Temporal Resolution

Kyra Bankhead

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In this markdown I will:

1. Divide the data into different resolutions.

2. Calculate null and empirical Whittaker Dissimilarity Index between time period lengths.

Read in Data and Create a Function to Count the Number of Individuals in Disignated Time Resolution

```r
# Set working directory here
setwd("C:/Users/bankh/My_Repos/Dolphins/data")

## load all necessary packages
library(vegan)
library(sfsmisc, verbose=F)
# Run multiple cores for faster computing
require(doParallel)
require(parallel)

# Read in file and add months
sample_data <- read.csv("sample_data.csv")

# Get all unique Code values in the entire sample_data
all_codes <- unique(sample_data$Code)

# Create a function that counts the IDs in each element
count_instances <- function(df) {
  code_counts <- table(df$Code)
  code_counts <- code_counts[match(all_codes, names(code_counts))] # Add codes to table even if they ar
  code_counts[is.na(code_counts)] <- 0 # Replace NAs with 0
  return(code_counts)
}
```

Divide Resolutions from Lowest to Highest Scale

```r
# ------------------- 22 sets of 1 year increments---------------------------
# Make a list of only 1 year per dataframe
list_years <- split(sample_data, sample_data$Year)
```

```r
# Apply the count_instances function to each year
instances_per_year <- lapply(list_years, count_instances)
# Convert the list of counts to a data frame
p1y <- do.call(rbind, instances_per_year)
p1y
```

```
##      FB41 FB05 FB36 FB38 FB55 FB96 FB98 F108 F153 FB15 FB23 FB78 FB93 F155 FB01
## 1993  17   26   35   35   28   13   12   10   12   21   20   10   20   31   29
## 1994  33   21   39   42   30   32   27   18   23   16   24   38   16   25   23
## 1995  34   39   53   63   42   18   11   20   18   15   31   26   19   57   67
## 1996   0   49   44   46   46    7    0    2   12   19   13   18   28   88   50
## 1997   0   35   41   41   31    8    0   16   14   36    0   31   25   57   34
## 1998   0   21   23   23   24   13    0    6   12   24    0   20   20   29   25
## 1999   0   24   28   26   32   10    0   11   21   35    0   18   30   27   26
## 2000   0   65   41    0   82   16    0   14   23   42    0   27   69   61   71
## 2001   0   53   29    0   71    8    0   16    9   37    0   44   40   57   64
## 2002   0   26   13    0   29    0    0   14   18   28    0    9   33   35   28
## 2003   0   32   16    0   47    0    0    9   10   25    0   18   27   38    9
## 2004   0   16   28    0   18    0    0   14   12   36    0   16   23   18    0
## 2005   0   29   30    0   37    0    0   10    8   21    0   29   10   28    0
## 2006   0   24   16    0   24    0    0   13   15   27    0   10   22   36    0
## 2007   0   19   35    0   30    0    0   16   12   55    0   45   52   80    0
## 2008   0    6   23    0   49    0    0   13   29   56    0   35   35   41    0
## 2009   0    7   31    0   30    0    0   20   16   25    0   33   16   20    0
## 2010   0    0   13    0   13    0    0    6   12   11    0   23   24   30    0
## 2011   0    0   12    0   19    0    0   39   20   22    0   31   17   25    0
## 2012   0    0    0    0   27    0    0   12   25   28    0   18   28   30    0
## 2013   0    0    0    0   52    0    0    9   19   21    0   35    0   44    0
## 2014   0    0    0    0   28    0    0   16   23   23    0   17    0   27    0
##      FB43 FB92 F118 F122 FB29 FB51 FB54 FB71 FB90 F100 F119 FB14 FB27 FB53 FB57
## 1993  31   39   45   44   21   23   45   23   44   12   14   19   17   48   47
## 1994  22   32   58   60   22    0   58   26   61   24   40   42   18    0   27
## 1995  18   43   83   67   30    0   86   35   69   39   52   46   39    0   31
## 1996  20   50   62   38   37    0   85   26   91   25   50   24   40    0   45
## 1997  24   49   47    0   29    0   66    0   45   31   52   33   49    0    0
## 1998  14   25   25    0   13    0   56    0   38   20   40   22   14    0    0
## 1999  14   20   34    0    0    0   18    0   31   15   43   28   18    0    0
## 2000  22   54   61    0    0    0   73    0   76   49   49  170   47    0    0
## 2001  33   60   66    0    0    0   72    0   72   34   53   75   37    0    0
## 2002  24   38   43    0    0    0   35    0   53   21   45   23   31    0    0
## 2003  17   24   34    0    0    0   81    0   69   21   32   26   37    0    0
## 2004  14   27   26    0    0    0   23    0   26   12   16   10   23    0    0
## 2005  12   32   50    0    0    0   37    0   51   35    0    7   23    0    0
## 2006  29   21   32    0    0    0   19    0   58    4    0    9    9    0    0
## 2007  40   71   49    0    0    0   47    0   82    0    0    5   29    0    0
## 2008  44   63   61    0    0    0   39    0   91    0    0    0   32    0    0
## 2009  17   32   35    0    0    0   27    0   28    0    0    0   24    0    0
## 2010  13   24   32    0    0    0   37    0   27    0    0    0   11    0    0
## 2011  21   31   24    0    0    0   16    0   23    0    0    0   18    0    0
## 2012   7   29    3    0    0    0   27    0   23    0    0    0   22    0    0
## 2013   0   27    0    0    0    0   57    0   31    0    0    0   30    0    0
## 2014   0   39    0    0    0    0   28    0   34    0    0    0   32    0    0
##      FB66 FB76 FB94 F112 FB12 FB03 FB19 F106 FB44 FB62 F175 FB10 FB46 FB75 FB79
```

```
## 1993    21    23    24    15    14    17    18    32    30    30    21    26    28    21    23
## 1994    33    33    48    34    30    19     0    29    28    27    35    35    32    35    37
## 1995    33    32    53    21    19    29     0    45    47    52    52    48    43    28    24
## 1996    26    24    30     0    17    44     0    45    31    32    58    54    48    27    57
## 1997    38    38    45     0     0    44     0    52    25     4    60    50    46    25    42
## 1998    18    15    27     0     0    29     0    34    12     0    25    17    17    17    30
## 1999    38    37    30     0     0    26     0    28    10     0    38    24    20    25    40
## 2000    88    91   149     0     0    66     0    47    16     0    66    49    50    62    40
## 2001    70    65    84     0     0    82     0    75    13     0    83    61    59    45    46
## 2002    43    38    31     0     0    51     0    30     7     0    51    30    30    30    28
## 2003    42    37    38     0     0    11     0    24     6     0    53    36    13    37    23
## 2004    21    19    11     0     0     0     0    15     7     0    39    22     0    27    34
## 2005    42    37     0     0     0     0     0    33    20     0    37    28     0    33    44
## 2006    11     0     0     0     0     0     0    21     6     0    36    17     0     3    28
## 2007    36     0     0     0     0     0     0   117    14     0    80    41     0     0    67
## 2008    24     0     0     0     0     0     0     0    16     0    51    26     0     0    77
## 2009    13     0     0     0     0     0     0     0    19     0    34    28     0     0    33
## 2010     8     0     0     0     0     0     0     0    13     0    27    16     0     0    42
## 2011    18     0     0     0     0     0     0     0    13     0    43    15     0     0    45
## 2012    23     0     0     0     0     0     0     0    16     0    49    23     0     0    31
## 2013    10     0     0     0     0     0     0     0    17     0    51    23     0     0    21
## 2014     0     0     0     0     0     0     0     0    22     0    25    16     0     0    29
##       FB60 FB13 F138 FB63 FB07 FB11 F132 FB25 F102 F111 F130 F134 F136 F154 F160
## 1993    11    11    34    36    50    43     5    30     7    20     4    10    11     7     6
## 1994    17    14    35    36    38    40     2    43     3    26     1     4     4     7     1
## 1995     7    23    60    60    67    52     3    38     3    10     2     4     4    20     8
## 1996     8    25    53    52    75    98     5    51     7    51     4     4     5    32    19
## 1997     0    51    33    29    47    69     5    41     5    66     1    19    14    31     6
## 1998     0    33    10     9    28    47     0    14     2    21     0     6     5     3     5
## 1999     0    43    12    10    33    30     0    31     2    19     0     3     4     0     6
## 2000     0    46    30    14    74   102     2    53     6    23     0     4     2     2     2
## 2001     0    53    44    34    68    79     3    19     6    40     2     8     7     4     9
## 2002     0    24    34    32    48    53     0    25     1    19     0     0     0     3     2
## 2003     0    29    32    18    40    37     2    29     2     0     0     2     1     3     5
## 2004     0    24    23    17    27    29     0    26     2     0     0     3     4     8     1
## 2005     0    11    35    27    31    53     0    25     4     0     0     5     4     4     4
## 2006     0    16    27    14    51    44     1    18     4     0     0     6     0     6     3
## 2007     0    22    61    17    50    93     0    34    15     0     0     2     0    16     0
## 2008     0    34    51     7    52    60     1    33     9     0     0     9     0     5     0
## 2009     0     9    34     0    22    33     0    32    10     0     0     7     0     1     0
## 2010     0     0    34     0    29    26     0    23     8     0     0     3     0     1     0
## 2011     0     0    28     0    33    29     0    27     4     0     0     0     0     0     0
## 2012     0     0    31     0    40    32     0    24     8     0     0     0     0     1     0
## 2013     0     0    54     0    25    37     0    30     8     0     0     0     0     4     0
## 2014     0     0    34     0    35    27     0    34     5     0     0     0     0     8     0
##       F162 F200 FB20 FB65 HIQQ POOF FB28 C333 FB09 FB33 ATNA CWM3 NKLN WTMA FB48
## 1993     6     5    12    31     5     2     2    34    32    36     1     5     1     5     7
## 1994     1     0    41    37     4     1     6     0    42    39     1     3     0     3    11
## 1995     7     0    48    69     2     3    14     0    57    37     1     8     3     9     8
## 1996    20     0    39    63     7     4    12     0    55    70     0     3     1     2     8
## 1997     6     0    35    48     2     7    32     0    41    40     0     4     0     0     6
## 1998     4     0    21    17     0     1    19     0    20    29     0     5     0     1     5
## 1999     8     0    20    34     1     0    25     0    15    25     0     8     0     0     9
## 2000     4     6    55    80     4     2    84     0    54    40     0     3     1     0    57
```

```
## 2001    8    1   41   63    8    2   42    0   41   58    0    1    0    0    9
## 2002    2    2   37   41    0    0   29    0   27   31    0    5    1    0    6
## 2003    3    0   41   74    0    1   13    0   43   44    0    2    0    0    9
## 2004    1    2   17   39    2    0    9    0   24   22    0    2    1    0    7
## 2005    2    0   42   32    3    0    9    0   35   45    0    0    0    0    5
## 2006    3    0   24   30    5    1    9    0   31   31    1    3    2    0    7
## 2007    2    0   57   61   13    0   17    0   40   49    5    6    8    0    8
## 2008    3    0   50   83    8    1   23    0   28   43    0    5    1    0    9
## 2009    7    0   36   34   10    0    9    0   11   27    0    3    3    0    2
## 2010    2    0   34   22    7    0   15    0    0   27    0    7    4    0    0
## 2011    8    0   40   29    4    0    3    0    0   21    0    3    2    0    0
## 2012    5    0   61   19    8    0   11    0    0   30    1    2    0    0    0
## 2013    9    0   31   42    8    0    9    0    0   52    0    5    0    0    0
## 2014    6    0   29   30    5    0   17    0    0   29    0    4    0    0    0
##         F105 1054 FB08 FB32 49C3 49LA CDRA DRAC STWR F161 F164 F104 KMSN MIDF 5NK2
## 1993    3    1    2   30    6    7    7    8    2    1    1    3    2    1    1
## 1994    0    0    0   28    6    6    0    0    0    0    1    0    3    0    0
## 1995    5    1    0   30    3   12    0    0    0    0    2    0    0    1    1
## 1996    0    0    0   27    0   16    0    0    0    0    2    0    0    0    0
## 1997    2    1    0   23    0    4    0    0    0    1    8    0    0    3    1
## 1998    0    0    0   13    0    6    0    1    0    0   13    0    0    1    2
## 1999    4    0    0   22    0    4    0    0    0    0    1    0    0    0    0
## 2000    3    0    0   88    0    8    0    0    0    0   11    0    0    0    0
## 2001    1    0    0   40    0    4    0    0    0    0   16    0    0    0    0
## 2002    0    0    0   20    0    8    0    0    0    0    4    0    0    2    0
## 2003    0    0    0    0    0    2    0    0    0    0   20    0    0    2    0
## 2004    1    0    0    0    0    2    0    0    0    0   10    0    0    0    0
## 2005    0    0    0    0    0    0    0    0    0    0   37    0    0    0    0
## 2006    0    0    0    0    0    0    0    0    2    0   17    0    0    0    0
## 2007    0    0    0    0    0    0    0    0    0    0   18    0    0    4    0
## 2008    0    0    0    0    0    0    0    0    0    0   34    0    0    4    0
## 2009    0    0    0    0    0    0    0    0    0    0   16    0    0    0    0
## 2010    0    0    0    0    0    0    0    0    0    0   24    0    0    2    0
## 2011    0    0    0    0    0    0    0    0    0    0   17    0    0    2    0
## 2012    0    0    0    0    0    0    0    0    0    0   41    0    0    1    0
## 2013    0    0    0    0    0    0    0    0    0    0   27    0    0    1    0
## 2014    0    0    0    0    0    0    0    0    0    0   27    0    0    1    0
##         F206 LNBT MBAB PRNS SCTN WTAB F156 BTTV SFAN F147 F210 F237 GITR GRIM FB84
## 1993    1    1    1    1    1    1    4    1    1    1    1    8    1    1   15
## 1994    0    0    0    0    0    0    0    0    0    3    0    9    0    0   27
## 1995    0    0    0    0    0    2    0    1    0    1    0    7    0    0   23
## 1996    0    0    0    0    0    0    0   13    0    1    0    1    0    0   41
## 1997    0    0    2    0    0    0    0    5    0    4    1    7    0    0   35
## 1998    0    0    0    0    0    0    0    0    0    2    2    2    0    0   18
## 1999    0    0    0    0    0    0    0    2    0    0    1    5    0    0   20
## 2000    0    0    1    0    2    0    0    0    0    0    2   22    0    1   29
## 2001    0    0    0    0    0    0    0    0    0    0   11   17    0    0   38
## 2002    0    0    0    0    0    0    0    0    0    0    1   16    0    0   24
## 2003    0    0    0    0    0    0    0    0    0    0    3   10    0    0    0
## 2004    0    0    0    0    0    0    0    0    0    0    0    6    0    0    0
## 2005    0    0    0    0    1    1    0    0    0    0    4   24    0    0    0
## 2006    0    1    1    0    1    1    0    0    0    0    5   29    0    0    0
## 2007    0    0    0    0    4    0    0    0    0    0    4   57    0    0    0
## 2008    0    0    0    0    3    1    0    0    0    0    1   45    0    0    0
```

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```
## 2009      0     0     1     0     1     0     0     0     0     0     0    13     0     0     0
## 2010      0     0     0     0     1     0     0     0     0     0     0    15     0     1     0
## 2011      0     0     0     0     0     0     0     0     0     0     0    11     0     0     0
## 2012      0     0     0     0     0     0     0     0     0     0     0    10     0     0     0
## 2013      0     0     0     0     0     0     0     0     0     0     0    20     0     1     0
## 2014      0     0     0     0     0     0     0     0     0     0     0    26     0     0     0
##       CRAG  HVMS  LCKL  RUFF  FB59  FB83  FB02  C834  BBMB  LDSL  LSMS  MCMA  PN06  F276  FB24
## 1993     2     2     3     3    20    13    17     9     2     2     1     4     1     7     8
## 1994     0     0     9     0    37    14    29     8     3     3     0     5     0     0    19
## 1995     4     1     1     1    49    21    52    16     1     2     0     5     1     9    36
## 1996     1     0     0     2    19    18    28     1     1     0     1    11     0     3    18
## 1997     0     0     0     0    25    25    14    12     0     0     0     3     0    10    19
## 1998     3     0     0     3    17    11    18    22     2     2     0     6     0     5    13
## 1999     2     2     0     2    19    31    14    23     1     1     0     7     0    15     0
## 2000     2     1     0     2    37    43    46    26     2     2     0    25     0    34     0
## 2001     1     2     0     1    61    26    23    40     1     1     0    14     0    31     0
## 2002     0     1     0     0    43    17    28    21     2     3     0     0     0    12     0
## 2003     0     1     0     3     1    21    22    19     0     0     0     0     0     9     0
## 2004     0     0     0     1     0    14    19    12     1     1     0     0     0    12     0
## 2005     0     2     0     2     0     0    36    14     1     1     0     0     0    14     0
## 2006     0     2     0     0     0     0    30    15     0     1     0     0     0    18     0
## 2007     0     8     0     0     0     0    49    41     0     0     0     0     1    47     0
## 2008     0     8     1     0     0     0    52    43     0     0     0     0     0    53     0
## 2009     0     5     1     0     0     0    22    21     0     0     0     0     0    24     0
## 2010     0     6     0     0     0     0    21    16     0     0     0     0     0    28     0
## 2011     0     4     0     0     0     0    22    27     0     0     0     0     0    25     0
## 2012     0     6     0     0     0     0    37    36     0     0     0     0     0    50     0
## 2013     0     2     1     0     0     0    20    24     0     0     0     0     0    33     0
## 2014     0     4     0     0     0     0    13    19     0     0     0     0     0    36     0
##       FB35  F182  DRSN  F150  F128  F131  DIPT  SLMS  2SDN  BBL2  BBLN  BTLN  CHK2  ETMA  HFFR
## 1993     8    10     8     5     9    19     2     2     1     1     2     1     2     2     1
## 1994     3    25     9     0    24    33     0     0     1     0     0     2     0     1     0
## 1995    11    30    17     0    16    74     2     2     0     0     1     0     1     1     0
## 1996     6    33    18     0    20    58     4     0     0     1     1     2     1     1     0
## 1997    10    37    19     0    49    62     3     0     1     1     1     0     0     0     0
## 1998     6    17     9     0    27    26     5     0     0     0     1     1     0     0     0
## 1999     6    24    19     0    31    29     0     0     0     0     0     0     0     6     0
## 2000     5    38     7     0    39    51     5     0     0     0     0     0     0     0     0
## 2001     6    38     4     0    65    76     0     0     0     0     1     1     0     1     0
## 2002     5    20     5     0    33    43     0     0     0     0     0     2     0     1     0
## 2003     4    19    10     0    33    21     0     0     0     0     0     0     0     2     0
## 2004     3    19    15     0    21    36     0     0     0     0     0     0     0     1     0
## 2005     5    18     7     0    31    31     0     0     0     0     1     1     0     0     0
## 2006     8    23     7     0    31    30     0     0     0     0     3     0     2     2     0
## 2007    15    24    14     0    63    92     0     0     0     0     2     0     0     0     0
## 2008    14    39    15     0    71    68     0     0     0     0     3     0     0     0     0
## 2009    11    20    16     0    32    38     0     0     0     0     1     0     0     0     0
## 2010    15    16    14     0    19    37     0     0     0     0     0     0     0     0     0
## 2011    10    25     8     0    28    33     0     0     0     0     0     0     0     0     0
## 2012    14    28     0     0    30    41     0     0     0     0     0     0     0     0     0
## 2013    10    23     0     0    29    52     0     0     0     0     1     0     0     0     0
## 2014     6    17     0     0    39    42     0     0     0     0     1     0     0     0     0
##       HNBT  HOWL  JAGG  JIG3  KMBT  LOBE  MLTS  MM68  MOLA  MTLR  PLOB  RT90  SHOT  SURR  TFMS
## 1993     1     2     2     1     2     1     1     1     1     1     1     1     2     1     1
```

## 1994	1	0	0	1	0	0	1	0	0	0	0	0	1	0	0
## 1995	1	0	2	1	1	2	0	0	0	0	0	0	0	2	2
## 1996	0	0	1	2	0	1	0	0	0	0	0	0	3	1	0
## 1997	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0
## 1998	0	0	0	2	0	0	2	0	0	0	0	0	2	0	0
## 1999	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
## 2000	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0
## 2001	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
## 2002	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0
## 2003	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
## 2004	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
## 2005	0	0	0	1	0	0	1	0	0	0	0	0	1	0	0
## 2006	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
## 2007	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
## 2008	3	0	0	1	0	0	2	0	0	0	0	0	0	0	0
## 2009	0	0	0	2	0	0	0	0	0	1	0	0	0	0	0
## 2010	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0
## 2011	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
## 2012	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
## 2013	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
## 2014	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

##	TSMV	THLA	C173	FB17	F110	F191	FB73	SPNC	SPNM	PSD2	PSDZ	HSNC	HSNS	AABE	BIDF
## 1993	1	1	6	10	6	5	4	1	1	1	1	2	2	1	1
## 1994	0	0	0	9	12	7	6	0	0	2	1	0	1	0	0
## 1995	3	0	0	5	14	3	2	0	0	0	0	0	4	0	0
## 1996	3	0	0	19	9	8	6	0	0	0	0	0	0	0	0
## 1997	2	0	0	11	14	8	5	0	0	0	0	0	1	0	0
## 1998	1	0	0	5	10	8	1	0	0	0	0	0	1	0	1
## 1999	3	0	0	4	14	4	1	0	0	0	0	0	0	0	0
## 2000	6	0	0	7	17	11	6	0	0	0	0	0	0	0	0
## 2001	2	0	0	7	20	0	7	0	0	0	0	0	0	0	0
## 2002	6	0	0	8	18	0	5	0	0	0	0	0	1	0	1
## 2003	0	0	0	6	23	0	0	0	0	0	0	0	1	0	0
## 2004	1	0	0	11	11	0	0	0	0	0	0	0	1	0	0
## 2005	0	0	0	10	11	0	0	0	0	0	0	0	0	0	0
## 2006	4	0	0	5	11	0	0	0	0	0	0	0	0	0	0
## 2007	1	0	0	0	29	0	0	0	0	0	0	0	1	0	0
## 2008	10	0	0	0	23	0	0	0	0	0	0	0	5	0	0
## 2009	9	0	0	0	18	0	0	0	0	0	0	0	1	0	0
## 2010	7	0	0	0	10	0	0	0	0	0	0	0	1	0	1
## 2011	4	0	0	0	15	0	0	0	0	0	0	0	1	0	0
## 2012	3	0	0	0	14	0	0	0	0	0	0	0	3	0	0
## 2013	0	0	0	0	17	0	0	0	0	1	0	0	5	0	1
## 2014	4	0	0	0	16	0	0	0	0	0	0	0	5	0	1

##	BRAC	ETSC	FNOT	GFSD	HBLS	LGSC	MOL2	MOST	MTMN	NLPS	PLUG	TINI	TOTW	F183	THUB
## 1993	3	1	1	3	1	3	1	3	3	3	2	1	3	9	1
## 1994	0	1	0	0	0	0	0	0	0	1	0	0	0	10	0
## 1995	0	0	0	0	0	1	0	0	1	0	0	0	0	10	0
## 1996	0	0	0	0	0	0	0	0	14	0	0	0	0	13	1
## 1997	0	0	1	0	0	0	0	0	0	0	6	0	1	15	1
## 1998	0	0	0	0	0	0	0	0	0	0	0	0	0	10	1
## 1999	0	0	0	1	0	0	1	0	0	0	0	0	0	21	0
## 2000	0	0	0	0	0	0	0	0	0	0	0	0	0	20	1
## 2001	0	0	0	0	0	0	0	0	0	0	0	0	0	25	1

