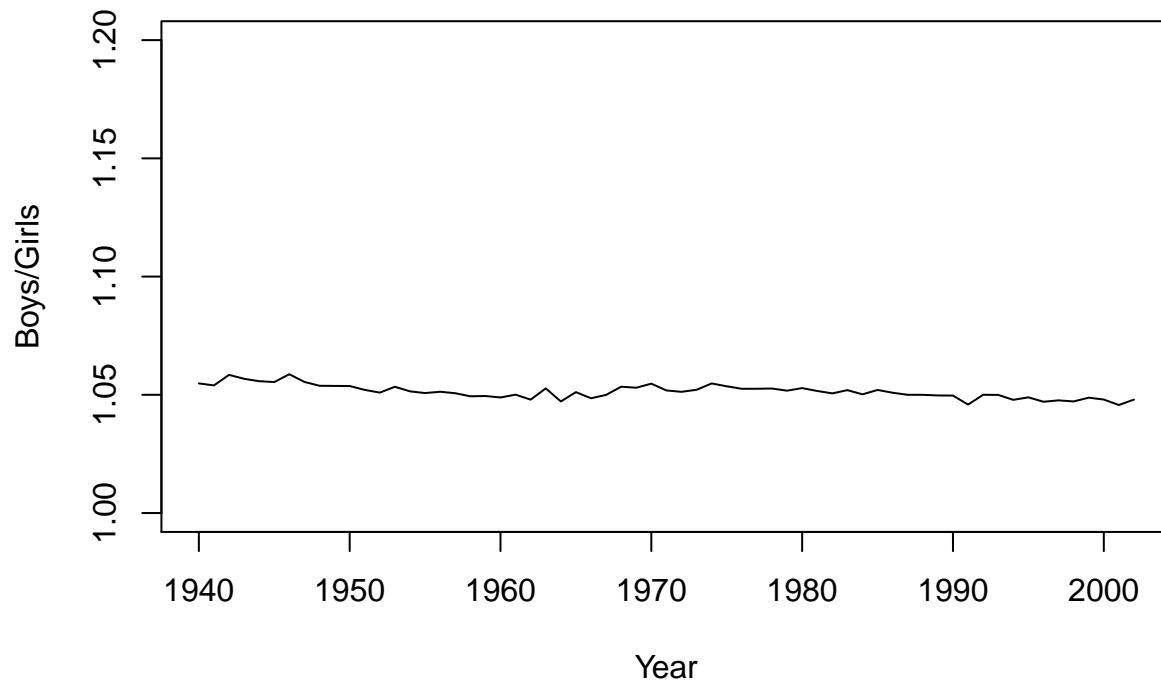
While there is much less variance in the USA in the birth ratio of boys to girls, it can be seen that that this ratio is stable around 1.05 and therefore boys are, in fact, born in greater proportion.

Question 4:

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

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

Total births were highest in 1961.