

Lab1.2

AUTHOR
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Worked with Rheegan King up to question 4.

```
library(tidyverse)

# Attaching core tidyverse packages
dplyr      1.1.2    readr      2.1.4
forcats    1.0.0    stringr    1.5.0
ggplot2     3.4.3    tibble     3.2.1
lubridate  1.9.2    tidyr      1.3.0
purrr       1.0.2

# Conflicts
dplyr::filter() masks stats::filter()
dplyr::lag()    masks stats::lag()
i Use the conflicted package (<http://conflicted.r-lib.org/>) to force all conflicts to

library(stat20data)
glimpse(arbuthnot)

Rows: 82
Columns: 3
$ year <int> 1629, 1630, 1631, 1632, 1633, 1634, 1635, 1636, 1637, 1638, 1639...
$ boys <int> 5218, 4858, 4422, 4994, 5158, 5035, 5106, 4917, 4703, 5359, 5366...
$ girls <int> 4683, 4457, 4102, 4590, 4839, 4820, 4928, 4605, 4457, 4952, 4784...
```

Question 1

From year 1629 to 1710

Question 2

```
q2_total_children <- mutate(data.frame(arbuthnot),total_birth = boys + girls)
arrange(q2_total_children, desc(total_birth))

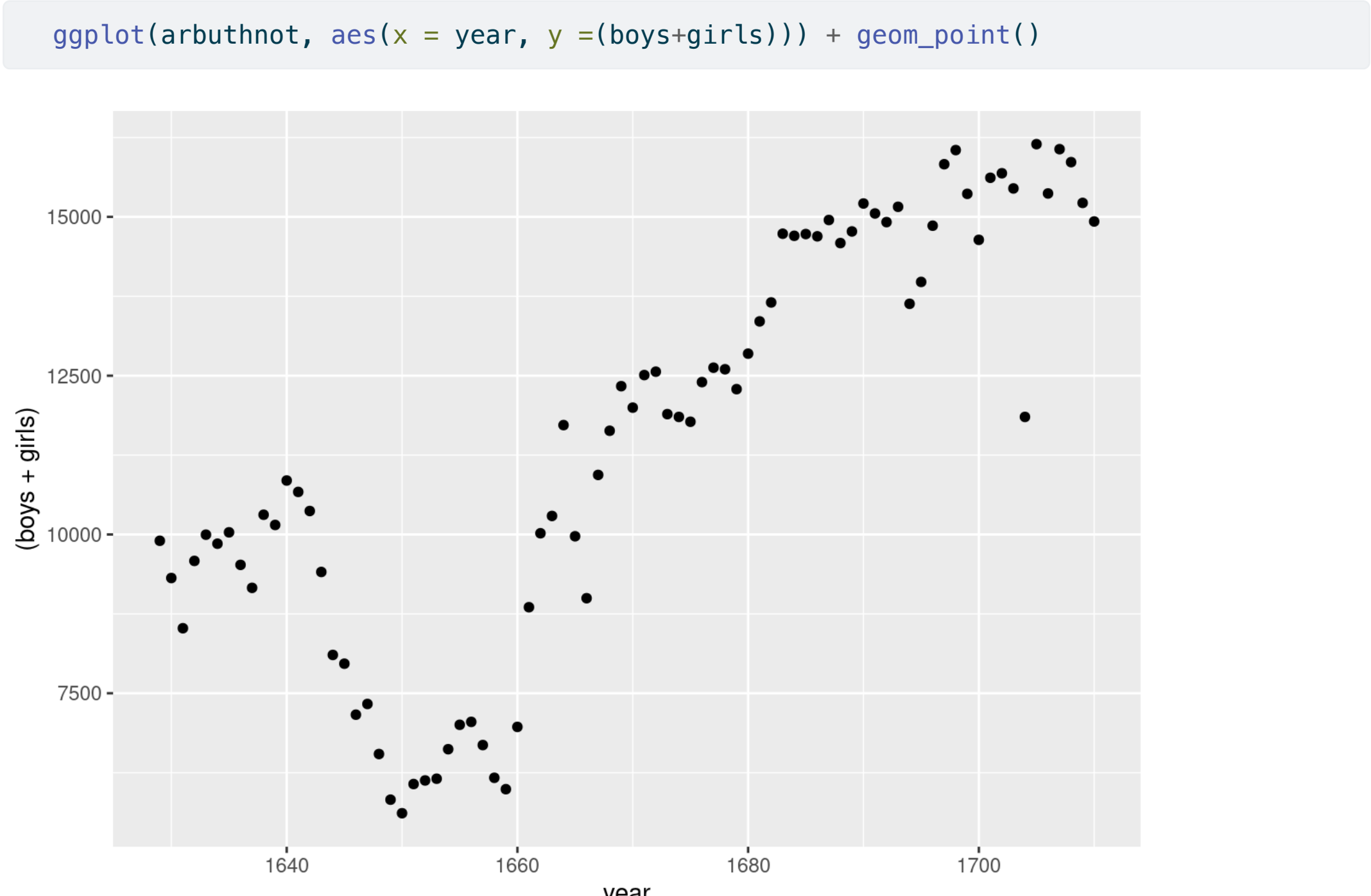
  year boys girls total_birth
1  1705 8366  7779      16145
2  1707 8379  7687      16066
3  1698 8426  7626      16052
4  1708 8239  7623      15862
5  1697 8062  7767      15829
6  1702 8031  7656      15687
7  1701 8102  7514      15616
8  1703 7765  7683      15448
9  1706 7952  7417      15369
10 1699 7911  7452      15363
11 1709 7840  7380      15220
12 1690 7909  7302      15211
13 1693 7676  7483      15159
14 1691 7662  7392      15054
15 1687 7737  7214      14951
16 1710 7640  7288      14928
17 1692 7602  7316      14918
18 1696 7632  7229      14861
19 1689 7604  7167      14771
20 1683 7577  7158      14735
21 1685 7484  7246      14730
22 1684 7575  7127      14702
23 1686 7575  7119      14694
24 1700 7578  7061      14639