```
## 2002    1    0    0    0    0    0    0    0    0    0    1    1    2   11    0
## 2003    1    0    0    0    0    0    0    0    0    0    2    0    0   13    0
## 2004    0    0    0    0    0    0    0    0    0    1    0    0    0   16    0
## 2005    1    0    0    0    0    0    0    0    0    0    0    0    0    9    0
## 2006    2    0    0    0    0    0    0    0    0    1    0    0    0    1    0
## 2007    5    0    0    0    0    0    0    0    0    1    5    0    0    0    0
## 2008    0    0    0    0    0    0    0    0    0    1   17    0    0    0    0
## 2009    1    0    0    0    0    0    0    0    0    0    2    0    0    0    0
## 2010    6    0    0    0    0    0    0    0    0    1    3    1    0    0    0
## 2011    1    0    0    0    0    0    0    0    0    0    2    0    0    0    0
## 2012    0    0    0    0    0    0    0    0    0    0    2    0    0    0    0
## 2013    0    0    0    1    0    0    0    0    0    1    0    1    0    0    0
## 2014    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
##       F114 C791 FB26 FB34 F180 BEEH BKTL FLCR HFTP MDS2 MSR2 PKUP SPTP WHMR SCOR
## 1993    7   16    6   10    3    1    1    1    1    1    1    1    1    1    1
## 1994   29   11   14   20    0    0    0    0    0    0    0    0    0    0    0
## 1995   34    0    9   17   10    0    0    0    0    0    0    0    0    0    1
## 1996   37    0    8    0   13    0    0    0    0    0    0    0    0    0    0
## 1997   24    0    6    0   31    0    0    0    0    0    0    1    0    0    0
## 1998   19    0    9    0   10    0    0    0    0    0    0    0    0    0    0
## 1999   19    0    8    0    2    0    0    0    0    0    0    0    0    0    0
## 2000   31    0   64    0    4    0    0    0    0    0    0    0    0    0    0
## 2001   35    0    8    0    3    0    1    1    0    0    1    0    0    1    0
## 2002   30    0    0    0    2    0    0    0    0    0    1    1    0    0    0
## 2003   14    0    0    0    6    0    0    0    0    0    0    0    0    0    0
## 2004   11    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2005    8    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2006   10    0    0    0    0    1    1    1    0    0    0    0    0    0    0
## 2007   17    0    0    0    3    0    0    0    0    0    0    0    0    0    0
## 2008   26    0    0    0    5    0    0    0    0    0    1    0    0    0    0
## 2009    6    0    0    0    0    0    0    1    0    0    0    0    0    0    0
## 2010    9    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## 2011    1    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## 2012    3    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## 2013    8    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## 2014   18    0    0    0    1    0    0    0    0    0    0    0    0    0    0
##       SPIK FJSL F117 OTH_608 MBOX ELFF PN04 TM32 TTM3 AAR2 LNST LSL1 PINC PNLB
## 1993    3    1   14       1    1    3    1    1    1    1    2    1    1    1
## 1994    1    0   38       0    0    5    2    0    0    0    0    0    0    0
## 1995    4    1   37       0    0    9    3    0    1    0    1    0    0    0
## 1996    0    0   34       0    0    3    2    0    0    0    1    0    0    0
## 1997    0    0    0       0    0    3    0    0    1    0    0    0    0    0
## 1998    0    0   31       0    0    2    0    0    0    0    0    0    0    0
## 1999    0    0   44       0    0    1    0    0    2    0    0    0    0    0
## 2000    0    0   78       0    0    1    0    0    0    0    0    0    0    0
## 2001    0    0   61       0    0    4    0    0    1    0    0    0    0    0
## 2002    0    0   15       0    0    2    0    0    4    0    1    0    0    0
## 2003    0    0    0       0    0    3    0    0    1    0    0    0    0    0
## 2004    0    0    0       0    0    0    0    0    0    0    0    0    0    0
## 2005    0    2    0       0    0    0    0    0    1    0    1    0    0    0
## 2006    0    0    0       0    0    1    0    0    0    0    1    0    0    0
## 2007    0    0    0       0    0    0    0    0    1    0    0    0    0    0
## 2008    0    1    0       0    0    0    0    0    0    0    0    0    0    0
## 2009    0    0    0       0    0    0    0    0    3    0    1    0    0    0
```

```
## 2010      0     0     0           0     0     0     0     0     1     0     0     0     0     0
## 2011      0     0     0           0     0     0     0     0     0     0     1     0     0     0
## 2012      0     0     0           0     0     0     0     0     0     0     1     0     0     0
## 2013      0     0     0           0     0     0     0     0     0     0     0     0     0     0
## 2014      0     0     0           0     0     0     0     0     0     0     0     0     0     0
##        TBBX  FB39  CMRS  CONC  CONS  F163  F181  HAIR  HITS  MSQ2  RTMW  SPGC  SPGT  TABB  MDNK
## 1993      1     4     3     1     1     1     3     3     1     1     1     1     1     3     2
## 1994      0    11     1     2     2     0     5     1     5     1     7     0     0     0     2
## 1995      0    13     0     0     0     2     4     3     0     2     4     0     1     5     2
## 1996      0    12     1     0     2    39    24     5     0     1     4     0     2     4     0
## 1997      0     0     0     0     1    42    31     5     0     4    12     0     0     3     2
## 1998      0     0     0     0     1    21    29     2     0     1     2     0     0     1     0
## 1999      0     0     0     0     1    20    19     0     0     0     1     0     0     1     0
## 2000      0     0     6     0     4    63   102    12     3     3     7     0     0     2     0
## 2001      0     0     4     0     1    43    11     2     2     2     3     0     0     1     0
## 2002      0     0     0     0     3     6     9     2     0     0     5     0     0     0     0
## 2003      0     0     4     0     0    12    44     7     1     0     1     0     0     1     2
## 2004      0     0     7     0     3     0    23     6     6     4     5     0     0     2     1
## 2005      0     0    15     0     1     0    19     5    14     2     6     0     0     0     9
## 2006      0     0     9     0     0     0    15     8    10     3     4     0     0     3    24
## 2007      0     0    10     0     0     0    38    11    10     0     1     0     0     0    19
## 2008      0     0     5     0     0     0    17     9     5     0     6     0     0     3     4
## 2009      0     0    10     0     0     0     0    10    10     0    12     0     0     0     0
## 2010      0     0    11     0     0     0     0     6    10     0     7     0     0     0     0
## 2011      0     0     7     0     0     0     0     8     7     0     5     0     0     0     0
## 2012      0     0     5     0     0     0     0     3     4     0    11     0     0     0     0
## 2013      0     0    13     0     0     0     0    16    11     0     7     0     0     0     0
## 2014      0     0    12     0     0     0     0     8    12     0     2     0     0     0     0
##        KNOB  PSDC  MDSQ  NIK2  HSMS  C072  BFWT  JAWS  THOS  CHPC  FNNK  DROL  ALHK  LHLV  PLUC
## 1993      6     1     1     1     1     1     3     3     1     1     1     1     1     2     1
## 1994      3     0     0     0     0     0     1     3     0     0     0     0     2     1     0
## 1995      7     0     0     2     0     0     5     6     0     0     0     0     2     0     0
## 1996      6     0     0     1     0     0     0     0     0     0     0     0     2     0     0
## 1997      7     0     0     1     0     0     0     0     0     1     0     0     0     0     0
## 1998      0     0     0     0     0     0     0     0     0     0     0     0     2     0     0
## 1999      0     0     0     0     0     0     0     0     0     1     0     0     0     0     0
## 2000      0     0     0     0     0     0     0     0     0     0     0     0     2     0     0
## 2001      0     0     0     0     0     0     0     0     0     0     0     0     1     1     0
## 2002      0     0     0     0     0     0     0     0     0     0     0     0     2     0     0
## 2003      0     0     1     0     0     0     0     0     0     0     0     0     4     0     0
## 2004      0     0     0     0     0     0     0     0     0     0     0     0     1     0     0
## 2005      0     0     0     1     0     0     0     0     0     0     0     0     2     0     0
## 2006      0     0     0     0     0     0     0     0     0     0     0     0     1     2     0
## 2007      0     0     0     0     0     0     0     0     0     0     0     0     2     1     0
## 2008      0     0     0     1     0     0     0     0     0     0     0     0     4     1     0
## 2009      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2010      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2011      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2012      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2013      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2014      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
##        FB06  CTRK  TRUN  FB87  LB2N  CKB2  1832  SUMO  F157  FRIL  SOLB  TCTV  IKNO  F101  LCKC
## 1993     14     1     1     5     3     4     5     1     2     1     3     4     2     2     1
## 1994     37     0     0     5     0     3     4     0     0     0     7     1     0    42     0
```

```
## 1995    44    0    0   16    0    3    6    0    0    0   12    7    4   57    0
## 1996    28    0    0   14    0    0    7    0   18    0    9    6    5   42    0
## 1997    38    0    0   42    0    0    7    2   43    0    9   13   16   61    0
## 1998    15    0    0   18    0    0    0    0   18    0    7    3   11   32    0
## 1999    28    0    0   21    0    0    0    1   19    0   11    4   27   45    0
## 2000    66    0    0   31    0    0    0    4   81    0   19    1   22   59    0
## 2001    57    0    0   12    0    0    0    2   60    0   17    1    6   57    0
## 2002    35    0    0   11    0    0    0    2   35    0   19    2    0   19    0
## 2003    22    0    0   16    0    0    0    3   78    0   17   17    0   32    0
## 2004    29    0    0    6    0    0    0    5   23    0   10    5    0   23    0
## 2005    40    0    0    6    0    0    0    9   38    0   11    2    0    0    0
## 2006    14    0    0   13    0    0    0   10   29    0    8    1    0    0    0
## 2007     0    0    0   21    0    0    0   11   34    0   23   14    0    0    0
## 2008     0    0    0   23    0    0    0    0   41    0   25    7    0    0    0
## 2009     0    0    0   18    0    0    0    0   10    0   11    0    0    0    0
## 2010     0    0    0   15    0    0    0    0    6    0   11    4    0    0    0
## 2011     0    0    0   16    0    0    0    0    0    0   15    7    0    0    0
## 2012     0    0    0   25    0    0    0    0    0    0   12    4    0    0    0
## 2013     0    0    0   14    0    0    0    0    0    0   14    4    0    0    0
## 2014     0    0    0   25    0    0    0    0    0    0   17    2    0    0    0
##        LNTB VRIP HFLT ZENN CCLW CLAW AOTA BKHO BRCC FTMA FTMC TURT F254 FRFI MPTB
## 1993     1    1    1    2    1    1    1    1    1    1    1    1    1    1    1
## 1994     0    0    0    7    0    0    0    0    0    0    0    0    0    0    4
## 1995     0    0    2    5    0    0    2    0    0    0    0    0    2    0    1
## 1996     0    1    0    0    0    1    0    0    0    0    0    0    0    0    0
## 1997     0    0    0    1    0    0    0    1    0    0    0    0    0    0    1
## 1998     0    1    5    0    0    0    0    1    0    0    0    0    3    0    5
## 1999     0    0    3    0    0    0    1    2    0    0    0    0    2    0    2
## 2000     0    0    1    0    0    0    0    5    0    0    0    0    0    0   10
## 2001     0    0    1    0    0    0    1    0    0    0    0    0    1    0   35
## 2002     0    1    5    0    0    0    0    1    0    0    0    0    4    0   16
## 2003     0    0    3    0    0    0    3    2    0    0    0    0    3    0   17
## 2004     0    0    3    0    0    0    0    2    0    0    0    0    6    0   10
## 2005     0    1    4    0    0    0    0    0    0    0    0    0   19    0   18
## 2006     0    1    6    0    0    0    0    0    0    0    0    0    6    0   20
## 2007     0    0    7    0    0    0    0    0    0    0    0    0   14    0   27
## 2008     0    0    0    0    0    0    0    4    0    0    0    0   15    0   28
## 2009     0    1    0    0    0    0    0    1    0    0    0    0   19    0   17
## 2010     0    0    0    0    0    0    0    0    0    0    0    0   11    0   10
## 2011     0    1    0    0    0    0    0    2    0    0    0    0   13    0   19
## 2012     0    1    0    0    0    0    0    0    0    0    0    0   16    0   16
## 2013     0    0    0    0    0    0    0    6    0    0    0    0   17    0   15
## 2014     0    0    0    0    0    0    0    6    0    0    0    0   23    0   14
##        OTH_554 SHTC TRIF TERM HSLA PHNE PN10 PNSN FEAT <NA> <NA> <NA> <NA> <NA>
## 1993        1    1    1    1    1    1    1    1    1    0    0    0    0    0
## 1994        0    0    1    0    0    2    4    2    0    6    3    4    6    1
## 1995        0    1    1    0    0    2    0    1    0    0    6    5    8    0
## 1996        0    0    2    0    0    4    0    0    2    0   12    7    3    0
## 1997        0    1    0    0    0    1    0    0    1    0   24    0    0    0
## 1998        0    2    0    0    0    2    1    0    1    0   50    0    0    0
## 1999        0   11    0    0    0    0    2    1    0    0    8    0    0    0
## 2000        0   28    0    0    0    0    2    0    1    0   13    0    0    0
## 2001        0   39    1    0    0    0    0    0    1    0   64    0    0    0
## 2002        0   14    0    0    0    0    0    0    0    0   18    0    0    0
```

```
## 2003        0    4    0    0    0    0    0    0    0    0   14    0    0    0
## 2004        0    4    0    0    0    0    0    0    0    0   15    0    0    0
## 2005        0    3    1    0    0    0    0    0    1    0   20    0    0    0
## 2006        0    0    1    0    0    0    0    0    1    0   26    0    0    0
## 2007        0    0    1    0    0    0    0    0    6    0   30    0    0    0
## 2008        0    0    0    0    0    0    0    0    1    0   43    0    0    0
## 2009        0    0    0    0    0    0    0    0    1    0   28    0    0    0
## 2010        0    0    1    0    0    0    0    0    1    0   29    0    0    0
## 2011        0    0    0    0    0    0    0    0    0    0  226    0    0    0
## 2012        0    0    1    0    0    0    0    0    0    0   30    0    0    0
## 2013        0    0    2    0    0    0    0    0    0    0    0    0    0    0
## 2014        0    0    0    0    0    0    0    0    0    0    0    0    0    0
##         <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994    1    1   11    9    2    2    3    1    1    1    1    2    2    1    1
## 1995    0    2    5    3    0    1    4    0    0    3    1    2    2    0    1
## 1996    0    5    2    2    1    1    0    0    0   10    3    5    0    0    0
## 1997    0    0   22   22    0    0    0    0    0    3    1   12    0    0    2
## 1998    0    0   12    9    0    0    0    0    0    2    0    3    0    0    2
## 1999    0    0   26   22    0    1    0    0    0    2    0    0    0    0    0
## 2000    0    0   21   19    0    0    0    0    0    2    0    6    0    0    1
## 2001    0    0   41   42    0    1    2    0    0    1    0   11    0    0    1
## 2002    0    0    9   10    0    0    0    0    0    3    0    3    0    0    0
## 2003    0    0    0    8    0    0    0    0    0    4    0    2    0    0    0
## 2004    0    0    0    7    0    0    0    0    0    0    4    0    0    0    0
## 2005    0    0    0   10    0    0    0    0    0    0    2    0    0    0    1
## 2006    0    0    0    8    0    0    0    0    0    1    3    0    0    1    0
## 2007    0    0    0   15    0    0    0    0    0    2    4    0    0    2    0
## 2008    0    0    0   16    0    0    0    0    0    1    6    0    0    0    1
## 2009    0    0    0   16    0    1    0    0    0    0    6    0    0    0    0
## 2010    0    0    0    8    0    0    0    0    0    3    2    0    0    0    0
## 2011    0    0    0   39    0    0    0    0    0    2    1    0    0    0    0
## 2012    0    0    0   10    0    0    0    0    0    3    0    0    0    1    0
## 2013    0    0    0    7    0    0    0    0    0    1    3    0    0    0    0
## 2014    0    0    0    0    0    0    0    0    0    1    3    0    0    0    0
##         <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994    1    1   32    1    5    2   14    1    1   11    1    1    1   13    4
## 1995    0    2   68    2    1    0    0    1    0   13    0    1    3    0    0
## 1996    1    0   63    1    1    0    0    3    1   11    2    1    0    0    0
## 1997    0    0   47    0    4    0    0    2    0    0    0    0    0    0    0
## 1998    1    0    7    0    4    1    0    0    0    0    0    1    0    0    0
## 1999    0    6    0    0    5    1    0    0    1    0    0    0    0    0    0
## 2000    0    1    0    0   20    0    0    0    0    0    0    2    0    0    0
## 2001    0    2    0    0   42    0    0    0    0    0    0    0    1    0    0
## 2002    0    4    0    0   18    0    0    0    2    0    0    0    1    0    0
## 2003    0    1    0    0   23    0    0    0    0    0    0    0    0    0    0
## 2004    0    2    0    0    9    0    0    0    0    0    0    0    0    0    0
## 2005    0    0    0    0   16    0    0    0    1    0    0    0    0    0    0
## 2006    1    0    0    0   21    0    0    0    1    0    0    0    0    0    0
## 2007    1    0    0    0   25    0    0    0    2    0    0    0    0    0    0
## 2008    0    0    0    0   32    0    0    0    0    0    0    0    0    0    0
## 2009    1    0    0    0   19    0    0    0    0    0    0    0    1    0    0
## 2010    0    0    0    0   11    0    0    0    0    0    0    0    0    0    0
```

```
## 2011      0    0    0    0   15    0    0    0    0    0    0    0    0    0    0
## 2012      1    0    0    0   16    0    0    0    0    0    0    0    0    0    0
## 2013      0    0    0    0   19    0    0    0    0    0    0    0    0    0    0
## 2014      0    0    0    0   10    0    0    0    0    0    0    0    0    0    0
##        <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994      1    6   17    1    1   15   15    2    1    1    1    1    1    1    1
## 1995      1    0   48    0    0    0    0   14    0    0    0    1    2    0    1
## 1996      0   15   16    0    0    2    4   10    0    1    0    2    3    0    0
## 1997      0   33    0    0    0    1    1   22    0    0    0    0    0    0    1
## 1998      0   20    0    0    0    0    1    0    0    0    0    0    0    0    1
## 1999      0    8    0    0    0    2    2    0    0    0    0    0    0    0    1
## 2000      4   17    0    0    0    9   53    0    0    0    0    0    0    1    0
## 2001      0   29    0    0    0    5   51    0    0    0    0    0    0    0    3
## 2002      0   18    0    0    0    1    0    0    0    0    0    0    0    0    2
## 2003      0   33    0    0    0    8    2    0    0    0    0    0    0    1    1
## 2004      0   16    0    0    0   13    9    0    0    0    0    0    0    1    0
## 2005      0   14    0    0    0   25    1    0    0    0    0    0    0    0    0
## 2006      0   23    0    0    0   20    0    0    0    0    0    0    0    0    0
## 2007      1   51    0    0    0   16    0    0    0    0    0    0    0    1    0
## 2008      0   30    0    0    0   20    0    0    0    0    0    0    0    3    0
## 2009      2   16    0    0    0   13    0    0    0    0    0    0    0    1    0
## 2010      1   11    0    0    0    5    0    0    0    0    0    0    0    0    0
## 2011      1   11    0    0    0    9    0    0    0    0    0    0    0    0    0
## 2012      1    8    0    0    0    8    0    0    0    0    0    0    0    0    0
## 2013      1    7    0    0    0   10    0    0    0    0    0    0    0    1    0
## 2014      2   14    0    0    0   15    0    0    0    0    0    0    0    0    0
##        <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994      1    1    1    1    1    1    0    0    0    0    0    0    0    0    0
## 1995      0    3    0    0    0    0    1    1    1    1    7    1    1    1   12
## 1996      0    2    2    0   11    0    0    0    0    0    4    8    8    0    6
## 1997      1    4    1    0    9    0    0    0    0    0    4   22   27    0    3
## 1998      0    1    3    0    2    0    0    0    0    0    1   24   26    0    4
## 1999      1    0    2    1    6    0    0    0    0    0    4   13   16    0    2
## 2000      1    7    6    0   41    0    0    0    0    0    4   33   44    1    0
## 2001      0    2    1    0   38    0    0    1    0    0    0   38   46    0    1
## 2002      0    3    2    0   21    0    0    1    0    0    2   15   20    0    4
## 2003      1    1    1    0   70    0    0    0    0    0    0    5    9    0    4
## 2004      1    5    4    0   23    0    0    0    0    0    1   16   10    0    9
## 2005      0    6    3    1    9    0    0    0    0    0    0    4    0    0    0
## 2006      0    5    5    0    5    0    0    0    0    0    1    1    0    1    5
## 2007      0    7    9    0   42    0    0    0    0    0   12    0    0    0   12
## 2008      0   12   12    0   46    0    0    0    0    0    6    0    0    0   21
## 2009      0    5   12    0   22    0    0    0    0    0    4    0    0    0   10
## 2010      0    5    3    0    1    0    0    0    0    0    1    0    0    0    4
## 2011      0    7    7    0    3    0    0    0    0    0    2    0    0    0    4
## 2012      0    0    9    0    8    0    0    0    0    0    0    0    0    0    5
## 2013      0    0    8    0    5    0    0    0    1    0    1    0    0    3    5
## 2014      0    0   11    0    5    0    0    0    0    0    3    0    0    0    5
##        <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995      2    1    1    1   12    7    1    1    5    2    1    1    1    1    1
```

