**Dr. Arbthnot’s data file**

**Q 1 What command would you use to extract just the counts of girls baptized?**

sum(x$girls)

**Q 2 Display the baptism records of a) girls, b) boys, c) all children, d) the ratio of boys and girls and e) the proportion of boys of all children over the observation years.**

boys<-(x$boys)

girls<-(x$girls)

proportion<-(x$boys/x$girls)

proportion1<-(x$boys/(x$girls+x$boys))

*Baptism records of boys*

[1] 1211684 1289734 1444365 1508959 1435301 1404587 1691220 1899876 1813852 1826352 1823555

[12] 1923020 1971262 2001798 2059068 2073719 2133588 2179960 2152546 2173638 2179708 2186274

[23] 2132466 2101632 2060162 1927054 1845862 1803388 1796326 1846572 1915378 1822910 1669927

[34] 1608326 1622114 1613135 1624436 1705916 1709394 1791267 1852616 1860272 1885676 1865553

[45] 1879490 1927983 1924868 1951153 2002424 2069490 2129495 2101518 2082097 2048861 2022589

[56] 1996355 1990480 1985596 2016205 2026854 2076969 2057922 2057979

*Baptism records of girls*

[1] 1148715 1223693 1364631 1427901 1359499 1330869 1597452 1800064 1721216 1733177 1730594

[12] 1827830 1875724 1900322 1958294 1973576 2029502 2074824 2051266 2071158 2078142 2082052

[23] 2034896 1996388 1967328 1833304 1760412 1717571 1705238 1753634 1816008 1733060 1588484

[34] 1528639 1537844 1531063 1543352 1620716 1623885 1703131 1759642 1768966 1794861 1773380

[45] 1789651 1832578 1831679 1858241 1907086 1971468 2028717 2009389 1982917 1951379 1930178

[56] 1903234 1901014 1895298 1925348 1932563 1981845 1968011 1963747

*The ratio of boys and girls*

[1] 1.054817 1.053969 1.058429 1.056767 1.055757 1.055391 1.058698 1.055449 1.053820 1.053760

[11] 1.053716 1.052078 1.050934 1.053399 1.051460 1.050742 1.051286 1.050672 1.049374 1.049480

[21] 1.048873 1.050057 1.047948 1.052717 1.047188 1.051137 1.048540 1.049964 1.053417 1.052997

[31] 1.054719 1.051845 1.051271 1.052129 1.054797 1.053605 1.052538 1.052569 1.052657 1.051749

[41] 1.052837 1.051615 1.050597 1.051976 1.050199 1.052061 1.050876 1.050000 1.049991 1.049720

[51] 1.049676 1.045849 1.050017 1.049955 1.047877 1.048928 1.047062 1.047643 1.047190 1.048791

[61] 1.047998 1.045686 1.047986

*The proportion of boys of all children over the observation years*

[1] 0.5133386 0.5131376 0.5141926 0.5138001 0.5135613 0.5134745 0.5142562 0.5134883 0.5131024

[10] 0.5130881 0.5130778 0.5126891 0.5124173 0.5130027 0.5125423 0.5123716 0.5125011 0.5123550

[19] 0.5120462 0.5120713 0.5119269 0.5122088 0.5117064 0.5128408 0.5115250 0.5124656 0.5118474

[28] 0.5121866 0.5130068 0.5129073 0.5133154 0.5126337 0.5124973 0.5127013 0.5133340 0.5130513

[37] 0.5127982 0.5128057 0.5128266 0.5126110 0.5128692 0.5125792 0.5123372 0.5126648 0.5122425

[46] 0.5126849 0.5124035 0.5121951 0.5121931 0.5121286 0.5121179 0.5112054 0.5121992 0.5121845

[55] 0.5116894 0.5119398 0.5114951 0.5116337 0.5115255 0.5119072 0.5117182 0.5111665 0.5117154

**Present data file**

**Q 1 What does the file contain? What data formats are in it? What years does it contain? How do the counts compare? How do the proportions compare?**

*What does the file contain?*

The file contain data about the number of boys and girls born from 1940 to 2002.