25 1688 7487  7101      14588
26 1695 7263  6713      13976
27 1682 6909  6744      13653
28 1694 6985  6647      13632
29 1681 6822  6533      13355
30 1680 6548  6299      12847
31 1677 6423  6203      12626
32 1678 6568  6033      12601
33 1672 6443  6120      12563
34 1671 6449  6061      12510
35 1676 6552  5847      12399
36 1669 6506  5829      12335
37 1679 6247  6041      12288
38 1670 6278  5719      11997
39 1673 6073  5822      11895
40 1674 6113  5738      11851
41 1704 6113  5738      11851
42 1675 6058  5717      11775
43 1664 6041  5681      11722
44 1668 6073  5560      11633
45 1667 5616  5322      10938
46 1640 5518  5332      10850
47 1641 5470  5200      10670
48 1642 5460  4910      10370
49 1638 5359  4952      10311
50 1663 5411  4881      10292
51 1639 5366  4784      10150
52 1635 5106  4928      10034
53 1662 5216  4803      10019
54 1633 5158  4839      9997
55 1665 5114  4858      9972
56 1629 5218  4683      9901
57 1634 5035  4820      9855
58 1632 4994  4590      9584
59 1636 4917  4605      9522
60 1643 4793  4617      9410
61 1630 4858  4457      9315
62 1637 4703  4457      9160
63 1666 4678  4319      8997
64 1661 4748  4107      8855
65 1631 4422  4102      8524
66 1644 4107  3997      8104
67 1645 4047  3919      7966
68 1647 3796  3536      7332
69 1646 3768  3395      7163
70 1656 3668  3382      7050
71 1655 3655  3349      7004
72 1660 3724  3247      6971
73 1657 3396  3289      6685
74 1654 3441  3179      6620
75 1648 3363  3181      6544
76 1658 3157  3013      6170
77 1653 3196  2959      6155
78 1652 3220  2908      6128
79 1651 3231  2840      6071
80 1659 3209  2781      5990
81 1649 3079  2746      5825
82 1650 2890  2722      5612
```

The most children where christened during 1705.