```
## 1996     5     0     0     0     3     0     0     0     1     1     0     0     0     0     0
## 1997     1     0     0     0     1     2     0     0     1     0     0     0     0     0     0
## 1998     0     0     0     0     1     2     0     0     1     1     0     0     0     0     0
## 1999     3     1     0     0     5     3     0     0     1     1     0     0     0     0     0
## 2000     2     0     0     0     5     1     0     0     0     1     0     0     0     0     0
## 2001     0     0     0     0     2     6     0     0     0     1     0     0     0     0     0
## 2002     2     0     0     0     2     4     0     0     0     0     0     0     0     0     0
## 2003     1     0     0     0     2    11     0     0     2     0     0     0     0     0     0
## 2004     1     0     0     0     2     1     0     0     0     1     0     0     0     0     1
## 2005     0     0     0     0     0     2     0     0     0     0     0     0     0     0     0
## 2006     1     0     0     0     6     8     0     0     1     0     0     0     0     0     0
## 2007     2     0     0     0     8    11     0     0     1     0     0     0     0     0     0
## 2008     3     0     0     0     9    14     0     0     0     0     0     0     0     0     0
## 2009     4     0     0     0     7     7     0     0     0     1     0     0     0     0     1
## 2010     3     0     0     0     7     8     0     0     0     0     0     0     0     0     0
## 2011     0     0     0     0     2     1     0     0     0     1     0     0     0     0     0
## 2012     1     0     0     0     0     3     0     0     0     1     0     0     0     0     0
## 2013     3     0     0     0     6     5     0     0     0     1     0     0     0     0     0
## 2014     1     0     0     0     4     7     0     0     0     0     0     0     0     0     1
##       <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1994     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1995     1     1     2     2     1     1     1     1     1     2     2     2     6     1     1
## 1996     0     0     0     3     0     0     0     0     1     1     0     0     0     0     1
## 1997     0     0     0     0     0     0     0     0     2     0     0     0     2     0     0
## 1998     0     0     0     0     0     0     0     0     0     0     0     1     0     0     0
## 1999     2     0     1     2     0     0     0     0     3     0     0     0     1     0     2
## 2000     0     0     0     0     0     0     0     0     1     0     0     0     0     0     0
## 2001     1     0     1     1     0     1     1     0     0     0     0     0     0     0     0
## 2002     1     0     0     4     0     0     0     0     2     2     0     0     1     0     2
## 2003     0     0     0     0     0     0     0     0     1     0     0     0     0     0     0
## 2004     0     0     0     0     0     0     0     0     1     1     0     0     0     0     0
## 2005     0     0     1     0     0     0     0     0     0     1     0     0     1     0     1
## 2006     0     0     0     0     0     0     0     0     0     1     0     0     0     0     1
## 2007     0     0     1     2     0     0     0     0     0     5     0     0     1     0     2
## 2008     0     0     0     1     0     0     0     0     0     2     0     0     0     0     1
## 2009     3     0     0     2     0     0     0     0     1     2     0     0     0     0     2
## 2010     1     0     0     0     0     0     0     1     1     1     0     0     0     1     1
## 2011     0     0     0     0     0     0     0     0     1     1     0     0     0     0     0
## 2012     1     0     0     0     0     0     0     0     1     1     0     0     0     0     1
## 2013     2     0     0     0     0     0     0     0     0     1     0     0     0     0     0
## 2014     1     0     0     0     0     0     0     0     0     0     0     0     0     0     0
##       <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1994     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1995     7     2     2     2     3     1     1     1     1     1     2     3     8     6     5
## 1996     1     0     1     0     0     0     1     1     0     0     4     7    14     2     0
## 1997     0     0     0     0     0     0     0     2     0     0     1     0     0     0     0
## 1998     1     0     0     0     0     0     0     0     0     0     2     0     0     0     0
## 1999     1     0     0     0     0     0     5     2     0     0     3     0     0     0     0
## 2000     3     0     0     0     0     0     0     2     0     0     2     0     8     0     0
## 2001     0     0     0     0     0     0     0     1     0     0     0     0     4     0     0
## 2002     0     0     0     0     0     0     0     1     0     0     1     0     4     0     0
## 2003     0     0     0     0     0     0     0     0     0     0     2     0     3     0     0
```

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```
## 2004      0    0    0    0    0    0    0    1    0    0    0    0    4    0    0
## 2005      0    0    0    0    0    0    0    0    0    0    0    0   10    0    0
## 2006      0    0    0    0    0    0    0    2    0    0    1    0    8    0    0
## 2007      0    0    0    0    0    0    0    1    0    0    1    0   20    0    0
## 2008      0    0    0    0    0    0    0    2    0    0    2    0   15    0    0
## 2009      0    0    0    0    0    0    0    2    0    0    0    0   12    0    0
## 2010      0    0    0    0    0    0    0    0    0    0    3    0   11    0    0
## 2011      0    0    0    0    0    0    0    0    0    0    2    0    5    0    0
## 2012      0    0    0    0    0    0    0    0    0    0    3    0   21    0    0
## 2013      0    0    0    0    0    0    0    1    0    0    1    0    9    0    0
## 2014      0    0    0    0    0    0    0    0    0    0    1    0    5    0    0
##        <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995      1    3    1    1    1    1    1    1    1    1    1    1    1    1    2
## 1996      0    0    1    0    0    0    0    0    0    0    0    0    0    0    2
## 1997      0    0    0    0    1    1    0    0    0    0    0    0    0    0    0
## 1998      2    0    0    0    0    0    0    0    0    0    0    2    0    0    0
## 1999      0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## 2000      0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## 2001      1    0    0    0    0    0    0    0    0    2    2    0    0    0    0
## 2002      2    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## 2003      0    0    0    1    0    0    0    0    1    0    0    0    0    0    0
## 2004      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2005      1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2006      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2007      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2008      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2009      0    0    0    0    1    0    0    2    0    0    0    0    0    0    0
## 2010      1    0    1    2    2    2    0    3    0    0    0    0    0    0    0
## 2011      0    0    1    1    0    1    0    1    0    0    0    0    0    0    0
## 2012      2    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## 2013      0    0    1    0    1    0    0    0    0    0    0    0    0    0    0
## 2014      0    0    1    0    1    0    0    0    0    0    0    0    0    0    0
##        <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995      2    4    1    1   13    1    1    1    1   24    3    1    1    2    1
## 1996      1    0    0    0    8    0    0    0    0   51    0    1    0    3    0
## 1997      0    3    0    0   12    1    1    0    0   41    2    0    0    0    0
## 1998      0    0    0    0   10    0    0    0    0   18    3    0    0    0    0
## 1999      0    2    0    0    4    0    0    0    0   25    3    0    0    0    0
## 2000      0    0    0    0    0    3    0    0    0   71   22    0    0    0    0
## 2001      0    1    0    0    0    1    0    0    0   72   15    0    0    0    0
## 2002      0    0    0    0    0    0    0    0    0   47    3    0    0    0    0
## 2003      0    0    0    0    0    2    0    0    0   31    3    0    0    0    0
## 2004      0    0    0    0    0    0    0    0    0   28   11    0    0    0    0
## 2005      0    0    0    0    0    0    0    0    0   47   16    0    0    0    0
## 2006      0    0    0    0    0    0    0    0    0   42   23    0    0    0    0
## 2007      0    2    0    0    0    0    0    0    0   83   31    0    0    0    0
## 2008      0    0    0    0    0    0    0    0    0   64   45    0    0    0    0
## 2009      0    0    0    0    0    0    0    0    0   18   18    0    0    0    0
## 2010      0    0    0    0    0    0    0    0    0   32   28    0    0    0    0
## 2011      0    0    0    0    0    0    0    0    0   31   24    0    0    0    0
```

```
## 2012    0    0    0    0    0    0    0    0    0   34   24    0    0    0    0
## 2013    0    0    0    0    0    0    0    0    0   27   17    0    0    0    0
## 2014    0    0    0    0    0    0    0    0    0   35    9    0    0    0    0
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995    7    8    1    1    1    1    2    2    1    1    1    1    1    1    1
## 1996   52   23    0    0    1    0    1    3    0    0    0    0    0    0    0
## 1997   40   46    0    0    0    0    4    4    0    0    1    0    0    0    0
## 1998   30   32    1    0    0    0    0    0    0    0    0    0    0    0    0
## 1999   38   43    1    0    0    1    0    0    0    0    0    0    0    0    0
## 2000   69   49    0    0    0    2    1    0    1    0    1    0    0    0    0
## 2001   71   57    0    0    0    0    2    0    6    0    1    0    0    0    1
## 2002   51   23    0    0    0    0    0    0    1    0    0    0    0    0    0
## 2003   32   30    0    0    0   11    2    0    1    0    2    0    0    0    0
## 2004   16   22    0    0    0    5    5    0    2    0    0    0    0    0    0
## 2005   39   10    0    0    0    2    4    0    3    0    1    0    0    0    1
## 2006   39   26    0    0    0    0    0    0    0    0    1    0    0    0    0
## 2007  108   78    1    0    0    1    0    0    4    0    0    0    0    0    2
## 2008   62   50    0    0    0   21    0    0    1    0    0    0    0    0    0
## 2009   36   45    0    0    0    2    0    0    1    0    2    0    0    0    0
## 2010   20   25    0    0    0    4    0    0    6    1    1    0    0    0    0
## 2011   27   28    0    0    0    0    0    0    0    2    0    0    0    0    0
## 2012   43   18    0    0    0    0    0    0    2    0    0    0    0    0    0
## 2013   40    0    0    0    0    1    0    0    0    1    1    0    0    0    0
## 2014   44    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995    1    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996    0    0    1    2    1    1   46    6    1    1    1    1    1    1    3
## 1997    0    0    0    0    1    0   34    7    0    0    0    1    0    0    1
## 1998    0    0    1    1    0    0    0    0    0    0    0    0    0    0    0
## 1999    0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## 2000    0    0    3    0    1    3    0    0    0    0    0    0    2    0    0
## 2001    0    0    0    0    0    0    0    0    0    0    0    0    0    0    2
## 2002    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## 2003    0    0    1    0    0    0    0    0    1    0    0    0    0    0    0
## 2004    0    0    1    0    0    0    0    0    0    0    0    0    1    0    0
## 2005    0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## 2006    0    0    1    0    0    0    0    0    1    0    1    0    0    0    0
## 2007    0    0    1    0    0    0    0    0    0    0    1    0    0    0    0
## 2008    0    0    2    0    0    0    0    0    0    0    0    0    0    0    0
## 2009    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2010    0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## 2011    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2012    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2013    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2014    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996    2   16    2    2    3   49   31    7   47    1   34    1    1   16   54
```

```
## 1997      1    0    1    1    0   38    0    9   59    0   40    0    0    0   64
## 1998      0    0    0    0    1   28    0    5   25    1   14    0    0    0   54
## 1999      1    0    0    0    0   22    0    0    5    2   22    0    0    0   19
## 2000      1    0    0    0    0   40    0    0    0   10   40    0    0    0   47
## 2001      3    0    0    0    0   35    0    0    0   38   88    0    0    0   53
## 2002      0    0    1    0    0   35    0    0    8   18   39    0    0    0   30
## 2003      0    0    0    0    0   19    0    0   43   16   44    0    0    0   40
## 2004      0    0    0    0    0   27    0    0   35   13   30    0    0    0   27
## 2005      0    0    0    0    0   49    0    0   51    0   31    0    0    0   35
## 2006      2    0    0    0    0   35    0    0   51    0   35    0    0    0   49
## 2007      0    0    0    0    0   83    0    0   84    0   67    0    0    0   79
## 2008      1    0    0    0    0   73    0    0   70    0   74    0    0    0   74
## 2009      0    0    0    0    0   18    0    0   22    0   28    0    0    0   36
## 2010      0    0    0    0    0   30    0    0   31    0   31    0    0    0   17
## 2011      0    0    0    0    0   30    0    0   30    0   35    0    0    0   29
## 2012      0    0    0    0    0   33    0    0   54    0   25    0    0    0   30
## 2013      0    0    0    0    0   27    0    0   47    0   23    0    0    0   49
## 2014      0    0    0    0    0   36    0    0   23    0    0    0    0    0   41
##       <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996     23   11   13    1    1    1    1    1    1   52   14    1   13   21    1
## 1997      0   20   22    5    0    2    0    0    0   45   17    0    0   19    1
## 1998      0   17    8    0    0    0    0    0    0   35   26    1    0    0    1
## 1999      0    8   18    0    0    0    0    0    0   23   19    0    0    0    3
## 2000      0   11   19    0    0    0    3    1    0   61   61    0    0    0    5
## 2001      0   19   22    0    0    0    3    0    0   66   31    0    0    0    5
## 2002      0    0   18    1    0    1    0    1    0   61   26    0    0    0    2
## 2003      0    0    8    0    0    0    0    0    0   60   34    0    0    0    1
## 2004      0    0   13    0    0    0    0    0    0   35   16    0    0    0    2
## 2005      0    0   11    1    0    1    0    1    0   41   14    0    0    0    2
## 2006      0    0    1    0    0    0    0    0    0   58   14    0    0    0    4
## 2007      0    0    0    0    0    0    0    0    0   55   19    0    0    0    8
## 2008      0    0    0    0    0    0    0    0    0   85   22    1    0    0    6
## 2009      0    0    0    0    0    0    0    0    0   26   13    0    0    0    4
## 2010      0    0    0    0    0    0    0    1    0   25    8    0    0    0    4
## 2011      0    0    0    0    0    0    0    0    0   18    4    0    0    0    8
## 2012      0    0    0    0    0    0    0    0    0   47    8    0    0    0    2
## 2013      0    0    0    0    0    0    0    3    0   34    5    0    0    0   12
## 2014      0    0    0    0    0    0    0    0    0   21    7    0    0    0    4
##       <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996      1    1   32    1    6   12    1    1    1    1    1   25    2    1    1
## 1997      0    2   41    1    3   34    0    0    0    0    0   66    0    0    0
## 1998      0    1   12    0    1   15    0    0    0    0    0   47    0    0    0
## 1999      0    0   10    3    1   20    0    0    0    0    0   30    0    0    2
## 2000      0    1    0    1    0   62    0    0    0    0    0  100    0    0    1
## 2001      0    0    0    0    0   21    0    0    0    0    0   97    0    0    1
## 2002      0    0    0    2    0    0    0    0    0    0    0   58    0    0    1
## 2003      0    0    0    1    0    0    0    0    0    0    0   29    0    0    2
## 2004      0    0    0    2    0    0    0    0    0    0    0   37    0    0    0
```

```
## 2005      0      0      0      0      0      0      0      0      0      0      0     60      0      0      0
## 2006      0      0      0      0      0      0      0      0      0      0      0     48      0      0      2
## 2007      0      0      0      0      0      0      0      0      0      0      0     68      0      0      2
## 2008      0      0      0      0      0      0      0      0      0      0      0     92      0      0      4
## 2009      0      0      0      1      0      0      0      0      0      0      0     24      0      0      3
## 2010      0      0      0      0      0      0      0      0      0      0      1     29      0      0      3
## 2011      0      0      0      1      0      0      0      0      0      0      0     31      0      0      5
## 2012      0      0      0      1      0      0      0      0      0      0      0     37      0      0      2
## 2013      0      0      0      0      0      0      0      0      0      0      0     44      0      0      2
## 2014      0      0      0      0      0      0      0      0      0      0      0     33      0      0      2
##      <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>
## 1993      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1994      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1995      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1996      1      1      1      1      1      1      1      1      4      1      1      1      1      1      1
## 1997      3      2      1      0      0      0      0      0     12     38      0      0      0      0      0
## 1998      3      2      1      0      0      0      0      0      2     17      0      0      0      1      0
## 1999      0      0      0      0      0      0      0      0      2     16      0      0      0      0      0
## 2000      0      2      0      0      0      0      0      0      7     25      0      0      0      0      0
## 2001      0      1      0      0      0      0      0      0      0      6      0      0      0      0      0
## 2002      0      1      0      0      0      0      0      0      0      9      0      0      0      0      0
## 2003      0      3      0      0      0      0      2      0      0      0      0      0      0      0      0
## 2004      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2005      0      0      1      0      0      0      0      0      0      0      2      0      0      0      0
## 2006      0      0      0      0      0      0      0      0      0      0      1      1      1      0      0
## 2007      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2008      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2009      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2010      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2011      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2012      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2013      0      0      0      0      0      0      0      0      0      0      2      0      0      0      0
## 2014      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
##      <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>
## 1993      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1994      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1995      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1996      1      1      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1997      0      0      3      1      1      3      1      1      1      1      1      2      1      2      1
## 1998      0      0      1      0      0      0      0      0      0      0      0      1      0      1      1
## 1999      0      0      0      0      0      0      0      0      0      0      0      3      0      1      2
## 2000      0      0      0      0      0      0      1      0      0      0      0      3      1      0      2
## 2001      0      0      2      0      0      0      0      0      0      0      0      3      1      0      0
## 2002      0      0      0      0      0      0      0      0      0      0      0      0      0      0      2
## 2003      0      2      0      0      0      1      0      0      0      0      0      0      0      0      4
## 2004      0      0      0      0      0      2      0      0      0      0      0      0      0      0      1
## 2005      0      0      0      0      0      1      0      0      0      0      0      0      0      2      0
## 2006      0      1      0      0      0      1      0      0      0      0      0      0      0      3      1
## 2007      0      0      0      0      0      0      0      0      0      0      0      0      0      3      2
## 2008      0      2      0      0      0      0      0      0      0      0      0      0      0      1      0
## 2009      0      3      0      0      0      0      1      0      0      0      0      0      1      1      2
## 2010      0      0      0      0      0      0      0      0      0      0      0      0      3      2      0
## 2011      0      0      0      0      0      0      0      0      0      0      0      0      1      4      0
## 2012      0      0      0      0      0      0      0      0      0      0      0      0      1      3      0
```

```
## 2013    0    0    0    0    0    0    0    0    0    0    0    0    2    6    0
## 2014    0    0    0    0    0    0    0    0    0    0    0    0    0    5    0
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1997    1    1    1    1   30    7    1    1    1    1    1    1    1    1    1
## 1998    1    1    0    0    0    1    0    0    0    0    0    0    0    0    0
## 1999    0    0    0   11    1    0    0    0    0    0    0    0    1    0    2
## 2000    0    0    0    1    0    0    0    0    0    0    0    0    0    0    1
## 2001    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## 2002    0    0    0    0    0    1    1    0    0    0    0    0    0    0    0
## 2003    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2004    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2005    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## 2006    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2007    1    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## 2008    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2009    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2010    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## 2011    0    0    0    0    0    5    0    0    0    0    0    0    0    0    0
## 2012    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## 2013    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## 2014    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1997    1    1   43   18   14    1    1    1    1    1   12    3    1    2    6
## 1998    0    0    0   18    8    4    0    0    0    0    9    1    0    1    6
## 1999    0    4    0   22   16    2    1    0    0    0   24    0    0    0   18
## 2000    0    0    0   32   19    1    3    0    1    4   22    0    0    0   27
## 2001    2    1    0   30   23    1    3    0    2    1   25    0    1    1   25
## 2002    0    0    0   12   18    2    3    0    0    0   12    0    0    0   13
## 2003    0    1    0   12   11    5    8    0    0    0   11    0    0    0   15
## 2004    0    1    0   18   14    2    6    0    0    0   15    0    0    0   19
## 2005    0    0    0   16    8    0   10    0    0    0   20    0    0    0   17
## 2006    1    2    0   29    7    0    9    0    0    0   20    0    0    0    0
## 2007    0    0    0   27   11    0    7    0    0    0   39    0    0    0    0
## 2008    0    1    0   54   11    0    9    0    0    0   26    0    1    1    0
## 2009    0    3    0   18   13    0    8    0    0    0   13    0    0    0    0
## 2010    1    2    0   25   16    0    6    0    0    0   16    0    0    1    0
## 2011    1    1    0   24   12    0    8    0    0    0   21    0    0    0    0
## 2012    1    1    0   48   20    0    5    0    0    0   19    0    0    0    0
## 2013    0    3    0   35    1    0    9    0    0    0    8    0    0    0    0
## 2014    0    0    0   33    0    0    7    0    0    0   17    0    0    0    0
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1997    3    1    2    2    1    1    1    1    1    1    3    1    1    1    1
```

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```
## 1998    1    0    0    0    0    0    1    3    0    0    1    0    0    0    0
## 1999    0    0    3    0    0    0    2    2    0    0    0    1    0    1    0
## 2000    4    0    3    0    0    0    2    6    0    0    4    4    2    0    1
## 2001    2    0    2    0    0    0    0    1    0    0    2    1    0    0    4
## 2002    6    0    1    0    0    0    0    2    0    0    0    1    0    0    1
## 2003    6    0    4    0    0    0    0    1    0    0    0    2    0    0    0
## 2004    6    0    0    0    0    0    0    6    0    0    0   11    0    0    1
## 2005    5    0    0    0    0    0    0    4    0    0    0    4    0    0    0
## 2006    9    0    0    0    0    0    0    7    0    0    0    9    1    0    0
## 2007   18    0    0    0    0    0    0   10    0    0    0   11    0    0    1
## 2008   11    0    0    0    0    0    0   12    0    0    0    5    0    0    0
## 2009    7    0    0    0    0    2    0   15    0    0    0   15    0    0    2
## 2010    6    0    0    0    0    3    0    8    0    0    0    4    1    0    0
## 2011    2    0    0    0    0    1    0    5    0    0    0    4    1    0    0
## 2012    3    0    0    0    0    0    0    2    0    0    0    8    0    0    1
## 2013    3    0    0    0    0    3    0    9    0    0    0    7    1    0    0
## 2014    2    0    0    0    0    3    0    6    0    0    0   10    2    0    0
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1997    1    1    1    1    1    1    1    1    1    1    1    1    1    1    1
## 1998    0    0    0    0    2    0    0    2    0    0    1    0    0    0    0
## 1999    1    0    0    1    0    0    0   12    0    3    0    0    1    1    0
## 2000    1    2    0    0    4    0    0   20    0    0    0    0    0    1    0
## 2001    2    4    0    0    1    0    0    0    0    2    3    2    3    1    0
## 2002    0    1    1    0    0    0    0    4    0    0    0    0    0    1    0
## 2003    0    1    0    0    0    0    0    5    0    0    0    0    0    0    0
## 2004    0    1    2    0    0    0    0    4    0    0    0    0    0    0    0
## 2005    0    0    0    0    0    0    0    4    0    0    0    0    0    0    0
## 2006    1    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## 2007    0    2    2    0    0    2    0    5    0    1    0    0    0    0    0
## 2008    2    1    2    1    0    2    0    2    0    0    0    2    0    1    0
## 2009    0    2    0    0    0    1    0    2    0    1    0    0    0    1    0
## 2010    0    2    0    0    0    2    0    3    0    0    0    0    0    1    0
## 2011    2    0    2    0    0    1    0    4    0    0    0    0    0    0    0
## 2012    1    2    0    1    0    0    0    4    0    1    0    0    0    1    0
## 2013    0    2    0    0    0    1    0    3    0    0    0    0    0    1    0
## 2014    0    1    0    0    0    0    0    3    0    1    0    0    0    1    0
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1997    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1998    1    1    1    8    1    1    1    1    1    1    1    1    1    1    1
## 1999    0   10    1   18    0    0    0    0    0    0    1    1    0    0    0
## 2000    0    0    0   31    0    0    0    0    0    0    0    0    0    0    0
## 2001    0    0    1   23    0    0    0    0    0    0    0    1    0    0    0
## 2002    0    0    0   22    0    0    0    0    1    0    0    3    1    0    0
## 2003    0    0    0    9    0    0    0    0    0    0    0    2    1    0    0
## 2004    0    0    2   17    0    0    0    3    0    0    0    3    0    0    0
## 2005    0    0    0    0    0    0    0    4    0    0    2    0    0    0    0
```

```
## 2006    0    0    0    0    0    0    0   14    0    0    0    3    0    0    0
## 2007    0    0    0    3    0    0    0   11    0    0    2    4    2    0    0
## 2008    0    0    0    0    0    0    0   10    0    0    0    4    0    0    0
## 2009    0    0    5    0    0    0    0    9    0    0    0    2    0    0    0
## 2010    0    0    1    0    0    0    0    3    0    0    3    2    0    0    0
## 2011    0    0    2    0    0    0    0   31    0    0    0    2    0    0    0
## 2012    0    0    1    0    0    0    0    9    0    0    0    2    0    0    0
## 2013    0    0    0    0    0    0    0    4    0    0    0    4    0    0    0
## 2014    0    0    2    0    0    0    0    5    0    0    0    2    0    0    0
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1997    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1998    1    2    1    1    1    1    1    2   19    1    3    1    1   17   25
## 1999    0    0    3    0    0    1    0    1    3    0    2    0    0    0   43
## 2000    0    0    1    0    0    0    0    2    5    0    2    1    0    0   57
## 2001    0    0    0    0    0    0    0    0    0    0    1    0    0    0   58
## 2002    0    0    0    0    0    0    0    0    0    0    1    0    0    0   36
## 2003    0    1    4    0    0    0    0    0    0    0    1    0    0    0   24
## 2004    0    0    3    0    0    0    0    0    0    0    0    0    0    0   28
## 2005    0    0    2    0    0    0    0    0    0    0    0    0    0    0   39
## 2006    0    0    5    0    0    0    0    0    0    0    0    0    0    0   46
## 2007    0    0   11    1    0    0    0    0    0    0    0    0    0    0   96
## 2008    0    0    8    0    0    0    0    0    0    0    0    0    0    0   79
## 2009    0    1    7    0    0    0    0    0    0    0    0    0    0    0   28
## 2010    0    2   14    0    0    0    0    0    0    0    0    0    0    0   29
## 2011    0    1    9    0    0    0    0    0    0    0    0    0    0    0   35
## 2012    0    0   15    0    0    0    0    0    0    0    0    0    0    0   46
## 2013    0    3    7    0    0    0    0    0    0    0    0    0    0    0   33
## 2014    0    5   11    0    0    0    0    0    0    0    0    0    0    0   35
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1997    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1998    6   10    6    2    1    1    1    1    1    1    1    2    2   20   15
## 1999    4    0    7    1    0    0    0    0    0    0    0    0    0   44   19
## 2000   28    0   12    1    0    0    0    0    0    0    0    0    0   52   56
## 2001   31    0    6    4    0    0    2    0    0    0    0    0    0   53   11
## 2002   10    0   15    0    0    0    1    0    0    0    0    0    0   35    0
## 2003   21    0    7    0    0    0    0    0    0    0    0    0    0   27    0
## 2004   18    0    3    0    0    0    0    0    0    0    0    0    0   24    0
## 2005   15    0    2    0    0    0    1    0    0    0    0    0    0   24    0
## 2006   12    0    5    0    0    0    1    0    0    0    0    0    0   32    0
## 2007   22    0    4    0    0    0    0    0    0    0    0    0    0   51    0
## 2008   28    0    2    2    0    0    0    1    0    0    0    0    0   64    0
## 2009   12    0    4    0    0    0    0    0    0    0    0    0    0   32    0
## 2010   11    0    3    0    0    0    0    0    0    0    0    0    0   28    0
## 2011   12    0    1    0    0    0    0    0    0    0    0    0    0   30    0
## 2012   15    0    0    0    0    0    0    0    0    0    0    0    0   41    0
## 2013   20    0    0    0    0    0    0    0    0    0    0    0    0   29    0
```

