Hao-0

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Lab 0 setup:

```
source('more/arbuthnot.R')
```

Exercise 1: What command would you use to extract just the counts of girls baptized?

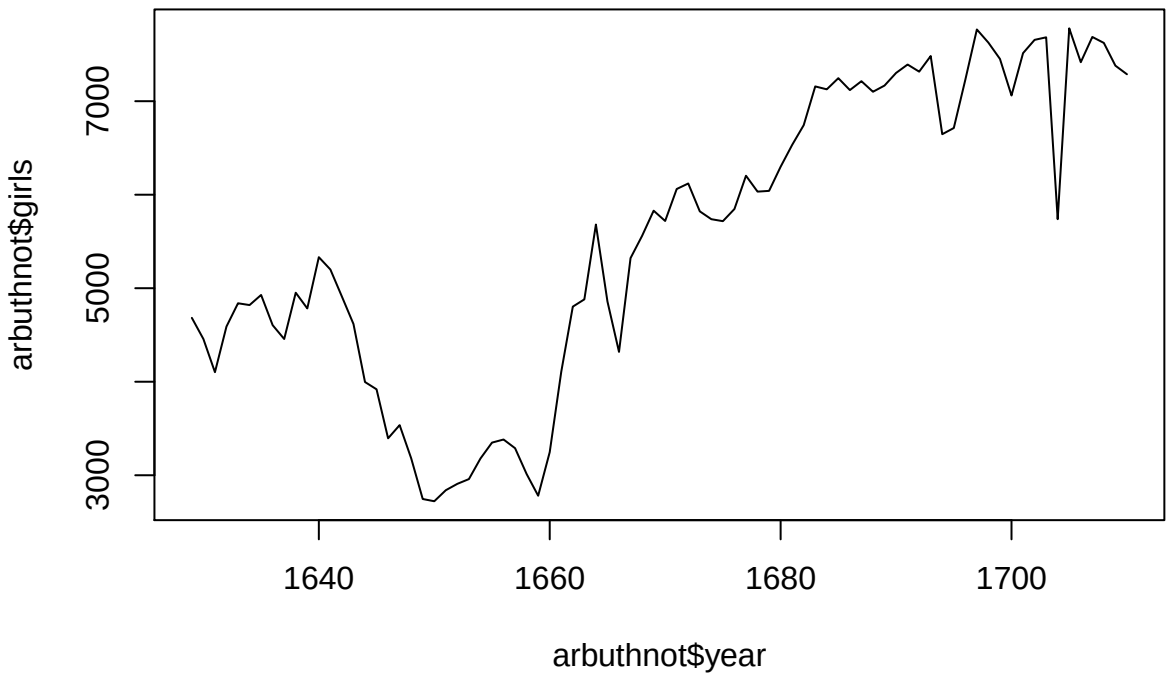
```
arbuthnot$girls
```

```
##  [1] 4683 4457 4102 4590 4839 4820 4928 4605 4457 4952 4784 5332 5200 4910
## [15] 4617 3997 3919 3395 3536 3181 2746 2722 2840 2908 2959 3179 3349 3382
## [29] 3289 3013 2781 3247 4107 4803 4881 5681 4858 4319 5322 5560 5829 5719
## [43] 6061 6120 5822 5738 5717 5847 6203 6033 6041 6299 6533 6744 7158 7127
## [57] 7246 7119 7214 7101 7167 7302 7392 7316 7483 6647 6713 7229 7767 7626
## [71] 7452 7061 7514 7656 7683 5738 7779 7417 7687 7623 7380 7288
```

Exercise 2: Is there an apparent trend in the number of girls baptized over the years? How would you describe it?

As illustrated in the chart below, the number of girls baptized appears to increase with time, except for a sharp drop around 1650.

```
plot(arbuthnot$year, arbuthnot$girls, type='l')
```



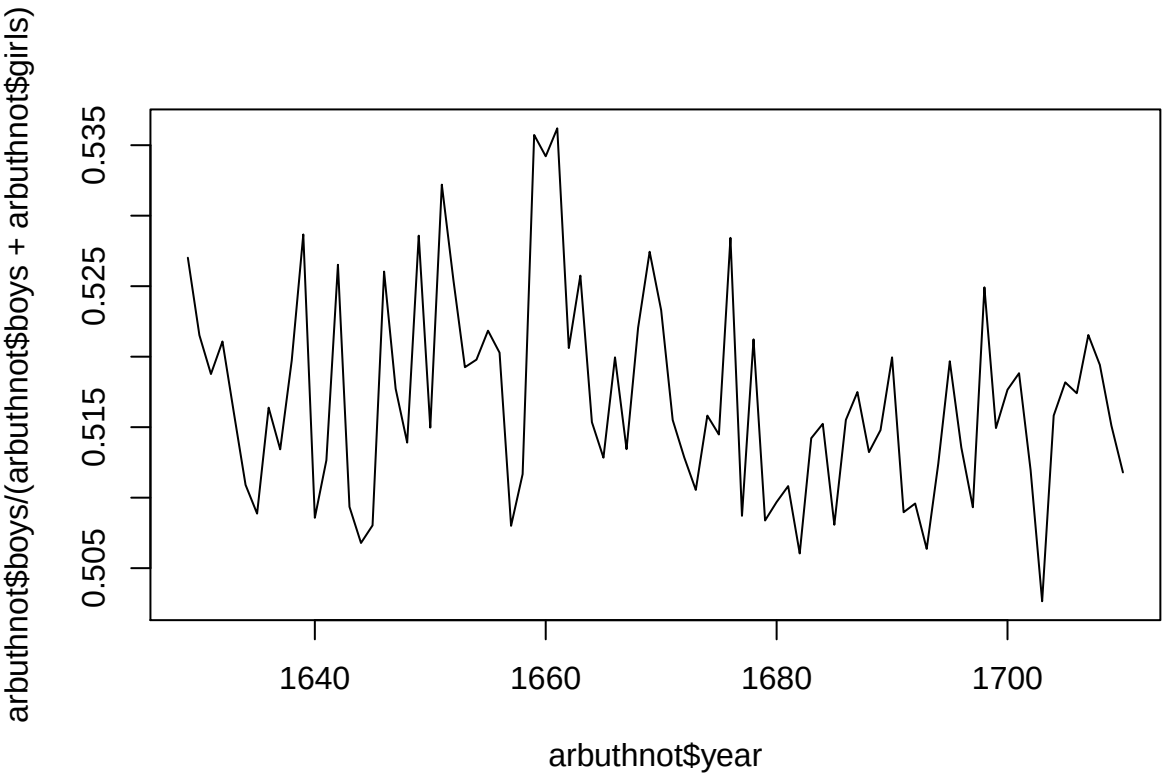
Exercise 3: Now, make a plot of the proportion of boys over time. What do you see?

While the proportion oscillates between a minimum of 0.5027 and maximum of 0.5362 with a mean of 0.5210, it's interesting that the ratio of boys never drops below 50% in any year.

```
summary(arbuthnot$boys / (arbuthnot$boys + arbuthnot$girls))
```

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.5027  0.5118  0.5157  0.5170  0.5210  0.5362
```

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


arbuthnot$boys/(arbuthnot$boys + arbuthnot$girls)
0.505
0.515
0.525
0.535
1640
1660
1680
1700
arbuthnot$year