*What data formats are in it?*

*The data format is in list format*

*What years does it contain? How do the counts compare? How do the proportions compare?*

Used function summary(present)

## year boys girls Total

## Min. :1940 Min. :1211684 Min. :1148715 Min. :2360399

## 1st Qu.:1956 1st Qu.:1799857 1st Qu.:1711404 1st Qu.:3511262

## Median :1971 Median :1924868 Median :1831679 Median :3756547

## Mean :1971 Mean :1885600 Mean :1793915 Mean :3679515

## 3rd Qu.:1986 3rd Qu.:2058524 3rd Qu.:1965538 3rd Qu.:4023830

## Max. :2002 Max. :2186274 Max. :2082052 Max. :4268326

**Q 2 Display the records of a) girls, b) boys, c) all children, d) the ratio of boys and girls and e) the proportion of boys of all children over the observation years.**

Boys<-(x$boys)

girls<-(x$girls)

proportion<-(x$boys/x$girls)

proportion1<-(x$boys/(x$girls+x$boys))

*Records of boys*

[1] 1211684 1289734 1444365 1508959 1435301 1404587 1691220 1899876 1813852 1826352 1823555

[12] 1923020 1971262 2001798 2059068 2073719 2133588 2179960 2152546 2173638 2179708 2186274

[23] 2132466 2101632 2060162 1927054 1845862 1803388 1796326 1846572 1915378 1822910 1669927

[34] 1608326 1622114 1613135 1624436 1705916 1709394 1791267 1852616 1860272 1885676 1865553

[45] 1879490 1927983 1924868 1951153 2002424 2069490 2129495 2101518 2082097 2048861 2022589

[56] 1996355 1990480 1985596 2016205 2026854 2076969 2057922 2057979

*Record of girls*

[1] 1148715 1223693 1364631 1427901 1359499 1330869 1597452 1800064 1721216 1733177 1730594

[12] 1827830 1875724 1900322 1958294 1973576 2029502 2074824 2051266 2071158 2078142 2082052

[23] 2034896 1996388 1967328 1833304 1760412 1717571 1705238 1753634 1816008 1733060 1588484

[34] 1528639 1537844 1531063 1543352 1620716 1623885 1703131 1759642 1768966 1794861 1773380

[45] 1789651 1832578 1831679 1858241 1907086 1971468 2028717 2009389 1982917 1951379 1930178

[56] 1903234 1901014 1895298 1925348 1932563 1981845 1968011 1963747

*The ratio of boys and girls*

[1] 1.054817 1.053969 1.058429 1.056767 1.055757 1.055391 1.058698 1.055449 1.053820 1.053760

[11] 1.053716 1.052078 1.050934 1.053399 1.051460 1.050742 1.051286 1.050672 1.049374 1.049480

[21] 1.048873 1.050057 1.047948 1.052717 1.047188 1.051137 1.048540 1.049964 1.053417 1.052997

[31] 1.054719 1.051845 1.051271 1.052129 1.054797 1.053605 1.052538 1.052569 1.052657 1.051749

[41] 1.052837 1.051615 1.050597 1.051976 1.050199 1.052061 1.050876 1.050000 1.049991 1.049720

[51] 1.049676 1.045849 1.050017 1.049955 1.047877 1.048928 1.047062 1.047643 1.047190 1.048791

[61] 1.047998 1.045686 1.047986

*The proportion of boys of all children over the observation years*

[1] 0.5133386 0.5131376 0.5141926 0.5138001 0.5135613 0.5134745 0.5142562 0.5134883 0.5131024

[10] 0.5130881 0.5130778 0.5126891 0.5124173 0.5130027 0.5125423 0.5123716 0.5125011 0.5123550

[19] 0.5120462 0.5120713 0.5119269 0.5122088 0.5117064 0.5128408 0.5115250 0.5124656 0.5118474

[28] 0.5121866 0.5130068 0.5129073 0.5133154 0.5126337 0.5124973 0.5127013 0.5133340 0.5130513

[37] 0.5127982 0.5128057 0.5128266 0.5126110 0.5128692 0.5125792 0.5123372 0.5126648 0.5122425

[46] 0.5126849 0.5124035 0.5121951 0.5121931 0.5121286 0.5121179 0.5112054 0.5121992 0.5121845

[55] 0.5116894 0.5119398 0.5114951 0.5116337 0.5115255 0.5119072 0.5117182 0.5111665 0.5117154

**Q3 Year with highest number of births in US**

max(x$boys+x$girls)

x[which.max(x$boys+x$girls),]

year boys girls

1961 2186274 2082052