```
## 2014   20    0    0    0    0    0    0    1    0    0    0    0    0   39    0
##       <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1997    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1998    1    1    1    1   13    9    1    1    1    1    1    1    4    3    1
## 1999    0    0    0    3   34   14    1    0    0    0    0    0   20   27    2
## 2000    0    0    0   14   42   33   19    0    0    0    0    0   15   39    0
## 2001    0    0    0    9   36   52    0    0    0    0    0    0   17   24    0
## 2002    1    0    0    8   28   10    1    0    0    0    0    0    6   14    0
## 2003    0    1    0   11   25    2    0    1    0    0    0    0   17   17    0
## 2004    0    0    0   21   36   24    0    0    0    0    0    0   19   13    0
## 2005    0    1    0   19   21   31    0    0    0    0    0    0   16   14    0
## 2006    0    0    0   37   28   19    0    0    0    0    0    0    0   21    0
## 2007    0    3    0   31   66   61    2    0    0    0    0    0    0   31    0
## 2008    0    1    0   23   51   25    2    0    0    0    0    0    0   32    0
## 2009    0    0    0   15   25    9    5    0    0    0    0    0    0   19    0
## 2010    0    4    0   16   22    3    3    0    0    0    0    0    0   15    0
## 2011    0    1    1   19   21    0    0    0    0    0    0    0    0   22    0
## 2012    0    2    0   19   36    0    0    0    0    0    0    0    0   20    0
## 2013    0    2    0   11   51    0    6    0    0    0    0    0    0   13    0
## 2014    0    2    0   13   37    0    1    0    0    0    0    0    0   13    0
##       <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1997    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1998    1    1    3    0    0    0    0    0    0    0    0    0    0    0    0
## 1999    0    0    1    1    1    1    3    1    1   13    1    1   17    1    1
## 2000    0    0    0    0    0    1    0    0    0    8    0    0   23    0    1
## 2001    0    0    0    1    0    0    0    0    0    0    0    0   32    1    0
## 2002    0    0    1    0    0    0    0    0    0    0    0    0   15    0    0
## 2003    0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## 2004    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2005    0    0    2    0    0    0    0    0    0    1    1    0    0    0    0
## 2006    0    0    0    0    0    0    0    0    0    0    0    0    0    2    0
## 2007    0    0    0    0    0    0    0    0    0    1    0    0    0    2    0
## 2008    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## 2009    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## 2010    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2011    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## 2012    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2013    0    0    3    0    0    0    0    0    0    0    0    0    0    1    0
## 2014    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##       <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1997    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1998    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
## 1999    2   25   11    2    3   16   18   27   10   21   21    1   17    5    1
## 2000    9   81   54   20    0   43   61   73    0   71   49    0    0   18    0
## 2001    9   69   40   14    0   34   42   67    0   75   70    0    0   15    0
## 2002    0   28   20    1    0   15   16   40    0   52   12    0    0   16    2
## 2003    1   35   10    0    0    0   26   73    0   67    0    0    0    5    3
## 2004    1   14    0    0    0    0   30   39    0   26    0    0    0    8    0
## 2005    1   25    0    0    0    0   23   33    0   45    0    0    0    0    0
## 2006    8   39    0    0    0    0   23   36    0   59    0    0    0    0    1
## 2007    9   39    0    0    0    0   62   84    0  113    0    0    0    0    1
## 2008    1    0    0    0    0    0   64   61    0  122    0    0    0    0    4
## 2009    1    0    0    0    0    0   23   21    0   26    0    0    0    0    0
## 2010    3    0    0    0    0    0    9   18    0   29    0    0    0    0    4
## 2011    1    0    0    0    0    0   16   16    0   37    0    0    0    0    2
## 2012    1    0    0    0    0    0   25   17    0   24    0    0    0    0    2
## 2013    4    0    0    0    0    0   19   26    0   43    0    0    0    0    0
## 2014    3    0    0    0    0    0   15   37    0   40    0    0    0    0    0
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1997    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1998    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1999    1   21    3    1    1    1    3   20    1   13    8    1    3    2    1
## 2000    0   64   11    0    0    0   11   72    0   22    0    0    0    1    0
## 2001    0   82    4    0    0    0   13   66    0    9    0    0    0    0    0
## 2002    0   12    4    0    0    0    8   43    0   15    0    0    0    0    0
## 2003    0    0    2    0    0    0    4   36    0    2    0    0    0    0    0
## 2004    0    0    0    0    0    0    0   27    0    0    0    0    0    0    0
## 2005    0    0    0    0    0    0    0   45    0    0    0    0    0    0    0
## 2006    0    0    1    0    0    0    0   49    0    0    0    0    0    0    0
## 2007    0    0    2    0    0    0    0   77    0    0    0    0    0    0    0
## 2008    0    0    3    0    0    0    0   55    0    0    0    0    0    0    0
## 2009    0    0    1    0    0    0    0   20    0    0    0    0    0    0    0
## 2010    0    0    4    0    0    0    0   11    0    0    0    0    0    0    0
## 2011    0    0    0    0    0    0    0    9    0    0    0    0    0    0    0
## 2012    0    0    0    0    0    0    0   12    0    0    0    0    0    0    0
## 2013    0    0    0    0    0    0    0   12    0    0    0    0    0    0    0
## 2014    0    0    0    0    0    0    0   11    0    0    0    0    0    0    0
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1997    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1998    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1999    1    1    1    1    1    1    1    2    1    1    1    2    1    1    1
## 2000    0    0    0    0    0    1    1    0    1    0    0    0    0    1    1
## 2001    3    0    2    0    2    3    2    0    0    0    0    0    0    0    0
## 2002    1    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## 2003    0    0    0    0    0    0    0    0    0    0    0    0    0    1    1
## 2004    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2005    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2006    0    0    1    0    1    1    0    0    0    0    0    0    0    6    0
```

```
## 2007    1    0    0    0    0    0    0    0    0    0    0    0    0    4    0
## 2008    1    0    1    0    0    0    0    0    0    0    0    0    0   12    0
## 2009    0    0    0    0    0    0    0    0    1    2    0    0    0    4    0
## 2010    0    0    0    0    0    0    0    0    3    0    0    0    1    2    0
## 2011    0    0    0    0    0    0    0    0    1    0    0    0    0    2    0
## 2012    0    0    0    0    0    0    0    0    1    0    0    0    0    1    0
## 2013    0    0    0    0    0    0    0    0    0    0    0    0    0    3    0
## 2014    0    0    0    0    0    0    0    0    0    0    0    0    0    6    0
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1997    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1998    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1999    1    1    1    1    1    1    1    1    1    1    2    1    1    1    1
## 2000    0    1    0    0    0    0    4    0    0   29    1    0    0    0    0
## 2001    0    2    0    0    0    0    3    0    0   27    1    0    0    0    0
## 2002    0    0    1    0    0    0    3    0    0   22    2    0    0    0    0
## 2003    0    0    0    0    0    0    7    1    0   21    0    0    0    0    0
## 2004    0    0    0    0    0    2    5    0    0   28    0    0    0    0    0
## 2005    0    0    0    0    0    0   10    4    0   32    0    0    0    0    0
## 2006    0    2    0    0    0    0    8    0    1   28    0    0    0    0    0
## 2007    0    3    0    0    0    0   12    0    2   45    0    0    0    0    0
## 2008    0    1    0    0    0    0    6    0    4   47    0    0    0    0    0
## 2009    0    2    0    0    0    0   12    0    2   21    1    0    0    0    0
## 2010    0    1    0    0    0    0    7    0    6   22    1    0    0    0    0
## 2011    0    2    0    0    0    1    4    0    2   24    0    0    0    0    0
## 2012    0    3    0    0    0    0    6    0    2   38    0    0    0    0    0
## 2013    0    3    0    0    0    0    4    0    4   21    1    0    0    0    0
## 2014    0    0    0    0    0    0    5    0    1   14    1    0    0    0    0
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1997    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1998    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1999    1    1    1    1    1    1    0    0    0    0    0    0    0    0    0
## 2000    0    0    0    0   20   25    1    1    1    1    2    1    2    3    8
## 2001    0    1    3    0   30   27    1    0    0    0    0    2    0    0   28
## 2002    0    0    0    0   21   19    0    1    0    0    0    0    0    1    6
## 2003    0    0    0    0   21   24    1    0    0    0    0    0    0    1    0
## 2004    0    0    0    0   25   18    1    3    0    0    0    0    0    0    0
## 2005    0    1    0    0   30   31    0    0    0    0    0    0    0    0    0
## 2006    0    0    0    0   29   31    0    0    1    0    1    0    0    0    0
## 2007    0    2    0    0   48   76    0    0    0    0    0    0    1    0    0
## 2008    0    0    0    0   52   74    0    3    1    0    1    0    0    0    0
## 2009    0    0    0    0   34   26    0    2    0    0    0    0    0    0    0
## 2010    0    0    0    0   32   28    0    1    0    0    0    0    0    0    0
## 2011    0    0    0    0   40   35    0    2    0    0    0    0    0    0    0
## 2012    0    0    0    0   61   45    0    0    0    0    0    0    0    0    0
## 2013    0    0    0    0   29   33    0    0    0    0    0    0    0    0    0
## 2014    0    0    0    0   28   34    0    0    0    0    0    0    0    1    0
```