Question 3

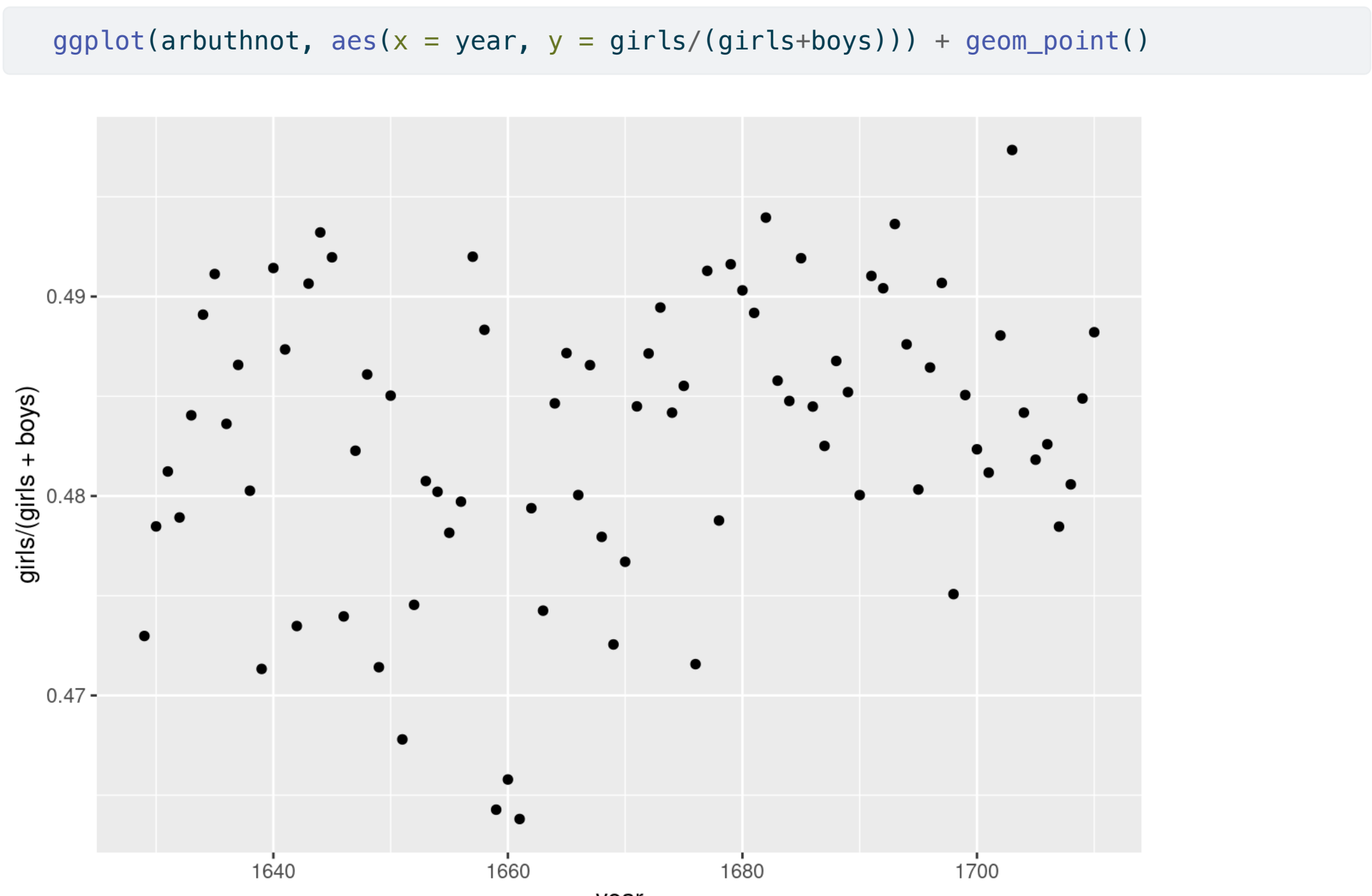
The proportion of girls christened in 1700 is 7578/14639

Question 4



There is a positive trend with a concave dip in 1650.

Question 5



The proportion of the girls christined is slightly under 50%.