```
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1997    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1998    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1999    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2000    3   14   10    1    2    2    1    2    1    1    1   12    1    1   60
## 2001    0    2    1    0    0    1    1    0    3    0    0   29    0    0   38
## 2002    0    8    8    0    0    1    0    0    1    0    1   17    0    0   33
## 2003    0   13   11    0    1    0    2    0    4    0    0   33    0    0   25
## 2004    0    7    9    0    1    0    1    0    1    0    1   15    0    0   13
## 2005    1    5   15    0    0    0    0    0    1    0    1   19    0    0    0
## 2006    0    6   15    0    2    1    0    0    0    0    1   39    0    0    0
## 2007    2    4   28    2    0    4    0    0    3    0    3   81    0    0    0
## 2008    1   25   36    3    2    4    0    0    1    0    0   94    0    0    0
## 2009    0   14   17    0    2    0    0    0    6    0    0   12    0    0    0
## 2010    1    9    9    0    0    0    0    0    5    0    0   13    0    0    0
## 2011    0   10   15    0    2    1    0    0    0    0    0   10    0    0    0
## 2012    2   15   18    0    1    0    0    0    0    0    0    0    0    0    0
## 2013    1   16    9    0    2    0    0    0    1    0    0    0    0    0    0
## 2014    0   22   16    0    0    0    0    0    0    0    0    0    0    0    0
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1997    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1998    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1999    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2000    1   63    1    5   45    1    1    1    1   48    4   10   14    1    1
## 2001    0   53    1    8   59    0    0    0    0   70    1    5    3    0    0
## 2002    0   35    3    0   29    0    0    0    0   33    2    1    3    1    0
## 2003    0   78    0    1   34    0    0    0    0   77    7    4    0    0    0
## 2004    0   27    0    0   17    0    0    0    2   24    2    3    2    0    0
## 2005    0   38    0    0   24    0    0    0    0   38    0    1    4    0    1
## 2006    0   31    0    0    0    0    0    0    0   43    0    0    3    0    0
## 2007    0   35    0    0    0    0    1    0    1   49    0    0    8    0    0
## 2008    0   61    0    0    0    0    0    0    0   62    0    0    8    0    0
## 2009    0   16    0    0    0    0    0    3    0   29    0    0    7    0    0
## 2010    0   11    0    0    0    0    0    1    0   24    0    0    0    0    0
## 2011    0   24    0    0    0    0    0    0    1   30    0    0    0    0    0
## 2012    0   18    0    0    0    0    0    0    0   45    0    0    2    0    0
## 2013    0   36    0    0    0    0    0    0    0   43    0    0    3    0    0
## 2014    0   25    0    0    0    0    0    1    1   31    0    0   13    0    0
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1997    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1998    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1999    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
## 2000   12    1    1    1    7    2   31   31   13   14   14   15   11    5    3
## 2001    8    0    0    1    0    3   33   50   24    1    4    1    0    2    3
## 2002    0    0    0    0    1    1   20    0    8    3    0    0    0    0    0
## 2003    0    0    0    0    4    0   66    2    4    0    0    0    0    0    0
## 2004    2    0    0    0    6    0   18    7    0    2    2    0    0    0    2
## 2005    0    0    0    0    6    0   46    1    0    0    0    0    0    0    3
## 2006    0    0    0    1   12    0   49   10    0    8    8    0    0    0    9
## 2007    1    0    0    0   19    0   61   29    0   40   37    0    0   30   18
## 2008   28    0    0    0    9    0   64   30    0   13   13    0    0   11   25
## 2009    0    0    0    0    6    0   29   25    0    7    5    0    0    7    1
## 2010    0    0    0    0    1    0   16   20    0    0    0    0    0    2    7
## 2011    0    0    0    0    3    0    7    6    0    0    0    0    0    0    3
## 2012    0    0    0    1    1    0   10   15    0    2    0    0    0    0    2
## 2013    0    0    0    0    5    0   29   48    0    4    3    0    0    0   28
## 2014    0    0    0    0    5    0   16   29    0    9    0    0    0    0   11
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1997    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1998    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1999    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2000    1    2    1    3    1    2    3    1    1    1    1    1    1    1    1
## 2001    0    0    0    1    0    2    2    0    0    0    0    0    0    1    0
## 2002    0    2    0    1    0    0    1    0    1    0    0    0    0    0    1
## 2003    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## 2004    0    3    0    1    0    0    0    0    1    0    0    0    1    0    0
## 2005    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2006    1    1    0    0    1    0    0    0    2    0    0    0    0    0    0
## 2007    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2008    0    1    0    4    0    0    0    0    0    0    0    0    0    1    0
## 2009    0    1    0    3    0    0    0    0    0    0    0    0    0    0    0
## 2010    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## 2011    0    0    0    2    0    0    0    0    0    0    0    0    0    0    0
## 2012    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## 2013    0    0    0    1    0    0    0    0    0    0    0    0    0    1    0
## 2014    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1997    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1998    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1999    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2000    1    1    1    2    1    1    1    0    0    0    0    0    0    0    0
## 2001    0    0    0    0    2    0   25    2    2    2    1    1    1    1    1
## 2002    0    0    0    0    1    0   13    0    0    0    0    0    0    0    0
## 2003    0    2    0    0    0    0    6    0    0    0    0    0    0    0    0
## 2004    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2005    0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## 2006    0    0    0    1    0    0    1    0    0    0    0    0    0    0    0
## 2007    0    0    0    0    0    1    5    0    0    0    0    0    0    0    0
```

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```
## 2008    1    3    0    1    0    0    3    1    0    1    0    0    0    0    0
## 2009    0    0    0    0    0    1    1    0    0    0    0    0    0    0    0
## 2010    0    0    0    0    0    0    5    0    0    0    0    0    0    0    0
## 2011    0    0    0    0    0    0    2    1    0    0    0    0    0    0    0
## 2012    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2013    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## 2014    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1997    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1998    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1999    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2001    1    1    1    1    1    2    3    1    1    1    1    1    1    1    1
## 2002    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2003    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2004    0    0    0    0    0    0    0    0    1    0    1    0    0    0    0
## 2005    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2006    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2007    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2008    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2009    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2010    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2011    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## 2012    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2013    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2014    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1997    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1998    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1999    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2001    1    1    1    1    2    1    1    1    1    1    1    1    1    1    1
## 2002    0    0    0    0    0    1    1    0    0    0    0    0    0    0    0
## 2003    0    2    0    0    2    0    0    0    0    0    0    0    0    0    0
## 2004    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2005    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## 2006    0    0    0    0    3    1    0    0    0    1    0    1    0    0    0
## 2007    0    0    0    0    7    0    0    0    0    0    0    0    0    0    0
## 2008    0    0    0    0    7    0    0    0    0    0    0    0    0    0    0
## 2009    0    0    0    0    5    0    0    0    0    0    1    0    0    0    0
## 2010    0    0    0    0    7    0    0    0    0    0    0    0    0    0    0
## 2011    0    0    0    1    3    0    0    0    0    0    0    0    0    0    0
## 2012    0    0    0    2    6    0    0    0    0    0    0    0    0    0    0
## 2013    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## 2014    0    0    0    1    5    0    0    0    0    0    0    0    0    0    0
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
```

```
## 1993       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1997       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1998       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1999       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2000       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2001       1    1    1    1    3    1    1   27    1    1    2    1    1    2    2
## 2002       0    1    0    0    0    0    0    0    0    0    6    0    0    1    1
## 2003       0    0    0    0    0    0    3    0    0    0    3    0    0    1    1
## 2004       0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## 2005       0    0    0    0    0    0    0    0    0    0    3    0    0    0    0
## 2006       1    0    1    0    0    0    0    0    0    0    5    0    0    1    0
## 2007       0    0    0    0    0    0    0    0    0    0   13    0    0    3    2
## 2008       0    0    0    0    0    0    0    0    0    0    5    0    0    0    0
## 2009       0    0    1    0    1    2    0    0    0    0    2    0    0    0    0
## 2010       0    0    0    0    0    0    0    0    0    0    2    0    0    3    3
## 2011       0    0    0    0    0    1    0    0    0    0    1    0    0    0    0
## 2012       0    0    0    0    0    0    0    0    0    0    1    0    0    0    1
## 2013       0    0    0    0    0    0    0    0    0    0    1    0    0    0    1
## 2014       0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
##         <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1997       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1998       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1999       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2000       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2001       2    3    1    1    1    1    2    1    1    1    2    2   19    1    4
## 2002       4    0    1    0    0    0    1    1    0    0    0    0    9    0    0
## 2003       5    1    4    2    0    0    1    0    0    0    0    0   16    0    0
## 2004       0    0    0    0    0    0    1    1    0    0    0    0   14    0    0
## 2005       1    0    0    0    0    0    0    4    0    0    0    0    4    0    0
## 2006       0    0    0    0    0    1    0    1    0    0    0    0    1    0    0
## 2007       2    0    0    0    0    1    0    1    0    0    0    0    2    0    0
## 2008       0    0    0    0    0    2    4    1    0    0    0    0    3    0    0
## 2009       1    1    0    0    0    1    3    1    0    0    0    0    3    0    0
## 2010       1    1    0    0    0    0    2    0    0    0    0    0    6    0    0
## 2011       2    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2012       0    0    0    0    0    1    2    1    0    0    0    0    2    0    1
## 2013       0    1    0    0    0    0    1    0    0    0    0    0    4    0    0
## 2014       3    1    0    0    0    0    0    1    0    0    0    0    1    0    0
##         <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1997       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1998       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1999       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2000       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
## 2001    1    7    3    1    1    1    2    1    1    4    1    1    1    1    1
## 2002    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2003    0    0    0    1    1    1    0    1    0    0    0    0    0    0    0
## 2004    0    0    0    0    1    1    0    1    0    0    0    0    0    0    0
## 2005    0    0    0    0    2    0    0    1    0    0    0    0    0    0    0
## 2006    0    0    0    0    1    3    0    0    0    0    0    0    0    0    0
## 2007    0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## 2008    0    0    0    4    0    3    0    0    0    0    0    0    0    0    0
## 2009    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2010    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2011    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## 2012    0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## 2013    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## 2014    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1997    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1998    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1999    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2001    3    2    2    1    1    1    2    0    0    0    0    0    0    0    0
## 2002    3    2    1    0    0    1    0    1    1    1    1    1    1    1    1
## 2003    2   12   16    1    0    0    0    0    0    0    0    0    0    0    0
## 2004    1   10    4    0    0    0    0    0    0    0    0    0    0    0    0
## 2005    2    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2006    6   14    3    0    0    0    0    0    0    0    0    0    0    0    0
## 2007   12    9    0    0    2    0    0    0    0    0    0    0    0    0    0
## 2008    2    7    0    0    0    0    0    1    0    0    0    0    0    0    0
## 2009    4    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2010    5    0    0    0    0    0    0    0    0    0    0    0    0    0    5
## 2011    1    3    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2012    3    4    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2013    3    2    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2014    7    5    0    0    0    0    0    0    0    0    0    0    0    0    0
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1997    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1998    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1999    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2001    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2002    3    3    1    2    2    1    1   32    1    9   13   15    1    1    1
## 2003    3    2    0    0    0    0    0   26    0    0   29    0    1    0    0
## 2004    0    0    0    0    0    0    0   18    0    0   26    0    3    0    2
## 2005    0    0    0    0    0    0    0   21    0    0   24    0    6    0    3
## 2006    0    2    0    0    0    0    0   27    0    0   11    0    5    0    0
## 2007    0    1    0    2    1    0    0   57    0    0    0    0    7    0    4
## 2008    0    3    0    1    2    0    0   36    0    0    0    0   12    0    5
```

```
## 2009     0     0     0     0     0     0     0    18     0     0     0     0     5     0     4
## 2010     0     4     0     1     1     0     0    22     0     0     0     0     6     1     1
## 2011     0     2     0     1     1     0     0    26     0     0     0     0     5     0     3
## 2012     0     2     0     0     0     0     0    33     0     0     0     0     2     3     0
## 2013     0     0     0     1     1     0     0    20     0     0     0     0     5     6     2
## 2014     0     0     0     0     0     0     0    27     0     0     0     0     8     0     0
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1994     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1995     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1996     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1997     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1998     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1999     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2000     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2001     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2002     1     1    16    10    17     3     2     7     1     1     1     1     9     4     2
## 2003     0     0    27    28    38     0     0    33     0     1     1     0     9     0     0
## 2004     0     0    22    26    20     0     0    22     0     1     1     1    12     0     0
## 2005     0     0    30    34    23     0     0    19     0     0     0     0     7     0     0
## 2006     0     0    40    40     0     0     0    17     0     0     0     0    18     0     0
## 2007     0     0    98   105     0     2     1    23     0     0     0     0    80     0     0
## 2008     0     0   146    71     0     7     0     0     0     0     1     0    38     0     0
## 2009     0     0    35    24     0     6     0     0     0     0     1     0    23     0     0
## 2010     0     0    11    14     0     2     0     0     0     0     2     0    20     0     0
## 2011     0     0     2     9     0     0     0     0     0     0     0     0    24     0     0
## 2012     0     0     2    14     0     0     0     0     0     0     1     0    34     0     0
## 2013     0     0     6    27     0     0     0     0     0     0     3     0    29     0     0
## 2014     0     0     5    13     0     0     0     0     0     0     0     0    23     0     0
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1994     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1995     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1996     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1997     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1998     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1999     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2000     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2001     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2002    21    19    13     4     3     1     1     3     2     3     1     1     1     1     1
## 2003    33    43    40    26     3     0     0     8     0     0     0     0     0     0     0
## 2004    28    34    21    25     1     0     0     8     0     4     0     0     0     0     0
## 2005    44    44    47    36     0     0     0     0     0     0     0     0     0     1     0
## 2006    53     0    56    38     0     0     1     0     0     0     0     0     0     0     0
## 2007    67     0    75   100     0     0     3     0     0     0     0     0     0     2     0
## 2008    83     0    55    49     0     0     0     0     0     0     0     0     0     3     0
## 2009    48     0    29    37     0     0     0     0     0     0     0     0     0     1     0
## 2010    39     0    29    12     0     0     0     0     0     0     0     0     0     4     1
## 2011    37     0    19    16     0     0     0     0     0     0     0     0     0     2     0
## 2012    44     0    21    25     0     0     0     0     0     0     0     0     0     2     0
## 2013    70     0    35    40     0     0     0     7     0     0     0     0     0     1     0
## 2014    33     0    23    35     0     0     0     5     0     0     0     0     0     3     0
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
```

```
## 1994      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1995      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1996      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1997      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1998      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1999      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2000      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2001      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2002      1      1      1      1      1      1      1      1      0      0      0      0      0      0      0
## 2003      0      0      0      4      0      0      0      2      2      2      7     14      1      1      1
## 2004      0      0      0      1      3      0      1      1      3      5     18      3      0      0      0
## 2005      0      0      0      0      0      0      0      0      0      3     25      0      0      0      0
## 2006      0      0      0      0      0      0      0      1      0      4      0      0      0      0      0
## 2007      0      0      0      0      0      0      0      0      0     16      0      0      0      1      0
## 2008      0      0      0      0      0      0      0      0      0     14      0      0      0      1      0
## 2009      0      0      0      0      1      0      0      0      0      4      0      0      3      1      0
## 2010      0      0      0      0      0      0      0      0      0     12      0      0      1      0      0
## 2011      0      0      0      0      0      0      0      0      0      5      0      0      0      1      0
## 2012      0      0      0      0      0      1      0      0      0      6      0      0      0      0      0
## 2013      0      0      0      0      0      0      0      0      0      5      0      0      1      1      0
## 2014      0      0      0      0      0      0      0      0      0      8      0      0      1      0      0
##       <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>
## 1993      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1994      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1995      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1996      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1997      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1998      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1999      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2000      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2001      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2002      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2003     19      2      1      1      1      1      1      1      7     22      1      2      1      1      1
## 2004     18      2      0      0      0      0      0      0      4     24      0      1      0      1      0
## 2005     27      2      0      0      0      0      0      0      2     46      0      0      1      0      0
## 2006     33      1      0      0      0      0      0      0      0     43      0      2      0      2      0
## 2007     69      1      0      0      0      0      0      0      0     89      0      3      0      0      0
## 2008     58      2      0      0      0      0      0      0      0     75      0      0      1      2      0
## 2009     44      0      0      0      1      1      0      0      0     31      0      0      1      0      0
## 2010     37      1      0      0      1      0      0      0      0     29      0      0      3      0      0
## 2011     41      1      0      0      1      0      0      0      0     34      0      0      0      0      0
## 2012     47      1      0      0      0      0      0      0      0     40      0      0      1      0      0
## 2013     53      7      0      0      2      0      0      0      0     48      0      0      0      1      0
## 2014     48      7      0      0      2      0      0      0      0      7      0      0      0      0      0
##       <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>
## 1993      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1994      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1995      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1996      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1997      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1998      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1999      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2000      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2001      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
```

```
## 2002      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2003      3    2    2    2    1    1    1    2    3    1    2    1    2    1    2
## 2004      2   15    4    2    0    0    0    6    1    0    1    0    0    0    0
## 2005      2   12    1    4    0    0    0   33   16    0    7    0    2    0    0
## 2006      2    6    0    8    0    0    0   20   24    0   32    0    6    0    0
## 2007      2    0    0    9    0    0    0   19   21    0   25    0   14    0    0
## 2008      0    0    0    4    0    0    0   36   21    0    8    0    6    0    0
## 2009      0    0    0    2    0    0    0   16    9    0    0    0    3    0    0
## 2010      0    0    0    4    0    0    0   25   23    0    0    0    1    0    0
## 2011      0    0    0    2    0    0    0   15    9    0    0    0    1    0    0
## 2012      0    0    0    4    0    0    0   42   18    0    0    0    0    0    0
## 2013      0    0    0    1    0    0    0   29   14    0    0    0    3    0    0
## 2014      0    0    0    1    0    0    0   25   16    0    0    0    7    0    0
##       <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1997      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1998      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1999      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2000      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2001      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2002      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2003      1    1    1    0    0    0    0    0    0    0    0    0    0    0    0
## 2004      0    0    0    1    1   10    2    3    2   11    2    1    1    1    1
## 2005      1    0    0    0    0    4    0    1   10    0    0    2    2    1    0
## 2006      0    0    0    0    0    0    2    3    8    0    0    2    2    1    0
## 2007      0    0    0    0    0    0    0   10   21    0    0    3    1    0    0
## 2008      0    2    0    0    0    0    0   14    5    0    0   30    0    0    0
## 2009      0    0    0    0    0    0    0    6    5    0    0    0    4    0    0
## 2010      0    0    0    1    0    0    0   10    1    0    0    0    0    0    0
## 2011      0    0    0    0    0    0    0    5    3    0    0    0    2    0    0
## 2012      0    1    0    0    0    0    0    4    5    0    0    0    1    0    0
## 2013      0    0    0    0    0    0    0    7   10    0    0    0    0    0    0
## 2014      0    0    0    0    0    0    0    5    5    0    0    0    1    0    0
##       <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1997      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1998      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1999      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2000      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2001      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2002      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2003      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2004      1   28   24   24   12    3   13   17   14    3    4   15    2    1    1
## 2005      0   10   42   41   33   23   34    8   49    0    2    9    0    2    4
## 2006      0    0    0   58   24   10   29    1   58    3    7   17    0    0    1
## 2007      0    0    0   36   42    0   31    0   80    0    8    0    0    0    1
## 2008      0    0    0    0   36    0   61    0   89    0    8    0    0    0    0
## 2009      0    0    0    0   31    0   31    0   30    0    5    0    0    0    0
```

```
## 2010    0    0    0    0   25    0   19    0   31    0    4    0    0    0    0
## 2011    0    0    0    0   27    0    4    0   23    0    1    0    0    0    0
## 2012    0    0    0    0   29    0    0    0   25    0    4    0    0    0    0
## 2013    0    0    0    0   36    0    5    0   33    0    3    0    0    0    0
## 2014    0    0    0    0   17    0    6    0   27    0    0    0    0    0    0
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1997    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1998    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1999    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2001    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2002    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2003    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2004    1    1    1    2    2    1    3    1    1    4    4    1    4    1    2
## 2005    2    2    1    3    0    0    5    6    6    0    0   17    5    1    2
## 2006    1    1    0    0    0    2    4    0    0    3    3   23    4    0    2
## 2007    2    2    0    0    0   31    0    0    1    1    0   33    1    0    2
## 2008    0    0    0    0    0   10    0    0    2    2    0   44    5    0    7
## 2009    0    0    0    0    0    6    0    0    0    3    0   17   10    0    5
## 2010    0    0    0    0    0    0    0    0    1    0    0   12    6    0    3
## 2011    3    2    0    0    0    0    0    0    1    1    0    9    5    0    3
## 2012    0    0    0    0    0    2    0    0    0    3    0   17   11    0    2
## 2013    1    0    0    0    0    4    0    0    0    3    0   16    7    0    4
## 2014    0    2    0    0    0   10    0    0    0    4    0   17    4    0    2
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1997    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1998    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1999    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2001    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2002    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2003    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2004    1    2    2    1    1    1    1    3    2    2    1    1    2    1    1
## 2005    0    2    1    0    0    2    9   16    1    7    2    9    0    0    0
## 2006    0    6    0    0    0    1    0    0    0   12    1    0    2    0    0
## 2007    0    4    2    0    0    1    0    0    0    6    1    3    4    0    0
## 2008    0    4    0    0    0    3    0    0    0    0    1    2    0    0    0
## 2009    1    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## 2010    1    1    1    0    0    3    0    0    0    0    3    1    0    0    1
## 2011    0    1    1    0    0    1    0    0    0    0    0    1    0    0    0
## 2012    1    1    0    0    0    1    0    0    0    0    2    0    0    0    1
## 2013    0    0    0    0    0    0    0    0    0    0    3    0    0    0    0
## 2014    0    0    1    0    0    1    0    0    0    0    1    0    0    0    0
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
## 1995      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1996      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1997      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1998      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1999      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2000      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2001      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2002      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2003      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2004      1      1      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2005     22      0      1      1      1      1      1      1      4     10      1      1      1      1      2
## 2006     21      0      0      0      0      0      0      2     32     17      0      0      0      0      7
## 2007     29      0      0      0      1      0      0      0     26     10      0      0      0      0     10
## 2008     31      0      0      0      0      0      0      0      3     10      0      0      0      0      7
## 2009     14      0      0      0      0      0      0      0      0      0      0      0      0      0      9
## 2010     14      0      0      0      0      0      0      0      0      7      0      0      0      0      9
## 2011     21      0      0      0      0      0      1      0      0      8      0      0      0      0      6
## 2012     18      0      0      0      0      0      1      0      0     14      0      0      0      0     15
## 2013     16      0      0      0      0      0      0      0      0     11      0      0      0      0     20
## 2014      5      0      0      0      0      0      0      0      0     10      1      1      1      1     19
##         <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>
## 1993      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1994      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1995      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1996      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1997      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1998      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1999      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2000      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2001      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2002      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2003      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2004      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2005     18     25     30     21      3      4      4     11     33      1      1      1      1      1      1
## 2006      0     35     30      9      0      3     26     23     44      0      0      0      2      0      0
## 2007      2     80     41     28      4      8     69     50     92      0      0      0      6      0      0
## 2008      1     47     28     26      1      2     36     29     61      0      0      0      7      0      0
## 2009      3     23     19      1      0      0     53     16     42      0      0      0      5      0      0
## 2010      2     27     21      0      0      0     22     11     32      0      0      0      0      0      0
## 2011      2     37     22      0      0      0     40     12     28      0      0      0      2      0      0
## 2012      0     32     23      0      0      0     38      7     28      0      0      0      1      0      0
## 2013      3     33     26      0      0      0     22     11     38      0      0      0      2      0      0
## 2014      0     44     29      0      0      0     28     10     24      0      0      0      1      0      0
##         <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>
## 1993      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1994      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1995      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1996      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1997      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1998      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1999      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2000      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2001      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2002      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
```

```
## 2003      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2004      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2005      1    2    3    1    1    1    1    1    1    1    3    1    1    1    6
## 2006      0    1    0    0    9    0    0    0    0    0    6    0    0    0   46
## 2007      0    0    0    0   16    0    0    0    0    0    5    0    0    0    0
## 2008      0    2    0    0   25    0    0    2    0    0   25    0    0    0    0
## 2009      0    1    0    0    0    0    0    0    0    0    4    0    0    0    0
## 2010      0    4    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2011      0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2012      0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2013      0    3    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2014      0    4    0    0    0    0    0    0    0    0    0    0    0    0    0
##        <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1997      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1998      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1999      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2000      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2001      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2002      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2003      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2004      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2005      3    1    1    1    1    1    2    1    1    1    1    1    1    2    1
## 2006      9    0    0    0    0    0    1    0    1    0    0    1    1    0    1
## 2007      0    0    1    0    0    0    1    0    1    0    0    0    3    3    1
## 2008      0    0    0    0    0    0    0    0    0    0    0    0    0    4    1
## 2009      0    0    0    0    1    0    0    0    0    0    0    0    0    1    0
## 2010      0    0    0    0    2    2    0    0    0    0    0    0    0    4    0
## 2011      0    0    0    0    1    0    0    0    0    0    0    0    1    2    1
## 2012      0    0    0    0    0    0    0    0    0    0    0    0    1    2    2
## 2013      0    0    0    0    1    4    2    0    0    0    0    0    1    1    4
## 2014      0    0    1    0    0    2    0    0    0    0    0    0    4    1    1
##        <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1997      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1998      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1999      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2000      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2001      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2002      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2003      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2004      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2005      1    2    1    2    1    1    2    1    2    1    1    0    0    0    0
## 2006      4    9    8    1    0    0    0    0    8    0    1    4    6    1    1
## 2007      3   30    9    0    0    0    1    2    9    0    0    3    4    2    1
## 2008      0    0    0    0    0    0    0    3   14    0    0    2   12    2    0
## 2009      1    0    1    0    0    0    0    3    5    0    0    3    3    0    0
## 2010      8    0    8    0    0    0    3    2    0    0    0    3    3    1    0
```

```
## 2011    7    0    2    0    0    0    1    0    0    0    0    1    3    1    1
## 2012   12    0    4    0    0    0    1    0    0    0    0    2    4    0    0
## 2013   20    0    5    0    0    0    3    0    0    0    0    4    2    0    0
## 2014   16    0    4    0    0    0    0    0    0    0    0    4    3    2    0
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1997    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1998    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1999    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2001    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2002    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2003    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2004    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2005    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2006    2    2    1    1    1    1    1    1    1    1    1    2    1    1    1
## 2007    0    0    4    2    2    0    0    0    0    1    0    1    0    0    0
## 2008    0    0    1    2    2    0    0    0    0    0    0    2    0    4    2
## 2009    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2010    0    0    0    0    0    0    0    0    0    0    0    1    1    0    1
## 2011    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2012    0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## 2013    0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## 2014    0    0    0    0    0    0    0    0    0    0    0    3    0    0    0
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1997    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1998    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1999    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2001    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2002    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2003    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2004    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2005    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2006    1    1    9    5    5    4   25    1    1    3    1    1    6   10    1
## 2007    2    0   34   10    9    7  108    0    0    0    0    0   10    8    0
## 2008    1    0   30   12   11    5   62    0    0    3    0    0    5    0    0
## 2009    3    0   28    4    9    4   24    0    0    0    0    0    8    0    1
## 2010    1    0   33    2    7    5    0    0    0    1    0    0    6    3    0
## 2011    1    0   31    0    4   10    0    0    0    0    0    0    6    4    0
## 2012    4    0   26    2    5    7    0    1    0    1    0    0    7    1    0
## 2013    5    0   25    3   15   17    0    0    0    2    0    0   11    4    0
## 2014    4    0   29    1    7   11    0    1    0    4    0    0   13    3    0
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
## 1996     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1997     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1998     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1999     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2000     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2001     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2002     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2003     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2004     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2005     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2006     1     1     1    20     3    17     2     1     1    28     9     1     2     2     1
## 2007     0     0     0    91     2    30     0     1     1    80    51     0     0     0     2
## 2008     0     0     0    65     3    47     0     0     1    38    35     2     0     1     1
## 2009     0     0     1    39     0    16     0     0     2    15    21     0     0     0     1
## 2010     0     0     0    19     0    30     0     0     0    20    27     0     0     0     2
## 2011     0     0     0    28     0    23     0     2     0    23    20     0     0     0     0
## 2012     0     0     0    23     0    15     0     2     0    18    33     0     0     0     0
## 2013     0     0     0    28     0     0     0     1     0    10    25     0     0     0     0
## 2014     0     0     0    22     0     0     0     0     0     0    26     0     0     0     3
##       <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1994     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1995     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1996     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1997     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1998     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1999     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2000     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2001     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2002     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2003     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2004     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2005     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2006     1     1     1     1     8     8     2     1     2     2     8     2     2     2     1
## 2007     0     0     0     0    39    35     1     0     0     0     0     7     3     3     0
## 2008     0     0     1     3    13    13     0     2     1     1     0     0     0     2     0
## 2009     0     0     0     5     0     5     3     0     0     0     0     0     1     3     0
## 2010     0     0     0     0     0     0     0     0     0     0     0     5     1     4     0
## 2011     0     0     2     0     0     0     3     0     0     0     0     0     0     0     0
## 2012     0     0     1     0     0     0     1     0     1     0     0     0     3     2     0
## 2013     0     0     2     0     0     0     2     0     0     0     0     0     0     1     0
## 2014     0     0     1     0     0     0     0     0     0     0     0     0     0     1     0
##       <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1994     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1995     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1996     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1997     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1998     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1999     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2000     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2001     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2002     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2003     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
```

```
## 2004      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2005      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2006      1    1    1    1    1    1    1    4    1    1    2    2    2    1    1
## 2007      0    0    0    0    4    0    0    7    1    0    2    0    0    2    2
## 2008      0    0    0    0    3    0    1    8    8    0    6    0    0    0    0
## 2009      0    0    0    0    0    0    0    3    4    0    1    0    0    1    1
## 2010      0    0    0    0    0    0    0    2    0    0    1    0    0    0    0
## 2011      0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## 2012      0    0    0    0    0    0    0    5    0    0    0    0    0    0    0
## 2013      0    0    0    0    0    0    0    2    0    0    1    0    0    0    0
## 2014      0    0    0    0    0    0    0    0    4    0    1    0    0    0    0
##        <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1997      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1998      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1999      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2000      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2001      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2002      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2003      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2004      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2005      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2006      3    1    1    1    2    1    1    3    1    2    1    1    1    0    0
## 2007     15    0    0    2    2    2    0    6    4    4    1    2    1    1    2
## 2008     10    0    0    2    1    0    2    5    0    0    0    0    0    0    2
## 2009      8    0    0    1    1    2    1    3    0    0    0    0    0    0    0
## 2010      6    0    0    4    1    3    0    7    0    0    0    0    0    1    0
## 2011      7    0    0    3    0    3    0    0    0    0    0    0    0    3    0
## 2012     18    0    0    2    0    6    1    0    0    0    0    0    0    4    0
## 2013     18    0    0    3    0    6    2    0    0    0    0    0    0    4    0
## 2014     10    0    1    3    1    7    0    0    0    0    0    0    0    3    0
##        <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1997      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1998      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1999      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2000      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2001      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2002      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2003      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2004      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2005      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2006      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2007      2    1    1    2    3    1    3    4    5    3    3    1    2    1    1
## 2008      0    0    0    1    3    0    0    2    2    2    3    2    3    0    0
## 2009      0    0    0    4    0    0    0    0    2    4    1    0    0    0    0
## 2010      0    0    0    3    0    1    0    0    3    4    1    0    0    0    0
## 2011      0    0    0    0    0    0    0    1    1    4    0    2    1    0    1
```

```
## 2012     0     0     0     5     0     0     0     3     1     2     0     0     1     0     0
## 2013     0     0     0     4     0     1     0     3     2     2     0     0     0     0     0
## 2014     0     0     0     3     0     0     0     2     1     3     0     0     0     0     0
##        <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1994     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1995     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1996     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1997     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1998     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1999     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2000     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2001     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2002     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2003     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2004     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2005     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2006     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2007    53    50     1     1     1     1     2     1     1     1     1     1     2     1     1
## 2008    84    76     5     0     0     0     0     0     0     0     0     0     0     0     0
## 2009    33    33     0     0     0     0     0     0     0     0     0     0     4     0     0
## 2010    20    40     0     0     0     0     0     0     0     0     0     0     6     0     0
## 2011    19    34     0     0     0     0     0     0     0     0     0     0     8     0     0
## 2012    14    28     0     0     0     0     0     0     0     0     0     0     5     0     0
## 2013    41    40     0     0     0     0     0     0     0     0     0     0     6     0     0
## 2014    35    33     0     0     0     0     0     0     0     0     0     0     9     0     0
##        <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1994     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1995     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1996     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1997     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1998     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1999     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2000     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2001     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2002     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2003     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2004     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2005     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2006     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2007     1     1     1     1     1     1     1     2     4     1     1     4     5     1    20
## 2008     2     0     0     0     0     0     0     2     2     0     0     2    17     3    48
## 2009     0     0     0     0     0     0     0     5     1     1     0     3     1     1    29
## 2010     0     1     0     0     0     0     0     0     1     0     0     2     3     0    15
## 2011     0     0     0     0     0     0     0     0     1     0     0     4     2     2    15
## 2012     0     0     0     0     0     0     0     0     0     1     0     2     3     1    24
## 2013     0     0     0     0     0     0     0     0     0     1     0     3     1     7    50
## 2014     0     0     0     0     0     0     0     0     0     0     0     3     0     3    37
##        <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1994     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1995     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1996     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
```

```
## 1997     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1998     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1999     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2000     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2001     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2002     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2003     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2004     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2005     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2006     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2007    41   31    5   14    1    6    5    1    1   30   28   19   19    1   14
## 2008    44    0    5   20    0    4    7    0    0   11   65    0    0    0   35
## 2009    20    0    3   13    0    5    4    0    0    7   33    0    0    0   11
## 2010     1    0    1    5    0    0    2    0    0    2   27    0    0    0   13
## 2011     7    0    1   12    0    2    1    0    0    0   26    0    0    0    0
## 2012    10    0    0    9    0    0    2    0    0    0   22    0    0    0    0
## 2013    18    0    6   16    0    1    6    0    0    0   25    0    0    0    0
## 2014    15    0    4   11    0    0    1    0    0    0   27    0    0    0    0
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1997     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1998     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1999     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2000     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2001     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2002     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2003     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2004     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2005     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2006     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2007    16   14    1    1    1    3   23    4    1    1    1    2    2    1    1
## 2008    30   35    0    0    0    0   41    1    0    0    0    1    1    2    0
## 2009    12   11    0    0    0    0   12    0    0    0    0    0    3    0    0
## 2010    13   13    0    1    0    0   12    0    1    2    2    0    3    1    0
## 2011     5    4    0    0    0    0    9    1    0    1    1    0    3    1    0
## 2012    10    7    0    0    0    0   13    2    0    0    0    0    0    1    0
## 2013    10    9    0    0    0    0   17    1    1    2    1    0    2    5    0
## 2014    12   11    0    0    0    0   19    4    0    0    0    0    0    1    0
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1997     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1998     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1999     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2000     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2001     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2002     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2003     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2004     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
## 2005       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2006       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2007       3      5      2      1      1      1      4      1      6      2      2      1      1      1      0
## 2008       1      8      0      0      0      0      0      1     13      3      3      5      0      0      4
## 2009       0      6      0      1      0      0      0      0      1      3      3      2      0      0      2
## 2010       0     14      0      0      0      0      0      0      1      0      0      2      0      0      3
## 2011       0     10      0      0      0      0      0      3      0      0      0      1      0      0      4
## 2012       0     16      0      0      0      0      0      3      0      0      0      3      0      0      0
## 2013       0     14      0      0      0      0      0      1      2      0      2      3      0      0      0
## 2014       0     11      0      0      0      0      0      3      2      0      3      7      0      1      0
##        <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>
## 1993       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1994       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1995       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1996       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1997       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1998       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1999       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2000       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2001       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2002       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2003       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2004       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2005       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2006       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2007       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2008       1      1      1      1      5      2      1      2      4     17      5      6     16      1     30
## 2009       1      0      0      0      2      0      0      4      0     10      0      0      0      0     27
## 2010       1      1      0      0      0      0      0      0      0      4      0      4      0      1     37
## 2011       0      0      0      0      0      0      0      0      0      0      2      7      0      1     16
## 2012       0      1      0      0      0      0      0      0      0      0      1      6      0      0     20
## 2013       0      1      0      0      0      0      0      0      0      0      3      6      0      0     22
## 2014       0      0      0      0      0      0      0      3      0      0      2      1      0      2     14
##        <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>
## 1993       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1994       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1995       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1996       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1997       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1998       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1999       0      0      0      1      0      0      0      0      0      0      0      0      0      0      0
## 2000       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2001       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2002       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2003       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2004       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2005       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2006       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2007       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2008       1      2      2      3      2      2      1     10      1      1      1      1      1      1      1
## 2009       0      0      0      0      0      1      0      9      0      0      0      0      0      0      0
## 2010       0      0      0      1      0      0      1      7      0      0      0      0      0      0      0
## 2011       0      0      0      0      0      0      0      6      0      0      0      0      0      0      0
## 2012       0      0      0      1      0      0      0      3      0      0      0      0      0      0      0
```

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```
## 2013      0      0      0      0      0      0      0      3      0      0      0      0      0      0      0
## 2014      0      0      0      1      0      0      0      6      0      0      1      1      1      0      0
##       <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1994      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1995      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1996      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1997      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1998      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1999      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2000      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2001      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2002      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2003      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2004      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2005      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2006      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2007      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2008      1      1      1      1      1      4     22     13     32      1      2      1      1      1      1
## 2009      0      0      0      0      0      4      2     22     34      0      0      0      4      0      4
## 2010      0      0      0      0      0      1      4     11     27      0      0      0      0      0      0
## 2011      0      0      0      0      0      3      0     16     43      0      0      0      0      0      0
## 2012      0      0      0      0      0      1      0      0     33      0      0      0      0      0      0
## 2013      0      0      0      0      0      2      0      0     24      0      0      0      4      0      4
## 2014      1      0      0      1      1      2      0      0     33      0      0      0      0      0      0
##       <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1994      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1995      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1996      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1997      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1998      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1999      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2000      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2001      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2002      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2003      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2004      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2005      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2006      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2007      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2008      5     38      1      1     26     10     24     22      3      7      6      1     10      3      1
## 2009      0      0      0      0      1      0     27     44      5      0      0      0      0      0      3
## 2010      0      0      0      0      0      0     27     25      0      1      0      0      0      0      0
## 2011      0      0      0      3      0      0     21     30      0      0      0      0      0      0      0
## 2012      0      0      0      0      0      0     30     27      0      2      0      0      0      0      0
## 2013      0      0      0      1      0      0     42     19      0      3      0      0      0      0      0
## 2014      0      0      0      0      0      0     36     22      0      0      0      0      0      0      0
##       <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1994      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1995      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1996      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1997      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
```

```
## 1998      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1999      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2000      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2001      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2002      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2003      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2004      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2005      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2006      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2007      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2008      1      4      2      1      2      4      4      2      2      2      1      1      1      1      2
## 2009      1      0      3      2      3      0      0      0      0      0      0      0      0      0      1
## 2010      0      0      6      3      1      0      1      0      0      0      0      0      0      0      0
## 2011      0      1      0      4      4      0      0      0      0      0      0      0      0      0      1
## 2012      0      0      0      2      2      0      0      0      0      0      0      0      0      0      0
## 2013      0      0      0      2      2      0      0      0      0      0      0      0      0      0      0
## 2014      0      0      0     11      0      0      0      0      0      5      0      1      0      0      1
##        <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>
## 1993      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1994      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1995      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1996      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1997      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1998      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1999      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2000      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2001      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2002      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2003      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2004      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2005      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2006      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2007      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2008      1      1      1      1      1      1      1      2      1      2      1      0      0      0      0
## 2009      0      0      0      0      0      0      0      4      1      1      0      3      2      1      1
## 2010      4      0      4      0      0      0      0      2      2      0      0      1      0      3      0
## 2011      4      0      1      0      0      0      0      3      1      0      0      0      1      0      0
## 2012      0      0      0      0      0      0      0      3      0      1      0      1      0      2      0
## 2013      0      0      4      0      0      0      1      0      0      0      0      1      0      4      0
## 2014      0      0      4      0      0      0      0      3      1      0      0      1      0      2      0
##        <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>
## 1993      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1994      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1995      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1996      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1997      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1998      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1999      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2000      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2001      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2002      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2003      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2004      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2005      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
```

```
## 2006      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2007      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2008      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2009      2    1    1   18    2    2    6    2    3    4    1    4    4    1    1
## 2010      0    0    0   24    4    4    2    0    0    7    0    0    0    6    0
## 2011      0    0    0   26    0    0    0    0    0    1    0    0    0    0    0
## 2012      1    0    0   41    0    0    0    0    0    2    0    0    0    0    2
## 2013      0    0    0   27    2    2    0    0    0    3    0    1    0    0    0
## 2014      0    1    0   28    0    0    0    0    0    6    0    7    0    0    2
##        <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1997      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1998      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1999      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2000      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2001      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2002      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2003      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2004      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2005      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2006      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2007      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2008      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2009     11    1    3    2    3    6    5   11    5    1    1    1    1   10    1
## 2010     26    0    1    1    1    7    4   20    6    0    2    3    0   30    0
## 2011     23    0    1    0    0    2    3    6    5    0    1    0    0   25    1
## 2012     24    0    1    0    0    2    7   15   10    0    0    1    0   23    0
## 2013     31    0    1    0    0    4    5   24   11    0    0    1    0   29    0
## 2014     34    0    1    0    0    3    4    6    5    0    0    0    0   37    1
##        <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1997      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1998      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1999      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2000      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2001      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2002      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2003      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2004      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2005      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2006      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2007      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2008      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2009      1    1    1    1    1    1    1    5    1    1    1    3    1    1    1
## 2010      0    0    0    0    0    1    2   24    0    0    1    3    0    0    2
## 2011      0    0    0    1    1    0    0   18    0    0    0    0    0    0    0
## 2012      0    0    0    0    0    0    0   19    0    0    1    1    0    0    0
## 2013      0    2    0    0    0    0    2   21    0    0    0    0    0    1    0
```

```
## 2014       0      0      0      0      0      0      2     25      0      1      0      0      0      1      0
##         <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>
## 1993       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1994       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1995       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1996       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1997       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1998       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1999       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2000       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2001       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2002       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2003       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2004       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2005       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2006       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2007       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2008       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2009       1      1      1      2      1      1      1      1      1      1      1      1      1      0      0
## 2010       0      1      0      0      0      0      0      0      0      0      1      0      0      1      1
## 2011       0      0      0      0      0      0      0      0      0      0      0      0      0      1      1
## 2012       0      0      0      0      0      0      0      0      0      0      2      0      0      0      1
## 2013       0      0      0      0      0      0      0      0      1      0      4      0      0      0      0
## 2014       0      0      0      0      0      0      0      0      2      0      0      0      0      0      0
##         <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>
## 1993       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1994       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1995       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1996       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1997       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1998       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1999       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2000       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2001       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2002       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2003       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2004       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2005       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2006       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2007       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2008       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2009       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2010       1      1      1      1      1      1      1      6     24     11      1      1      1      1     16
## 2011       0      0      0      0      0      0      0      3     33      4      0      0      0      0     23
## 2012       0      1      0      0      0      0      0      0     40     21      0      0      0      0      0
## 2013       2      0      0      0      0      0      0      0     25     11      0      0      0      0      0
## 2014       0      0      0      0      0      0      0      0     35      4      0      0      0      0      0
##         <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>
## 1993       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1994       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1995       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1996       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1997       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1998       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
```

```
## 1999     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2000     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2001     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2002     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2003     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2004     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2005     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2006     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2007     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2008     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2009     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2010    21    28     7    14     8    15     9     1     5     1     1     1    13    26     3
## 2011    30    33    11    16    11    18     9     0     0     0     5     0    29    34     0
## 2012    53    39    10    25     7    48     0     0     0     0     6     0    43     0     0
## 2013    37    39    20    14     6    25     0     0     1     0     2     0    34     0     0
## 2014    30    26    26    26     0    35     0     0     2     0     1     0    45     0     0
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1994     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1995     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1996     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1997     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1998     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1999     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2000     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2001     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2002     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2003     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2004     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2005     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2006     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2007     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2008     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2009     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2010     3     2    13     7     3     2     3     1     3     2     2     1     2     1     1
## 2011     1     0    34     9    10     0     1     0     3     3     1     0     0     0     1
## 2012     0     1    41    17    16     0     1     1     0     1     0     0     0     0     0
## 2013     2     0    47     8    15     0     3     0     0     4     0     0     0     0     0
## 2014     1     0    38     7    11     0     0     0     0     1     1     0     0     0     0
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1994     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1995     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1996     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1997     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1998     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1999     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2000     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2001     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2002     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2003     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2004     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2005     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2006     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
```

```
## 2007      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2008      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2009      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2010      6    3    1    4    1    1    2    2    1    1    1    1    1    1    1
## 2011     23    0    1    8    0    0    0    0    3    1    1    1    0    0    0
## 2012     19    0    0    3    0    0    0    1    0    0    0    0    0    0    0
## 2013     25    6    0   17    0    2    0    1    0    0    0    0    0    0    0
## 2014      7    2    0    9    0    0    0    4    0    0    1    0    0    0    0
##        <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1997      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1998      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1999      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2000      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2001      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2002      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2003      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2004      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2005      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2006      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2007      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2008      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2009      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2010      2    1    2    1    1    1    1    4    5    1    1    1    1    4    1
## 2011      0    0    0    0    0    0    0    0    1    0    1    0    0    2    0
## 2012      0    0    0    1    1    0    0    0    0    0    0    0    0    0    0
## 2013      0    0    0    1    0    0    0    0    0    0    0    0    1    0    1
## 2014      0    0    0    3    0    0    0    1    0    0    0    0    0    0    0
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## 1994      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1997      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1998      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1999      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2000      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2001      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2002      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2003      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2004      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2005      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2006      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2007      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2008      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2009      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2010      1    1    1    1    1    1    1    1    3    1    1    1    1    1    1
## 2011      0    0    0    0    0    0    0    0    0    0    0    1    1    1    0
## 2012      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2013      0    2    0    0    0    0    0    0    1    0    0    0    2    2    0
## 2014      0    0    0    0    0    0    0    0    0    0    0    0    0    0    2
```

```
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1997    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1998    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1999    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2001    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2002    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2003    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2004    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2005    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2006    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2007    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2008    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2009    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2010    1    1    1    1    1    1    1    2    2    2    2    2    1    2    1
## 2011    3    2    0    0    0    0    0    0    0    0    0    0    0    1    0
## 2012    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## 2013    1    1    1    1    0    0    0    0    0    0    1    0    0    2    0
## 2014    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
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## 1993    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1997    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1998    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1999    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2001    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2002    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2003    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2004    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2005    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2006    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2007    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2008    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2009    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2010    1    1    1    1    1    1    1    1    0    0    0    0    0    0    0
## 2011    0    0    0    0    0    2    0    1    1    2    2    1    1    3    1
## 2012    3    1    0    0    0    0    0    1    0    0    0    0    0    0    0
## 2013    0    0    0    0    0    0    0    3    1    0    0    0    0    2    0
## 2014    0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1997    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1998    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1999    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
## 2000      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2001      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2002      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2003      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2004      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2005      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2006      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2007      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2008      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2009      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2010      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2011      1      1      6      2      4      2      2      2      2      1      8      1      1      1      1
## 2012      0      0      0      0      2      1      0      0      0      0     21      0      1      0      0
## 2013      0      0      0      0      9      1      0      0      0      0     31      0      0      0      1
## 2014      0      0      0      0      6      0      0      0      0      0     30      0      1      0      0
##        <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>
## 1993      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1994      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1995      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1996      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1997      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
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## 1999      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2000      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2001      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2002      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
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## 2004      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2005      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2006      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2007      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2008      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2009      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2010      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2011      1      1      4      6     13      1      1     10      1      1      4      1      2      2      2
## 2012      0      0      8      0     25      2      0     25      0      2      3      0      2      1      1
## 2013      0      0      9      0     18      2      0     30      0      2      5      0      2      0      2
## 2014      0      0     17      0     12      6      0     35      0      2      0      0      1      0      0
##        <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>
## 1993      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1994      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1995      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1996      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1997      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1998      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1999      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2000      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2001      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2002      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2003      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2004      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2005      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2006      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2007      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
```

```
## 2008      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2009      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2010      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2011      3    2    3    1    1   12    1    1    1    1    1    1    3    1    4
## 2012      2    2    5    1    0   42    0    0    3    0    0    0   10    6    2
## 2013      1    1   10    0    0   29    0    0    3    0    0    0   30    4    0
## 2014      3    0    6    0    0   40    0    0    3    0    0    0   16    5    0
##        <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
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## 1994      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1997      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1998      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1999      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2000      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2001      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2002      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2003      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2004      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2005      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2006      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2007      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2008      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2009      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2010      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2011      2    1    1    1   16    1    3    1    1    1    1    2    1    1    1
## 2012      3    0    0    0   18    0    4    1    1    1    0    1    3    0    0
## 2013      6    1    4    1   42    0    1    4    0    0    0    6    2    0    0
## 2014      9    2    3    0   29    0    6    1    0    0    0    6    0    0    0
##        <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1994      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1995      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1996      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1997      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1998      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 1999      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2000      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2001      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2002      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2003      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2004      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2005      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2006      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2007      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2008      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2009      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2010      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2011      2    1    1    2    1    2    1    0    0    0    0    0    0    0    0
## 2012     19    2    0    7    0    0    2    1    1    1    1    1    1    1    1
## 2013     15    0    0   11    0    0    4    0    0    0    0    0    0    0    0
## 2014     10    2    0   12    0    0    2    0    0    0    0    0    0    0    0
##        <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
```

```
## 1993      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1994      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1995      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1996      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1997      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1998      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1999      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2000      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2001      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2002      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2003      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2004      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2005      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2006      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2007      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2008      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2009      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2010      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2011      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2012      1    14     2     8     2     3     3     2     2     1     2     1     1    34     1
## 2013      0    14     0     5     0     1     0     4     0     0     1     0     0    52     0
## 2014      0    21     0     3     0     0     2     6     0     0     1     0     0    47     0
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## 1995      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1996      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1997      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
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## 1999      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2000      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
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## 2002      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2003      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
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## 2006      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2007      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2008      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2009      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2010      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2011      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2012      1     1     1     1    19    21    20    16     3     1     2     1     1    37     2
## 2013      0     0     2     0     0    56    51    19     0     0     2     0     0    50     0
## 2014      0     0     4     0     0    27    35    29     0     0     4     0     0    25     0
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## 1996      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1997      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1998      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1999      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2000      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
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## 2004      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2005      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
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## 2009      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2010      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2011      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2012      2     2     2     2     1    17     3    12     3     1     1     3     1     1     1
## 2013     28     0     0     0     0    37     0    44     4     0     2     0     0     0     0
## 2014     11     0     0     0     0    27     0    40     6     0     4     0     0     0     0
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## 1997      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
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## 2003      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
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## 2010      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2011      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2012      1     6     1     2    12     1     1     1     1     1     1     1     2     1    10
## 2013      0     6     1     1     5     0     0     0     0     0     0     1     0     0    53
## 2014      0     2     1     1     0     0     0     0     0     0     0     1     0     0    31
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## 2008      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
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## 2009      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
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## 2012      2      2      1      1      1      1      1      1      1      1      2      1      1      2      1
## 2013      2      5      1      0      0      0      0      0      0      0      5      0      0      0      1
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## 2012      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
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## 2010      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2011      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2012      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2013      3      1      1     20      6      3      1     33      5     25      2      2      1      2      1
## 2014      0      0      0     23      0      1      2      0      0     17      1      0      1      9      0
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## 2012      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2013      3      3      4      3      3      3      1      4      3      1      1     27     11     32      8
## 2014     13      0      9      0     10      0      0      7      0      0      1     23     17     29      0
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## 2002     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
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## 2011     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2012     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2013     1     3     3     6     1    36     6     1     1     8     5     2     8     1     1
## 2014     0     6     3     0     0    28     5     0     0    16    12     0    11     0     0
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## 2010     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2011     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2012     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2013     1     1     1     6     1     2     7     1     2     1     1     1     1     1     1
## 2014     0     0     0    22     0     0     6     0     3     0     0     0     0     0     0
##       <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1993     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1994     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1995     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1996     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1997     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1998     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1999     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2000     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2001     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2002     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2003     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2004     0     0     0     0     0     0     0     0     0    12     0    11     0     0     0
## 2005     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2006     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2007     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2008     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2009     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
```

```
## 2010      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2011      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2012      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2013      1      1      1      2      2      1      1      3      1      1      1      1      9      1      1
## 2014      0      1      1      0      0      0      0      2      0      0      0      0     27      0      0
##       <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>
## 1993      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1994      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1995      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1996      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1997      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1998      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1999      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2000      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2001      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2002      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2003      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2004      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2005      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2006      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2007      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2008      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2009      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2010      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2011      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2012      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2013      1      1      1      2      1      1      1      1      1      1      2      1      2      2      1
## 2014      0      0      0      2      0      0      0      0      0      0      0      0      0      0      0
##       <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>
## 1993      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1994      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1995      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1996      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1997      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1998      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1999      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2000      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2001      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2002      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2003      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2004      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2005      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2006      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2007      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2008      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2009      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2010      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2011      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2012      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2013      1      1      1      1      1      0      0      0      0      0      0      0      0      0      0
## 2014      0      0      0     12      4     10      4      3      1      1      1      1      1      1      1
##       <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>
## 1993      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1994      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
```

```
## 1995      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1996      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1997      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1998      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1999      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2000      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2001      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2002      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2003      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2004      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2005      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2006      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2007      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2008      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2009      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2010      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2011      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2012      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2013      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2014      1      1      1      1      1      2      2      4      1      2      9      4      1      2      2
##        <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>
## 1993      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1994      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1995      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1996      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1997      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1998      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1999      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2000      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2001      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2002      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2003      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2004      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2005      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2006      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2007      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2008      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2009      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2010      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2011      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2012      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2013      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2014      8     10     16     16      1      2      1      1      1      1      1      1      1      1      5
##        <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>
## 1993      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1994      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1995      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1996      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1997      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1998      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 1999      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2000      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2001      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2002      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
```

```
## 2003      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2004      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2005      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2006      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2007      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2008      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2009      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2010      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2011      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2012      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2013      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2014     19    25     5     1     1     1     5     1     1     1     1     3     1     1     2
##        <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1993      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1994      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1995      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1996      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1997      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1998      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 1999      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2000      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2001      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2002      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2003      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2004      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2005      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2006      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2007      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2008      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2009      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2010      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2011      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2012      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2013      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2014      4     2     1     1     1     1    14     1     2     1     1     1     1     6     1
##        <NA>  <NA>
## 1993      0     0
## 1994      0     0
## 1995      0     0
## 1996      0     0
## 1997      0     0
## 1998      0     0
## 1999      0     0
## 2000      0     0
## 2001      0     0
## 2002      0     0
## 2003      0     0
## 2004      0     0
## 2005      0     0
## 2006      0     0
## 2007      0     0
## 2008      0     0
## 2009      0     0
## 2010      0     0
```

```
## 2011    0    0
## 2012    0    0
## 2013    0    0
## 2014    1    1
```

```r
# Transforming into binary matrices
p1y <- as.matrix(p1y); p1y[which(p1y>=1)] = 1; p1y[which(p1y<1)] = 0


# -------------------- 11 sets of 2 year increments---------------------------
# Make a list of 2 years per dataframe
sample_data$TwoYearIncrement <- cut(sample_data$Year, breaks = seq(min(sample_data$Year), max(sample_da
list_twoyears <- split(sample_data, sample_data$TwoYearIncrement)
# Apply the count_instances function to each two years
instances_per_twoyear <- lapply(list_twoyears, count_instances)
# Convert the list of counts to a data frame
p2y <- do.call(rbind, instances_per_twoyear)
p2y
```

```
##    FB41 FB05 FB36 FB38 FB55 FB96 FB98 F108 F153 FB15 FB23 FB78 FB93 F155 FB01
## 1    67   60   92  105   72   50   38   38   41   31   55   64   35   82   90
## 2     0   84   85   87   77   15    0   18   26   55   13   49   53  145   84
## 3     0   45   51   49   56   23    0   17   33   59    0   38   50   56   51
## 4     0  118   70    0  153   24    0   30   32   79    0   71  109  118  135
## 5     0   58   29    0   76    0    0   23   28   53    0   27   60   73   37
## 6     0   45   58    0   55    0    0   24   20   57    0   45   33   46    0
## 7     0   43   51    0   54    0    0   29   27   82    0   55   74  116    0
## 8     0   13   54    0   79    0    0   33   45   81    0   68   51   61    0
## 9     0    0   25    0   32    0    0   45   32   33    0   54   41   55    0
## 10    0    0    0    0   79    0    0   21   44   49    0   53   28   74    0
## 11    0    0    0    0   28    0    0   16   23   23    0   17    0   27    0
##    FB43 FB92 F118 F122 FB29 <NA> FB54 FB71 FB90 F100 F119 FB14 FB27 <NA> FB57
## 1    40   75  141  127   52    0  144   61  130   63   92   88   57    0   58
## 2    44   99  109   38   66    0  151   26  136   56  102   57   89    0   45
## 3    28   45   59    0   13    0   74    0   69   35   83   50   32    0    0
## 4    55  114  127    0    0    0  145    0  148   83  102  245   84    0    0
## 5    41   62   77    0    0    0  116    0  122   42   77   49   68    0    0
## 6    26   59   76    0    0    0   60    0   77   47   16   17   46    0    0
## 7    69   92   81    0    0    0   66    0  140    4    0   14   38    0    0
## 8    61   95   96    0    0    0   66    0  119    0    0    0   56    0    0
## 9    34   55   56    0    0    0   53    0   50    0    0    0   29    0    0
## 10    7   56    3    0    0    0   84    0   54    0    0    0   52    0    0
## 11    0   39    0    0    0    0   28    0   34    0    0    0   32    0    0
##    FB66 FB76 FB94 F112 FB12 FB03 <NA> F106 FB44 FB62 F175 FB10 FB46 FB75 FB79
## 1    66   65  101   55   49   48    0   74   75   79   87   83   75   63   61
## 2    64   62   75    0   17   88    0   97   56   36  118  104   94   52   99
## 3    56   52   57    0    0   55    0   62   22    0   63   41   37   42   70
## 4   158  156  233    0    0  148    0  122   29    0  149  110  109  107   86
## 5    85   75   69    0    0   62    0   54   13    0  104   66   43   67   51
## 6    63   56   11    0    0    0    0   48   27    0   76   50    0   60   78
## 7    47    0    0    0    0    0    0  138   20    0  116   58    0    3   95
## 8    37    0    0    0    0    0    0    0   35    0   85   54    0    0  110
## 9    26    0    0    0    0    0    0    0   26    0   70   31    0    0   87
## 10   33    0    0    0    0    0    0    0   33    0  100   46    0    0   52
```

```
## 11     0     0     0     0     0     0     0     0    22     0    25    16     0     0    29
##      FB60  FB13  F138  FB63  FB07  FB11  F132  FB25  F102  F111  F130  F134  F136  F154  F160
## 1     24    37    95    96   105    92     5    81     6    36     3     8     8    27     9
## 2      8    76    86    81   122   167    10    92    12   117     5    23    19    63    25
## 3      0    76    22    19    61    77     0    45     4    40     0     9     9     3    11
## 4      0    99    74    48   142   181     5    72    12    63     2    12     9     6    11
## 5      0    53    66    50    88    90     2    54     3    19     0     2     1     6     7
## 6      0    35    58    44    58    82     0    51     6     0     0     8     8    12     5
## 7      0    38    88    31   101   137     1    52    19     0     0     8     0    22     3
## 8      0    43    85     7    74    93     1    65    19     0     0    16     0     6     0
## 9      0     0    62     0    62    55     0    50    12     0     0     3     0     1     0
## 10     0     0    85     0    65    69     0    54    16     0     0     0     0     5     0
## 11     0     0    34     0    35    27     0    34     5     0     0     0     0     8     0
##      F162  <NA>  FB20  FB65  HIQQ  POOF  FB28  <NA>  FB09  FB33  ATNA  CWM3  NKLN  WTMA  FB48
## 1      8     0    89   106     6     4    20     0    99    76     2    11     3    12    19
## 2     26     0    74   111     9    11    44     0    96   110     0     7     1     2    14
## 3     12     0    41    51     1     1    44     0    35    54     0    13     0     1    14
## 4     12     7    96   143    12     4   126     0    95    98     0     4     1     0    66
## 5      5     2    78   115     0     1    42     0    70    75     0     7     1     0    15
## 6      3     2    59    71     5     0    18     0    59    67     0     2     1     0    12
## 7      5     0    81    91    18     1    26     0    71    80     6     9    10     0    15
## 8     10     0    86   117    18     1    32     0    39    70     0     8     4     0    11
## 9     10     0    74    51    11     0    18     0     0    48     0    10     6     0     0
## 10    14     0    92    61    16     0    20     0     0    82     1     7     0     0     0
## 11     6     0    29    30     5     0    17     0     0    29     0     4     0     0     0
##      F105  1054  <NA>  FB32  49C3  49LA  <NA>  <NA>  <NA>  <NA>  F164  <NA>  KMSN  MIDF  5NK2
## 1      5     1     0    58     9    18     0     0     0     0     3     0     3     1     1
## 2      2     1     0    50     0    20     0     0     0     1    10     0     0     3     1
## 3      4     0     0    35     0    10     0     1     0     0    14     0     0     1     2
## 4      4     0     0   128     0    12     0     0     0     0    27     0     0     0     0
## 5      0     0     0    20     0    10     0     0     0     0    24     0     0     4     0
## 6      1     0     0     0     0     2     0     0     0     0    47     0     0     0     0
## 7      0     0     0     0     0     0     0     0     2     0    35     0     0     4     0
## 8      0     0     0     0     0     0     0     0     0     0    50     0     0     4     0
## 9      0     0     0     0     0     0     0     0     0     0    41     0     0     4     0
## 10     0     0     0     0     0     0     0     0     0     0    68     0     0     2     0
## 11     0     0     0     0     0     0     0     0     0     0    27     0     0     1     0
##      <NA>  <NA>  <NA>  <NA>  <NA>  WTAB  <NA>  BTTV  <NA>  F147  <NA>  F237  <NA>  <NA>  FB84
## 1      0     0     0     0     0     2     0     1     0     4     0    16     0     0    50
## 2      0     0     2     0     0     0     0    18     0     5     1     8     0     0    76
## 3      0     0     0     0     0     0     0     2     0     2     3     7     0     0    38
## 4      0     0     1     0     2     0     0     0     0     0    13    39     0     1    67
## 5      0     0     0     0     0     0     0     0     0     0     4    26     0     0    24
## 6      0     0     0     0     1     1     0     0     0     0     4    30     0     0     0
## 7      0     1     1     0     5     1     0     0     0     0     9    86     0     0     0
## 8      0     0     1     0     4     1     0     0     0     0     1    58     0     0     0
## 9      0     0     0     0     1     0     0     0     0     0     0    26     0     1     0
## 10     0     0     0     0     0     0     0     0     0     0     0    30     0     1     0
## 11     0     0     0     0     0     0     0     0     0     0     0    26     0     0     0
##      CRAG  HVMS  LCKL  RUFF  FB59  FB83  FB02  C834  BBMB  LDSL  <NA>  MCMA  PN06  F276  FB24
## 1      4     1    10     1    86    35    81    24     4     5     0    10     1     9    55
## 2      1     0     0     2    44    43    42    13     1     0     1    14     0    13    37
## 3      5     2     0     5    36    42    32    45     3     3     0    13     0    20    13
## 4      3     3     0     3    98    69    69    66     3     3     0    39     0    65     0
```

## 5	0	2	0	3	44	38	50	40	2	3	0	0	0	21	0
## 6	0	2	0	3	0	14	55	26	2	2	0	0	0	26	0
## 7	0	10	0	0	0	0	79	56	0	1	0	0	1	65	0
## 8	0	13	2	0	0	0	74	64	0	0	0	0	0	77	0
## 9	0	10	0	0	0	0	43	43	0	0	0	0	0	53	0
## 10	0	8	1	0	0	0	57	60	0	0	0	0	0	83	0
## 11	0	4	0	0	0	0	13	19	0	0	0	0	0	36	0

##	FB35	F182	DRSN	<NA>	F128	F131	DIPT	SLMS	2SDN	<NA>	BBLN	BTLN	CHK2	ETMA	<NA>
## 1	14	55	26	0	40	107	2	2	1	0	1	2	1	2	0
## 2	16	70	37	0	69	120	7	0	1	2	2	2	1	1	0
## 3	12	41	28	0	58	55	5	0	0	0	1	1	0	6	0
## 4	11	76	11	0	104	127	5	0	0	0	1	1	0	1	0
## 5	9	39	15	0	66	64	0	0	0	0	0	2	0	3	0
## 6	8	37	22	0	52	67	0	0	0	0	1	1	0	1	0
## 7	23	47	21	0	94	122	0	0	0	0	5	0	0	2	0
## 8	25	59	31	0	103	106	0	0	0	0	4	0	0	0	0
## 9	25	41	22	0	47	70	0	0	0	0	0	0	0	0	0
## 10	24	51	0	0	59	93	0	0	0	0	1	0	0	0	0
## 11	6	17	0	0	39	42	0	0	0	0	1	0	0	0	0

##	HNBT	<NA>	JAGG	JIG3	KMBT	LOBE	MLTS	<NA>	<NA>	<NA>	<NA>	<NA>	SHOT	SURR	TFMS
## 1	2	0	2	2	1	2	1	0	0	0	0	0	1	2	2
## 2	0	0	1	3	0	1	1	0	0	0	0	0	3	1	0
## 3	1	0	0	2	0	0	2	0	0	0	0	0	2	0	0
## 4	0	0	0	1	0	0	1	0	0	1	0	0	2	0	0
## 5	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0
## 6	0	0	0	1	0	0	1	0	0	0	0	0	1	0	0
## 7	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
## 8	3	0	0	3	0	0	2	0	0	1	0	0	0	0	0
## 9	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0
## 10	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
## 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

##	TSMV	<NA>	<NA>	FB17	F110	F191	FB73	<NA>	<NA>	PSD2	PSDZ	<NA>	HSNS	<NA>	<NA>
## 1	3	0	0	14	26	10	8	0	0	2	1	0	5	0	0
## 2	5	0	0	30	23	16	11	0	0	0	0	0	1	0	0
## 3	4	0	0	9	24	12	2	0	0	0	0	0	1	0	1
## 4	8	0	0	14	37	11	13	0	0	0	0	0	0	0	0
## 5	6	0	0	14	41	0	5	0	0	0	0	0	2	0	1
## 6	1	0	0	21	22	0	0	0	0	0	0	0	1	0	0
## 7	5	0	0	5	40	0	0	0	0	0	0	0	1	0	0
## 8	19	0	0	0	41	0	0	0	0	0	0	0	6	0	0
## 9	11	0	0	0	25	0	0	0	0	0	0	0	2	0	1
## 10	3	0	0	0	31	0	0	0	0	1	0	0	8	0	1
## 11	4	0	0	0	16	0	0	0	0	0	0	0	5	0	1

##	<NA>	ETSC	<NA>	<NA>	<NA>	LGSC	<NA>	<NA>	MTMN	NLPS	<NA>	<NA>	<NA>	F183	<NA>
## 1	0	1	0	0	0	1	0	0	1	1	0	0	0	20	0
## 2	0	0	1	0	0	0	0	0	14	0	6	0	1	28	2
## 3	0	0	0	1	0	0	1	0	0	0	0	0	0	31	1
## 4	0	0	0	0	0	0	0	0	0	0	0	0	0	45	2
## 5	2	0	0	0	0	0	0	0	0	3	1	2	0	24	0
## 6	1	0	0	0	0	0	0	0	0	1	0	0	0	25	0
## 7	7	0	0	0	0	0	0	0	0	2	5	0	0	1	0
## 8	1	0	0	0	0	0	0	0	0	1	19	0	0	0	0
## 9	7	0	0	0	0	0	0	0	0	1	5	1	0	0	0
## 10	0	0	0	1	0	0	0	0	0	1	2	1	0	0	0