Question 6

```
glimpse(present)

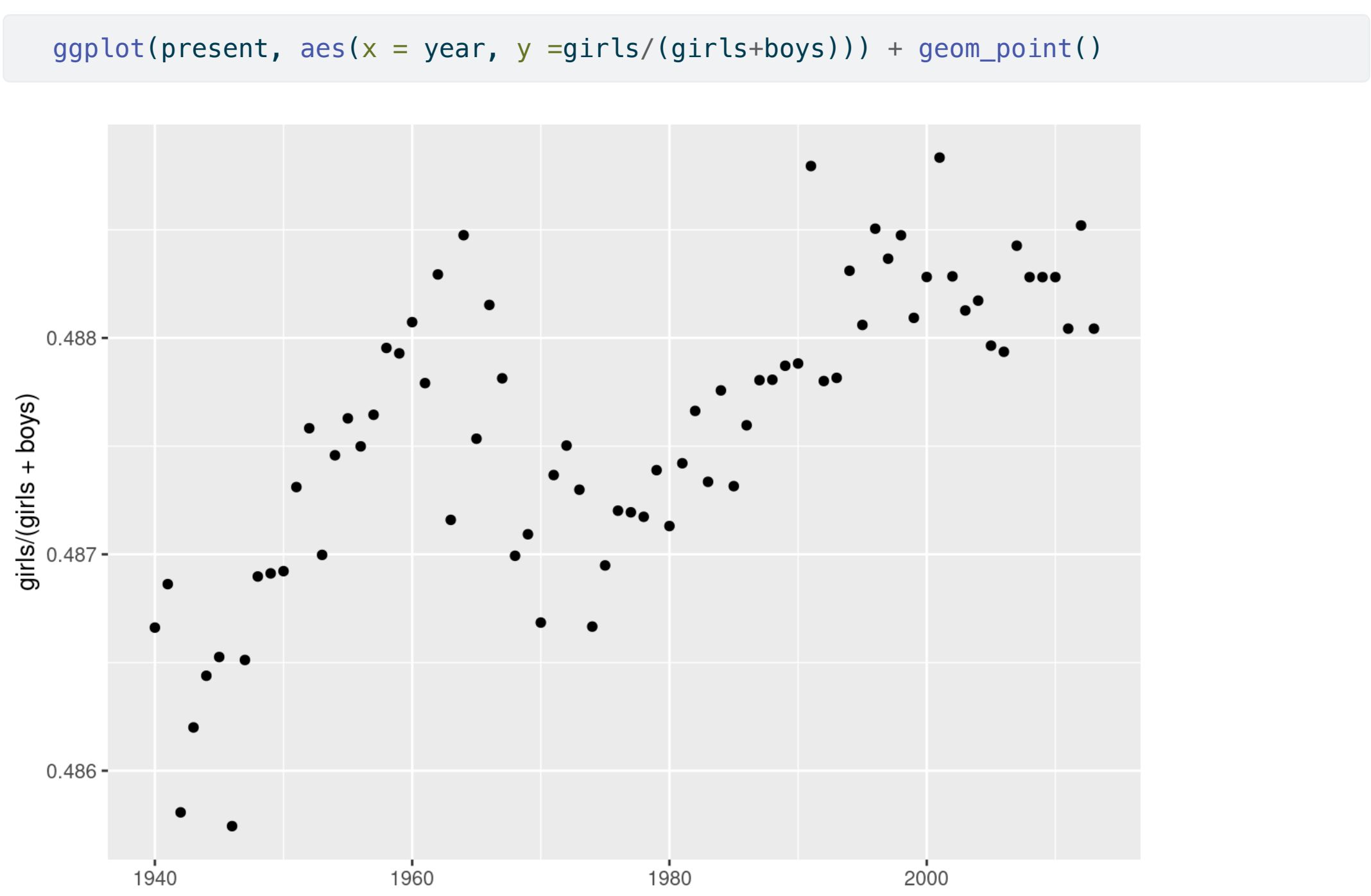
Rows: 74
Columns: 3
$ year <dbl> 1940, 1941, 1942, 1943, 1944, 1945, 1946, 1947, 1948, 1949, 1950...
$ boys <dbl> 1211684, 1289734, 1444365, 1508959, 1435301, 1404587, 1691220, 1...
$ girls <dbl> 1148715, 1223693, 1364631, 1427901, 1359499, 1330869, 1597452, 1...
```

The time frame in 1940 to 2014

Question 7

The magnitude of the the “present” data set is much larger than the “arbuthnot” data set. Theres around 150 times more kids recorded for the present set.

Question 8



Theres a positive trend where there's constant rising in the proportion of girls being born from around 47% to almost 50%.

Question 9

The proportion of boys to girls being christened is fairly even with boys having a small increase in both data sets. My reservations include the fact that range of the years between data sets isn't similar. Also present processes a much larger amount of christenings than arbuthnot does.