```
## 11     0     0     0     1     0     0     0     0     0     0     0     0     0     0     0
##      F114 C791 FB26 FB34 F180 <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> SCOR
## 1     63   11   23   37   10    0    0    0    0    0    0    0    0    0    1
## 2     61    0   14    0   44    0    0    0    0    0    0    1    0    0    0
## 3     38    0   17    0   12    0    0    0    0    0    0    0    0    0    0
## 4     66    0   72    0    7    0    1    1    0    0    1    0    0    1    0
## 5     44    0    0    0    8    0    0    0    0    0    1    1    0    0    0
## 6     19    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 7     27    0    0    0    3    1    1    1    0    0    0    0    0    0    0
## 8     32    0    0    0    5    0    0    1    0    0    1    0    0    0    0
## 9     10    0    0    0    2    0    0    0    0    0    0    0    0    0    0
## 10    11    0    0    0    2    0    0    0    0    0    0    0    0    0    0
## 11    18    0    0    0    1    0    0    0    0    0    0    0    0    0    0
##      SPIK FJSL F117 <NA> <NA> ELFF PN04 <NA> TTM3 <NA> LNST <NA> <NA> <NA> <NA>
## 1      5    1   75    0    0   14    5    0    1    0    1    0    0    0    0
## 2      0    0   34    0    0    6    2    0    1    0    1    0    0    0    0
## 3      0    0   75    0    0    3    0    0    2    0    0    0    0    0    0
## 4      0    0  139    0    0    5    0    0    1    0    0    0    0    0    0
## 5      0    0   15    0    0    5    0    0    5    0    1    0    0    0    0
## 6      0    2    0    0    0    0    0    0    1    0    1    0    0    0    0
## 7      0    0    0    0    0    1    0    0    1    0    1    0    0    0    0
## 8      0    1    0    0    0    0    0    0    3    0    1    0    0    0    0
## 9      0    0    0    0    0    0    0    0    1    0    1    0    0    0    0
## 10     0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## 11     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      FB39 CMRS CONC CONS F163 F181 HAIR HITS MSQ2 RTMW <NA> SPGT TABB MDNK KNOB
## 1     24    1    2    2    2    9    4    5    3   11    0    1    5    4   10
## 2     12    1    0    3   81   55   10    0    5   16    0    2    7    2   13
## 3      0    0    0    2   41   48    2    0    1    3    0    0    2    0    0
## 4      0   10    0    5  106  113   14    5    5   10    0    0    3    0    0
## 5      0    4    0    3   18   53    9    1    0    6    0    0    1    2    0
## 6      0   22    0    4    0   42   11   20    6   11    0    0    2   10    0
## 7      0   19    0    0    0   53   19   20    3    5    0    0    3   43    0
## 8      0   15    0    0    0   17   19   15    0   18    0    0    3    4    0
## 9      0   18    0    0    0    0   14   17    0   12    0    0    0    0    0
## 10     0   18    0    0    0    0   19   15    0   18    0    0    0    0    0
## 11     0   12    0    0    0    0    8   12    0    2    0    0    0    0    0
##      <NA> <NA> NIK2 <NA> <NA> BFWT JAWS <NA> <NA> <NA> <NA> ALHK LHLV <NA> FB06
## 1      0    0    2    0    0    6    9    0    0    0    0    4    1    0   81
## 2      0    0    2    0    0    0    0    0    1    0    0    2    0    0   66
## 3      0    0    0    0    0    0    0    0    1    0    0    2    0    0   43
## 4      0    0    0    0    0    0    0    0    0    0    0    3    1    0  123
## 5      0    1    0    0    0    0    0    0    0    0    0    6    0    0   57
## 6      0    0    1    0    0    0    0    0    0    0    0    3    0    0   69
## 7      0    0    0    0    0    0    0    0    0    0    0    3    3    0   14
## 8      0    0    1    0    0    0    0    0    0    0    0    4    1    0    0
## 9      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 10     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 11     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      <NA> <NA> FB87 <NA> CKB2 1832 <NA> <NA> <NA> SOLB TCTV IKNO F101 <NA> <NA>
## 1      0    0   21    0    6   10    0    0    0   19    8    4   99    0    0
## 2      0    0   56    0    0   14    2   61    0   18   19   21  103    0    0
## 3      0    0   39    0    0    0    1   37    0   18    7   38   77    0    0
## 4      0    0   43    0    0    0    6  141    0   36    2   28  116    0    0
```

```
## 5      0     0    27     0     0     0     5   113     0    36    19     0    51     0     0
## 6      0     0    12     0     0     0    14    61     0    21     7     0    23     0     0
## 7      0     0    34     0     0     0    21    63     0    31    15     0     0     0     0
## 8      0     0    41     0     0     0     0    51     0    36     7     0     0     0     0
## 9      0     0    31     0     0     0     0     6     0    26    11     0     0     0     0
## 10     0     0    39     0     0     0     0     0     0    26     8     0     0     0     0
## 11     0     0    25     0     0     0     0     0     0    17     2     0     0     0     0
##    <NA> HFLT ZENN <NA> <NA> AOTA <NA> <NA> <NA> <NA> <NA> F254 <NA> MPTB <NA>
## 1     0     2    12     0     0     2     0     0     0     0     0     2     0     5     0
## 2     1     0     1     0     1     0     1     0     0     0     0     0     0     1     0
## 3     1     8     0     0     0     1     3     0     0     0     0     5     0     7     0
## 4     0     2     0     0     0     1     5     0     0     0     0     1     0    45     0
## 5     1     8     0     0     0     3     3     0     0     0     0     7     0    33     0
## 6     1     7     0     0     0     0     2     0     0     0     0    25     0    28     0
## 7     1    13     0     0     0     0     0     0     0     0     0    20     0    47     0
## 8     1     0     0     0     0     0     5     0     0     0     0    34     0    45     0
## 9     1     0     0     0     0     0     2     0     0     0     0    24     0    29     0
## 10    1     0     0     0     0     0     6     0     0     0     0    33     0    31     0
## 11    0     0     0     0     0     0     6     0     0     0     0    23     0    14     0
##    SHTC TRIF <NA> <NA> PHNE PN10 PNSN <NA> LUMP BEGR MOCH F116 SLIF OTH_604
## 1     1     2     0     0     4     4     3     0     6     9     9    14     1       1
## 2     1     2     0     0     5     0     0     3     0    36     7     3     0       0
## 3    13     0     0     0     2     3     1     1     0    58     0     0     0       0
## 4    67     1     0     0     0     2     0     2     0    77     0     0     0       0
## 5    18     0     0     0     0     0     0     0     0    32     0     0     0       0
## 6     7     1     0     0     0     0     0     1     0    35     0     0     0       0
## 7     0     2     0     0     0     0     0     7     0    56     0     0     0       0
## 8     0     0     0     0     0     0     0     2     0    71     0     0     0       0
## 9     0     1     0     0     0     0     0     1     0   255     0     0     0       0
## 10    0     3     0     0     0     0     0     0     0    30     0     0     0       0
## 11    0     0     0     0     0     0     0     0     0     0     0     0     0       0
##    THOR F192 F194 MCM2 CATR LFLA OTH_199 TN3N MTSS SIMP BRDO RPPL DTHB GTFG
## 1     3    16    12     2     3     7       1    1     4     2     4     4     1     2
## 2     5    24    24     1     1     0       0    0    13     4    17     0     0     2
## 3     0    38    31     0     1     0       0    0     4     0     3     0     0     2
## 4     0    62    61     0     1     2       0    0     3     0    17     0     0     2
## 5     0     9    18     0     0     0       0    0     7     0     5     0     0     0
## 6     0     0    17     0     0     0       0    0     0     6     0     0     0     1
## 7     0     0    23     0     0     0       0    0     3     7     0     0     3     0
## 8     0     0    32     0     1     0       0    0     1    12     0     0     0     1
## 9     0     0    47     0     0     0       0    0     5     3     0     0     0     0
## 10    0     0    17     0     0     0       0    0     4     3     0     0     1     0
## 11    0     0     0     0     0     0       0    0     1     3     0     0     0     0
##    UPBK MNIK C652 THMN RY34 TBTN CCL4 F172 L106 C391 BTHV NKNN PNKD C754 RTMC
## 1     1     3   100     3     6     2    14     2     1    24     1     2     4    13     4
## 2     1     0   110     1     5     0     0     5     1    11     2     1     0     0     0
## 3     1     6     7     0     9     2     0     0     1     0     0     1     0     0     0
## 4     0     3     0     0    62     0     0     0     0     0     0     2     1     0     0
## 5     0     5     0     0    41     0     0     0     2     0     0     0     1     0     0
## 6     0     2     0     0    25     0     0     0     1     0     0     0     0     0     0
## 7     2     0     0     0    46     0     0     0     3     0     0     0     0     0     0
## 8     1     0     0     0    51     0     0     0     0     0     0     0     1     0     0
## 9     0     0     0     0    26     0     0     0     0     0     0     0     0     0     0
## 10    1     0     0     0    35     0     0     0     0     0     0     0     0     0     0
```

```
## 11    0    0    0    0   10    0    0    0    0    0    0    0    0    0    0
##     WLDC F149 C595 C091 LEMS C991 FB99 LBMA PNTH HNSC LIWB LCDB TTOO TWHN LWMN
## 1     2    6   65    1    1   15   15   16    1    1    1    2    3    1    2
## 2     0   48   16    0    0    3    5   32    0    1    0    2    3    0    1
## 3     0   28    0    0    0    2    3    0    0    0    0    0    0    0    2
## 4     4   46    0    0    0   14  104    0    0    0    0    0    0    1    3
## 5     0   51    0    0    0    9    2    0    0    0    0    0    0    1    3
## 6     0   30    0    0    0   38   10    0    0    0    0    0    0    1    0
## 7     1   74    0    0    0   36    0    0    0    0    0    0    0    1    0
## 8     2   46    0    0    0   33    0    0    0    0    0    0    0    4    0
## 9     2   22    0    0    0   14    0    0    0    0    0    0    0    0    0
## 10    2   15    0    0    0   18    0    0    0    0    0    0    0    1    0
## 11    2   14    0    0    0   15    0    0    0    0    0    0    0    0    0
##     LFLG LDMA LNPF WHIS F141 FANT LLIN FTMW GAFF HAGR PRFR F174 FB58 MIDM M145
## 1     1    4    1    1    1    1    1    1    1    1    7    1    1    1   12
## 2     1    6    3    0   20    0    0    0    0    0    8   30   35    0    9
## 3     1    1    5    1    8    0    0    0    0    0    5   37   42    0    6
## 4     1    9    7    0   79    0    0    1    0    0    4   71   90    1    1
## 5     1    4    3    0   91    0    0    1    0    0    2   20   29    0    8
## 6     1   11    7    1   32    0    0    0    0    0    1   20   10    0    9
## 7     0   12   14    0   47    0    0    0    0    0   13    1    0    1   17
## 8     0   17   24    0   68    0    0    0    0    0   10    0    0    0   31
## 9     0   12   10    0    4    0    0    0    0    0    3    0    0    0    8
## 10    0    0   17    0   13    0    0    0    1    0    1    0    0    3   10
## 11    0    0   11    0    5    0    0    0    0    0    3    0    0    0    5
##     MANT ONIP STDO TLN2 PSDQ HBMB ALIN HIPC HIPM BARE BOXX CURD LET2 MOPS MTWN
## 1     2    1    1    1   12    7    1    1    5    2    1    1    1    1    1
## 2     6    0    0    0    4    2    0    0    2    1    0    0    0    0    0
## 3     3    1    0    0    6    5    0    0    2    2    0    0    0    0    0
## 4     2    0    0    0    7    7    0    0    0    2    0    0    0    0    0
## 5     3    0    0    0    4   15    0    0    2    0    0    0    0    0    0
## 6     1    0    0    0    2    3    0    0    0    1    0    0    0    0    1
## 7     3    0    0    0   14   19    0    0    2    0    0    0    0    0    0
## 8     7    0    0    0   16   21    0    0    0    1    0    0    0    0    1
## 9     3    0    0    0    9    9    0    0    0    1    0    0    0    0    0
## 10    4    0    0    0    6    8    0    0    0    2    0    0    0    0    0
## 11    1    0    0    0    4    7    0    0    0    0    0    0    0    0    1
##     NEWT SBTT TPLS PN05 BRCH LYLU TNSL TRNO SUFL CATW CLOX MM49 MSUM SCKB THNM
## 1     1    1    2    2    1    1    1    1    1    2    2    2    6    1    1
## 2     0    0    0    3    0    0    0    0    3    1    0    0    2    0    1
## 3     2    0    1    2    0    0    0    0    3    0    0    1    1    0    2
## 4     1    0    1    1    0    1    1    0    1    0    0    0    0    0    0
## 5     1    0    0    4    0    0    0    0    3    2    0    0    1    0    2
## 6     0    0    1    0    0    0    0    0    1    2    0    0    1    0    1
## 7     0    0    1    2    0    0    0    0    0    6    0    0    1    0    3
## 8     3    0    0    3    0    0    0    0    1    4    0    0    0    0    3
## 9     1    0    0    0    0    0    0    1    2    2    0    0    0    1    1
## 10    3    0    0    0    0    0    0    0    1    2    0    0    0    0    1
## 11    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##     LBLS LBSC LBTY LTET HMLS MM62 GWEN KNNN OTH_596 OTH_610 Q5LA SPTL F219 1452
## 1     7    2    2    2    3    1    1    1       1       1    2    3    8    6
## 2     1    0    1    0    0    0    1    3       0       0    5    7   14    2
## 3     2    0    0    0    0    0    5    2       0       0    5    0    0    0
## 4     3    0    0    0    0    0    0    3       0       0    2    0   12    0
```

```
## 5       0    0    0    0    0    0    0    1       0       0    3    0    7    0
## 6       0    0    0    0    0    0    0    1       0       0    0    0   14    0
## 7       0    0    0    0    0    0    0    3       0       0    2    0   28    0
## 8       0    0    0    0    0    0    0    4       0       0    2    0   27    0
## 9       0    0    0    0    0    0    0    0       0       0    5    0   16    0
## 10      0    0    0    0    0    0    0    1       0       0    4    0   30    0
## 11      0    0    0    0    0    0    0    0       0       0    1    0    5    0
##      CPS2 BTHS F107 ANGL GRIN HMLA PTHD RCLA SROM SUMM HNLN KLNN SKIT GRC1 GRC2
## 1       5    1    3    1    1    1    1    1    1    1    1    1    1    1    1
## 2       0    0    0    1    0    1    1    0    0    0    0    0    0    0    0
## 3       0    2    0    0    0    0    0    0    0    0    0    0    3    0    0
## 4       0    1    0    0    0    0    0    0    0    0    3    2    0    0    0
## 5       0    2    0    0    1    0    0    0    0    1    0    1    0    0    0
## 6       0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## 7       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 8       0    0    0    0    0    1    0    0    2    0    0    0    0    0    0
## 9       0    1    0    2    3    2    3    0    4    0    0    0    0    0    0
## 10      0    2    0    1    0    1    0    0    0    0    1    0    0    0    0
## 11      0    0    0    1    0    1    0    0    0    0    0    0    0    0    0
##      BTLE CWM4 MSUC USLN RUBB 1535 MLOB MLOC OTH_487 OTH_441 F178 BOXR OTH_422
## 1       2    2    4    1    1   13    1    1       1       1   24    3       1
## 2       2    1    3    0    0   20    1    1       0       0   92    2       1
## 3       0    0    2    0    0   14    0    0       0       0   43    6       0
## 4       0    0    1    0    0    0    4    0       0       0  143   37       0
## 5       0    0    0    0    0    0    2    0       0       0   78    6       0
## 6       0    0    0    0    0    0    0    0       0       0   75   27       0
## 7       0    0    2    0    0    0    0    0       0       0  125   54       0
## 8       0    0    0    0    0    0    0    0       0       0   82   63       0
## 9       0    0    0    0    0    0    0    0       0       0   63   52       0
## 10      0    0    0    0    0    0    0    0       0       0   61   41       0
## 11      0    0    0    0    0    0    0    0       0       0   35    9       0
##      OTH_373 THOC OTH_601 F109 F127 MDLB LBT1 BZPN F231 F120 F124 LOTB PPSL LBHL
## 1          1    2       1    7    8    1    1    1    1    2    2    1    1    1
## 2          0    3       0   92   69    0    0    1    0    5    7    0    0    1
## 3          0    0       0   68   75    2    0    0    1    0    0    0    0    0
## 4          0    0       0  140  106    0    0    0    2    3    0    7    0    2
## 5          0    0       0   83   53    0    0    0   11    2    0    2    0    2
## 6          0    0       0   55   32    0    0    0    7    9    0    5    0    1
## 7          0    0       0  147  104    1    0    0    1    0    0    4    0    1
## 8          0    0       0   98   95    0    0    0   23    0    0    2    0    2
## 9          0    0       0   47   53    0    0    0    4    0    0    6    3    1
## 10         0    0       0   83   18    0    0    0    1    0    0    2    1    1
## 11         0    0       0   44    0    0    0    0    0    0    0    0    0    0
##      OTH_456 OTH_707 BUZM JDLA MTHS OTH_591 <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1          1       1    1    1    1       1    0    0    0    0    0    0    0
## 2          0       0    0    0    0       0    1    2    2    1   80   13    1
## 3          0       0    0    0    0       0    1    1    0    0    0    0    0
## 4          0       0    0    1    0       0    3    0    1    3    0    0    0
## 5          0       0    0    0    0       0    1    0    0    0    0    0    1
## 6          0       0    0    1    0       0    1    0    0    0    0    0    0
## 7          0       0    0    2    0       0    2    0    0    0    0    0    1
## 8          0       0    0    0    0       0    2    0    0    0    0    0    0
## 9          0       0    0    0    0       0    0    0    0    0    0    0    0
## 10         0       0    0    0    0       0    0    0    0    0    0    0    0
```

```
## 11          0         0      0      0      0         0      0      0      0      0      0      0      0      0
##         <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1         0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2         1     1     2     1     1     4     3    16     3     3     3    87    31    16   106
## 3         0     1     0     0     0     0     1     0     0     0     1    50     0     5    30
## 4         0     0     0     2     0     2     4     0     0     0     0    75     0     0     0
## 5         0     0     0     1     0     0     0     0     1     0     0    54     0     0    51
## 6         0     1     0     1     0     0     0     0     0     0     0    76     0     0    86
## 7         0     2     0     0     0     0     2     0     0     0     0   118     0     0   135
## 8         0     0     0     0     0     0     1     0     0     0     0    91     0     0    92
## 9         0     1     0     0     0     0     0     0     0     0     0    60     0     0    61
## 10        0     0     0     0     0     0     0     0     0     0     0    60     0     0   101
## 11        0     0     0     0     0     0     0     0     0     0     0    36     0     0    23
##         <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1         0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2         1    74     1     1    16   118    23    31    35     6     1     3     1     1     1
## 3         3    36     0     0     0    73     0    25    26     0     0     0     0     0     0
## 4        48   128     0     0     0   100     0    30    41     0     0     0     6     1     0
## 5        34    83     0     0     0    70     0     0    26     1     0     1     0     1     0
## 6        13    61     0     0     0    62     0     0    24     1     0     1     0     1     0
## 7         0   102     0     0     0   128     0     0     1     0     0     0     0     0     0
## 8         0   102     0     0     0   110     0     0     0     0     0     0     0     0     0
## 9         0    66     0     0     0    46     0     0     0     0     0     0     0     1     0
## 10        0    48     0     0     0    79     0     0     0     0     0     0     0     3     0
## 11        0     0     0     0     0    41     0     0     0     0     0     0     0     0     0
##         <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1         0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2        97    31     1    13    40     2     1     3    73     2     9    46     1     1     1
## 3        58    45     1     0     0     4     0     1    22     3     2    35     0     0     0
## 4       127    92     0     0     0    10     0     1     0     1     0    83     0     0     0
## 5       121    60     0     0     0     3     0     0     0     3     0     0     0     0     0
## 6        76    30     0     0     0     4     0     0     0     2     0     0     0     0     0
## 7       113    33     0     0     0    12     0     0     0     0     0     0     0     0     0
## 8       111    35     1     0     0    10     0     0     0     1     0     0     0     0     0
## 9        43    12     0     0     0    12     0     0     0     1     0     0     0     0     0
## 10       81    13     0     0     0    14     0     0     0     1     0     0     0     0     0
## 11       21     7     0     0     0     4     0     0     0     0     0     0     0     0     0
##         <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1         0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2         1     1    91     2     1     1     4     3     2     1     1     1     1     1    16
## 3         0     0    77     0     0     2     3     2     1     0     0     0     0     0     4
## 4         0     0   197     0     0     2     0     3     0     0     0     0     0     0     7
## 5         0     0    87     0     0     3     0     4     0     0     0     0     2     0     0
## 6         0     0    97     0     0     0     0     0     1     0     0     0     0     0     0
## 7         0     0   116     0     0     4     0     0     0     0     0     0     0     0     0
## 8         0     0   116     0     0     7     0     0     0     0     0     0     0     0     0
## 9         0     1    60     0     0     8     0     0     0     0     0     0     0     0     0
## 10        0     0    81     0     0     4     0     0     0     0     0     0     0     0     0
## 11        0     0    33     0     0     2     0     0     0     0     0     0     0     0     0
##         <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1         0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2        39     1     1     1     1     1     1     1     3     1     1     3     1     1     1
## 3        33     0     0     0     1     0     0     0     1     0     0     0     0     0     0
## 4        31     0     0     0     0     0     0     0     2     0     0     0     1     0     0
```

```
## 5       9     0     0     0     0     0     0     2     0     0     0     1     0     0     0
## 6       0     2     0     0     0     0     0     0     0     0     0     3     0     0     0
## 7       0     1     1     1     0     0     0     1     0     0     0     1     0     0     0
## 8       0     0     0     0     0     0     0     5     0     0     0     0     1     0     0
## 9       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 10      0     2     0     0     0     0     0     0     0     0     0     0     0     0     0
## 11      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
##     <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2       1     1     2     1     2     1     1     1     1     1    30     7     1     1     1
## 3       0     0     4     0     2     3     1     1     0    11     1     1     0     0     0
## 4       0     0     6     2     0     2     0     0     0     1     0     1     0     0     0
## 5       0     0     0     0     0     6     0     0     0     0     0     1     1     0     0
## 6       0     0     0     0     2     1     0     0     0     0     0     1     0     0     0
## 7       0     0     0     0     6     3     1     0     0     0     0     1     0     0     0
## 8       0     0     0     1     2     2     0     0     0     0     0     0     0     0     0
## 9       0     0     0     4     6     0     0     0     0     0     0     6     0     0     0
## 10      0     0     0     3     9     0     0     0     0     0     0     1     0     0     0
## 11      0     0     0     0     5     0     0     0     0     0     0     0     0     0     0
##     <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2       1     1     1     1     1     1     1     1    43    18    14     1     1     1     1
## 3       0     0     0     1     0     2     0     4     0    40    24     6     1     0     0
## 4       0     0     0     0     0     1     2     1     0    62    42     2     6     0     3
## 5       0     0     0     0     0     0     0     1     0    24    29     7    11     0     0
## 6       0     0     0     0     0     0     0     1     0    34    22     2    16     0     0
## 7       0     0     0     0     0     0     1     2     0    56    18     0    16     0     0
## 8       0     0     0     0     0     0     0     4     0    72    24     0    17     0     0
## 9       0     0     0     0     0     0     2     3     0    49    28     0    14     0     0
## 10      0     0     0     1     0     0     1     4     0    83    21     0    14     0     0
## 11      0     0     0     0     0     0     0     0     0    33     0     0     7     0     0
##     <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2       1    12     3     1     2     6     3     1     2     2     1     1     1     1     1
## 3       0    33     1     0     1    24     1     0     3     0     0     0     3     5     0
## 4       5    47     0     1     1    52     6     0     5     0     0     0     2     7     0
## 5       0    23     0     0     0    28    12     0     5     0     0     0     0     3     0
## 6       0    35     0     0     0    36    11     0     0     0     0     0     0    10     0
## 7       0    59     0     0     0     0    27     0     0     0     0     0     0    17     0
## 8       0    39     0     1     1     0    18     0     0     0     0     2     0    27     0
## 9       0    37     0     0     1     0     8     0     0     0     0     4     0    13     0
## 10      0    27     0     0     0     0     6     0     0     0     0     3     0    11     0
## 11      0    17     0     0     0     0     2     0     0     0     0     3     0     6     0
##     <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2       1     3     1     1     1     1     1     1     1     1     1     1     1     1     1
## 3       0     1     1     0     1     0     1     0     0     1     2     0     0    14     0
## 4       0     6     5     2     0     5     3     6     0     0     5     0     0    20     0
## 5       0     0     3     0     0     1     0     2     1     0     0     0     0     9     0
## 6       0     0    15     0     0     1     0     1     2     0     0     0     0     8     0
## 7       0     0    20     1     0     1     1     2     2     0     0     3     0     5     0
## 8       0     0    20     0     0     2     2     3     2     1     0     3     0     4     0
## 9       0     0     8     2     0     0     2     2     2     0     0     3     0     7     0
## 10      0     0    15     1     0     1     1     4     0     1     0     1     0     7     0
```

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```
## 11    0    0   10    2    0    0    0    1    0    0    0    0    0    3    0
##     <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     1    1    1    1    1    1    0    0    0    0    0    0    0    0    0
## 3     3    1    0    1    1    0    1   11    2   26    1    1    1    1    1
## 4     2    3    2    3    2    0    0    0    1   54    0    0    0    0    0
## 5     0    0    0    0    1    0    0    0    0   31    0    0    0    0    1
## 6     0    0    0    0    0    0    0    0    2   17    0    0    0    7    0
## 7     1    0    0    0    0    0    0    0    0    3    0    0    0   25    0
## 8     1    0    2    0    2    0    0    0    5    0    0    0    0   19    0
## 9     0    0    0    0    1    0    0    0    3    0    0    0    0   34    0
## 10    1    0    0    0    2    0    0    0    1    0    0    0    0   13    0
## 11    1    0    0    0    1    0    0    0    2    0    0    0    0    5    0
##     <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     1    2    2    1    1    1    1    2    4    1    1    2    1    3   22
## 4     0    0    1    0    0    0    0    0    1    0    0    0    0    2    5
## 5     0    0    5    2    0    0    0    1    4    0    0    0    0    0    0
## 6     0    2    3    0    0    0    0    0    5    0    0    0    0    0    0
## 7     0    2    7    2    0    0    0    0   16    1    0    0    0    0    0
## 8     0    0    6    0    0    0    0    1   15    0    0    0    0    0    0
## 9     0    3    4    0    0    0    0    3   23    0    0    0    0    0    0
## 10    0    0    6    0    0    0    0    3   22    0    0    0    0    0    0
## 11    0    0    2    0    0    0    0    5   11    0    0    0    0    0    0
##     <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     1    5    1    1   17   68   10   10   13    3    1    1    1    1    1
## 4     0    3    1    0    0  115   59    0   18    5    0    0    2    0    0
## 5     0    2    0    0    0   60   31    0   22    0    0    0    1    0    0
## 6     0    0    0    0    0   67   33    0    5    0    0    0    1    0    0
## 7     0    0    0    0    0  142   34    0    9    0    0    0    1    0    0
## 8     0    0    0    0    0  107   40    0    6    2    0    0    0    1    0
## 9     0    0    0    0    0   64   23    0    4    0    0    0    0    0    0
## 10    0    0    0    0    0   79   35    0    0    0    0    0    0    0    0
## 11    0    0    0    0    0   35   20    0    0    0    0    0    0    1    0
##     <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     1    1    2    2   64   34    1    1    1    4   47   23    2    1    1
## 4     0    0    0    0  105   67    0    0    0   23   78   85   19    0    0
## 5     0    0    0    0   62    0    1    1    0   19   53   12    1    1    0
## 6     0    0    0    0   48    0    0    1    0   40   57   55    0    0    0
## 7     0    0    0    0   83    0    0    3    0   68   94   80    2    0    0
## 8     0    0    0    0   96    0    0    1    0   38   76   34    7    0    0
## 9     0    0    0    0   58    0    0    5    1   35   43    3    3    0    0
## 10    0    0    0    0   70    0    0    4    0   30   87    0    6    0    0
## 11    0    0    0    0   39    0    0    2    0   13   37    0    1    0    0
##     <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     1    1    1   24   30    3    1    1    4    1    1    1    3    1    1
## 4     0    0    0   32   63    0    0    0    0    1    0    1    0    0    0
```

```
## 5      0    0    0   23   31    0    0    0    1    0    0    0    0    0    0
## 6      0    0    0   35   27    0    0    0    2    0    0    0    0    0    0
## 7      0    0    0    0   52    0    0    0    0    0    0    0    0    0    0
## 8      0    0    0    0   51    0    0    0    0    1    0    0    0    0    0
## 9      0    0    0    0   37    0    0    0    0    0    0    0    0    0    0
## 10     0    0    0    0   33    0    0    0    3    0    0    0    0    0    0
## 11     0    0    0    0   13    0    0    0    0    0    0    0    0    0    0
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     13    1    1   17    1    1    2   25   11    2    3   16   18   27   10
## 4      8    0    0   55    1    1   18  150   94   34    0   77  103  140    0
## 5      0    1    0   15    0    0    1   63   30    1    0   15   42  113    0
## 6      1    1    0    0    0    0    2   39    0    0    0    0   53   72    0
## 7      1    0    0    0    4    0   17   78    0    0    0    0   85  120    0
## 8      1    0    0    0    0    0    2    0    0    0    0    0   87   82    0
## 9      1    0    0    0    0    0    4    0    0    0    0    0   25   34    0
## 10     0    0    0    0    1    0    5    0    0    0    0    0   44   43    0
## 11     0    0    0    0    0    0    3    0    0    0    0    0   15   37    0
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     21   21    1   17    5    1    1   21    3    1    1    1    3   20    1
## 4    146  119    0    0   33    0    0  146   15    0    0    0   24  138    0
## 5    119   12    0    0   21    5    0   12    6    0    0    0   12   79    0
## 6     71    0    0    0    8    0    0    0    0    0    0    0    0   72    0
## 7    172    0    0    0    0    2    0    0    3    0    0    0    0  126    0
## 8    148    0    0    0    0    4    0    0    4    0    0    0    0   75    0
## 9     66    0    0    0    0    6    0    0    4    0    0    0    0   20    0
## 10    67    0    0    0    0    2    0    0    0    0    0    0    0   24    0
## 11    40    0    0    0    0    0    0    0    0    0    0    0    0   11    0
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     13    8    1    3    2    1    1    1    1    1    1    1    1    2    1
## 4     31    0    0    0    1    0    3    0    2    0    2    4    3    0    1
## 5     17    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## 6      0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## 7      0    0    0    0    0    0    1    0    1    0    1    1    0    0    0
## 8      0    0    0    0    0    0    1    0    1    0    0    0    0    0    1
## 9      0    0    0    0    0    0    0    0    0    0    0    0    0    0    4
## 10     0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## 11     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3      1    1    2    1    1    1    1    1    1    1    1    1    1    1    1
## 4      0    0    0    0    1    1    0    3    0    0    0    0    7    0    0
## 5      0    0    0    0    2    1    0    0    1    0    0    0   10    1    0
## 6      0    0    0    0    0    0    0    0    0    0    0    2   15    4    0
## 7      0    0    0    0   10    0    0    5    0    0    0    0   20    0    3
## 8      2    0    0    0   16    0    0    3    0    0    0    0   18    0    6
## 9      0    0    0    1    4    0    0    3    0    0    0    1   11    0    8
## 10     0    0    0    0    4    0    0    6    0    0    0    0   10    0    6
```

```
## 11     0    0    0    0    6    0    0    0    0    0    0    0    5    0    1
##     <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     1    2    1    1    1    1    1    1    1    1    1    1    0    0    0
## 4    56    2    0    0    0    0    0    1    3    0   50   52    2    1    1
## 5    43    2    0    0    0    0    0    0    0    0   42   43    1    1    0
## 6    60    0    0    0    0    0    0    1    0    0   55   49    1    3    0
## 7    73    0    0    0    0    0    0    2    0    0   77  107    0    0    1
## 8    68    1    0    0    0    0    0    0    0    0   86  100    0    5    1
## 9    46    1    0    0    0    0    0    0    0    0   72   63    0    3    0
## 10   59    1    0    0    0    0    0    0    0    0   90   78    0    0    0
## 11   14    1    0    0    0    0    0    0    0    0   28   34    0    0    0
##     <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     1    2    3    2    3   36    3   16   11    1    2    3    2    2    4
## 5     0    0    0    0    2    6    0   21   19    0    1    1    2    0    5
## 6     0    0    0    0    0    0    1   12   24    0    1    0    1    0    2
## 7     0    1    0    1    0    0    2   10   43    2    2    5    0    0    3
## 8     0    1    0    0    0    0    1   39   53    3    4    4    0    0    7
## 9     0    0    0    0    0    0    1   19   24    0    2    1    0    0    5
## 10    0    0    0    0    0    0    3   31   27    0    3    0    0    0    1
## 11    0    0    0    0    1    0    0   22   16    0    0    0    0    0    0
##     <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     1    1   41    1    1   98    1  116    2   13  104    1    1    1    1
## 5     0    1   50    0    0   58    0  113    3    1   63    0    0    0    0
## 6     0    2   34    0    0   13    0   65    0    0   41    0    0    0    2
## 7     0    4  120    0    0    0    0   66    0    0    0    0    1    0    1
## 8     0    0  106    0    0    0    0   77    0    0    0    0    0    3    0
## 9     0    0   23    0    0    0    0   35    0    0    0    0    0    1    1
## 10    0    0    0    0    0    0    0   54    0    0    0    0    0    0    0
## 11    0    0    0    0    0    0    0   25    0    0    0    0    0    1    1
##     <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4   118    5   15   17    1    1   20    1    1    2    7    5   64   81   37
## 5   110    9    5    3    1    0    0    0    0    0    5    1   86    2   12
## 6    62    2    4    6    0    1    2    0    0    0   12    0   64    8    0
## 7    92    0    0   11    0    0    1    0    0    1   31    0  110   39    0
## 8    91    0    0   15    0    0   28    0    0    0   15    0   93   55    0
## 9    54    0    0    0    0    0    0    0    0    0    4    0   23   26    0
## 10   88    0    0    5    0    0    0    0    0    1    6    0   39   63    0
## 11   31    0    0   13    0    0    0    0    0    0    5    0   16   29    0
##     <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    15   18   16   11    7    6    1    2    1    4    1    4    5    1    1
```

##															
## 5	3	0	0	0	0	0	0	2	0	1	0	0	1	0	1
## 6	2	2	0	0	0	5	0	3	0	1	0	0	0	0	1
## 7	48	45	0	0	30	27	1	1	0	0	1	0	0	0	2
## 8	20	18	0	0	18	26	0	2	0	7	0	0	0	0	0
## 9	0	0	0	0	2	10	0	0	0	3	0	0	0	0	0
## 10	6	3	0	0	0	30	0	0	0	2	0	0	0	0	0
## 11	9	0	0	0	0	11	0	0	0	0	0	0	0	0	0
##	<NA>	<NA>	<NA>	<NA>	<NA>	<NA>	<NA>	<NA>	<NA>	<NA>	<NA>	<NA>	<NA>	<NA>	<NA>
## 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
## 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
## 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
## 4	1	1	1	1	2	1	1	1	1	2	3	1	26	2	2
## 5	0	0	0	0	0	2	0	2	0	0	1	0	19	0	0
## 6	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0
## 7	0	0	0	0	0	0	0	0	0	1	0	1	6	0	0
## 8	0	0	0	0	1	0	1	3	0	1	0	1	4	1	0
## 9	0	0	0	0	0	0	0	0	0	0	0	0	7	1	0
## 10	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
## 11	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
##	<NA>	<NA>	<NA>	<NA>	<NA>	<NA>	<NA>	<NA>	<NA>	<NA>	<NA>	<NA>	<NA>	<NA>	<NA>
## 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
## 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
## 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
## 4	2	1	1	1	1	1	1	1	1	1	1	2	3	1	1
## 5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
## 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
## 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
## 8	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
## 9	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
## 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
## 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
##	<NA>	<NA>	<NA>	<NA>	<NA>	<NA>	<NA>	<NA>	<NA>	<NA>	<NA>	<NA>	<NA>	<NA>	<NA>
## 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
## 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
## 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
## 4	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1
## 5	0	0	0	0	0	0	0	2	0	0	2	1	1	0	0
## 6	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0
## 7	0	0	0	0	0	0	0	0	0	0	10	1	0	0	0
## 8	0	0	0	0	0	0	0	0	0	0	12	0	0	0	0
## 9	0	0	0	0	0	0	0	0	0	1	10	0	0	0	0
## 10	0	0	0	0	0	0	0	0	0	2	7	0	0	0	0
## 11	0	0	0	0	0	0	0	0	0	1	5	0	0	0	0
##	<NA>	<NA>	<NA>	<NA>	<NA>	<NA>	<NA>	<NA>	<NA>	<NA>	<NA>	<NA>	<NA>	<NA>	<NA>
## 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
## 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
## 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
## 4	1	1	1	1	1	1	1	1	1	1	3	1	1	27	1
## 5	0	0	0	0	0	0	0	1	0	0	0	0	3	0	0
## 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
## 7	1	0	1	0	0	0	1	0	1	0	0	0	0	0	0
## 8	0	1	0	0	0	0	0	0	1	0	1	2	0	0	0
## 9	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
## 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

```
## 11     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
##     <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4     1     2     1     1     2     2     2     3     1     1     1     1     2     1     1
## 5     0     9     0     0     2     2     9     1     5     2     0     0     2     1     0
## 6     0     4     0     0     0     0     1     0     0     0     0     0     1     5     0
## 7     0    18     0     0     4     2     2     0     0     0     0     2     0     2     0
## 8     0     7     0     0     0     0     1     1     0     0     0     3     7     2     0
## 9     0     3     0     0     3     3     3     1     0     0     0     0     2     0     0
## 10    0     2     0     0     0     2     0     1     0     0     0     1     3     1     0
## 11    0     1     0     0     0     0     3     1     0     0     0     0     0     1     0
##     <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4     1     2     2    19     1     4     1     7     3     1     1     1     2     1     1
## 5     0     0     0    25     0     0     0     0     0     1     1     1     0     1     0
## 6     0     0     0    18     0     0     0     0     0     0     3     1     0     2     0
## 7     0     0     0     3     0     0     0     0     0     0     1     3     0     0     0
## 8     0     0     0     6     0     0     0     0     0     4     0     3     0     0     0
## 9     0     0     0     6     0     0     0     0     0     1     0     0     0     0     0
## 10    0     0     0     6     0     1     0     0     1     1     0     0     0     0     0
## 11    0     0     0     1     0     0     0     0     0     0     0     0     0     0     0
##     <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4     4     1     1     1     1     1     3     2     2     1     1     1     2     0     0
## 5     0     0     0     0     0     0     5    14    17     1     0     1     0     1     1
## 6     0     0     0     0     0     0     3    11     4     0     0     0     0     0     0
## 7     0     1     0     0     0     0    18    23     3     0     2     0     0     0     0
## 8     0     0     0     0     0     0     6     7     0     0     0     0     0     1     0
## 9     0     0     0     0     0     0     6     3     0     0     0     0     0     0     0
## 10    0     0     0     0     0     0     6     6     0     0     0     0     0     0     0
## 11    0     0     0     0     0     0     7     5     0     0     0     0     0     0     0
##     <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 5     1     1     1     1     1     1     6     5     1     2     2     1     1    58     1
## 6     0     0     0     0     0     0     0     0     0     0     0     0     0    39     0
## 7     0     0     0     0     0     0     0     3     0     2     1     0     0    84     0
## 8     0     0     0     0     0     0     0     3     0     1     2     0     0    54     0
## 9     0     0     0     0     0     5     0     6     0     2     2     0     0    48     0
## 10    0     0     0     0     0     0     0     2     0     1     1     0     0    53     0
## 11    0     0     0     0     0     0     0     0     0     0     0     0     0    27     0
##     <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
```

```
## 5      9   42   15    2    1    1    1    1   43   38   55    3    2   40    1
## 6      0   50    0    9    0    5    0    0   52   60   43    0    0   41    0
## 7      0   11    0   12    0    4    0    0  138  145    0    2    1   40    0
## 8      0    0    0   17    0    9    0    0  181   95    0   13    0    0    0
## 9      0    0    0   11    1    4    0    0   13   23    0    2    0    0    0
## 10     0    0    0    7    9    2    0    0    8   41    0    0    0    0    0
## 11     0    0    0    8    0    0    0    0    5   13    0    0    0    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5     2    2    1   18    4    2   54   62   53   30    6    1    1   11    2
## 6     1    1    1   19    0    0   72   78   68   61    1    0    0    8    0
## 7     0    0    0   98    0    0  120    0  131  138    0    0    4    0    0
## 8     0    2    0   61    0    0  131    0   84   86    0    0    0    0    0
## 9     0    2    0   44    0    0   76    0   48   28    0    0    0    0    0
## 10    0    4    0   63    0    0  114    0   56   65    0    0    0    7    0
## 11    0    0    0   23    0    0   33    0   23   35    0    0    0    5    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5     3    1    1    1    1    1    1    1    1    5    1    1    1    3    2
## 6     4    0    0    0    1    0    0    0    0    1    3    0    1    1    3
## 7     0    0    0    0    2    0    0    0    0    0    0    0    0    1    0
## 8     0    0    0    0    4    0    0    0    0    0    1    0    0    0    0
## 9     0    0    0    0    6    1    0    0    0    0    0    0    0    0    0
## 10    0    0    0    0    3    0    0    0    0    0    0    1    0    0    0
## 11    0    0    0    0    3    0    0    0    0    0    0    0    0    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5     2    7   14    1    1    1   19    2    1    1    1    1    1    1    7
## 6     8   43    3    0    0    0   45    4    0    0    0    0    0    0    6
## 7    20    0    0    0    1    0  102    2    0    0    0    0    0    0    0
## 8    18    0    0    3    2    0  102    2    0    0    1    1    0    0    0
## 9    17    0    0    1    1    0   78    2    0    0    2    0    0    0    0
## 10   11    0    0    1    1    0  100    8    0    0    2    0    0    0    0
## 11    8    0    0    1    0    0   48    7    0    0    2    0    0    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5    22    1    2    1    1    1    3    2    2    2    1    1    1    2    3
## 6    70    0    1    1    1    0    4   27    5    6    0    0    0   39   17
## 7   132    0    5    0    2    0    4    6    0   17    0    0    0   39   45
## 8   106    0    0    2    2    0    0    0    0    6    0    0    0   52   30
## 9    63    0    0    3    0    0    0    0    0    6    0    0    0   40   32
## 10   88    0    0    1    1    0    0    0    0    5    0    0    0   71   32
```

```
## 11      7      0      0      0      0      0      0      0      0      1      0      0      0     25     16
##      <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>
## 1       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 3       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 4       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 5       1      2      1      2      1      2      1      1      1      0      0      0      0      0      0
## 6       0      8      0      2      0      0      1      0      0      1      1     14      2      4     12
## 7       0     57      0     20      0      0      0      0      0      0      0      0      2     13     29
## 8       0      8      0      9      0      0      0      2      0      0      0      0      0     20     10
## 9       0      0      0      2      0      0      0      0      0      1      0      0      0     15      4
## 10      0      0      0      3      0      0      0      1      0      0      0      0      0     11     15
## 11      0      0      0      7      0      0      0      0      0      0      0      0      0      5      5
##      <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>
## 1       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 3       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 4       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 5       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 6      11      2      3      3      2      1      1     38     66     65     45     26     47     25     63
## 7       0      0      5      3      1      0      0      0      0     94     66     10     60      1    138
## 8       0      0     30      4      0      0      0      0      0      0     67      0     92      0    119
## 9       0      0      0      2      0      0      0      0      0      0     52      0     23      0     54
## 10      0      0      0      1      0      0      0      0      0      0     65      0      5      0     58
## 11      0      0      0      1      0      0      0      0      0      0     17      0      6      0     27
##      <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>
## 1       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 3       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 4       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 5       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 6       3      6     24      2      3      5      3      3      2      5      2      1      8      7      7
## 7       3     15     17      0      0      2      3      3      0      0      0     33      4      0      1
## 8       0     13      0      0      0      0      0      0      0      0      0     16      0      0      2
## 9       0      5      0      0      0      0      3      2      0      0      0      0      0      0      2
## 10      0      7      0      0      0      0      1      0      0      0      0      6      0      0      0
## 11      0      0      0      0      0      0      0      2      0      0      0     10      0      0      0
##      <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>
## 1       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 3       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 4       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 5       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 6       4      4     18      9      2      4      1      4      3      1      1      3     10     19      3
## 7       4      3     56      5      0      4      0     10      2      0      0      2      0      0      0
## 8       5      0     61     15      0     12      1      4      0      0      0      3      0      0      0
## 9       1      0     21     11      0      6      1      2      2      0      0      4      0      0      0
## 10      6      0     33     18      0      6      1      1      0      0      0      1      0      0      0
## 11      4      0     17      4      0      2      0      0      1      0      0      1      0      0      0
##      <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>
## 1       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 3       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 4       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
```

```
## 5     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6     9    3   10    2    1    1   23    1    1    1    1    1    1    1    4
## 7    18    2    3    6    0    0   50    0    0    0    1    0    0    2   58
## 8     0    2    2    0    0    0   45    0    0    0    0    0    0    0    3
## 9     0    3    2    0    0    1   35    0    0    0    0    0    1    0    0
## 10    0    5    0    0    0    1   34    0    0    0    0    0    1    0    0
## 11    0    1    0    0    0    0    5    0    0    0    0    0    0    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6    10    1    1    1    1    2   18   25   30   21    3    4    4   11   33
## 7    27    0    0    0    0   17    2  115   71   37    4   11   95   73  136
## 8    10    0    0    0    0   16    4   70   47   27    1    2   89   45  103
## 9    15    0    0    0    0   15    4   64   43    0    0    0   62   23   60
## 10   25    0    0    0    0   35    3   65   49    0    0    0   60   18   66
## 11   10    1    1    1    1   19    0   44   29    0    0    0   28   10   24
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6     1    1    1    1    1    1    1    2    3    1    1    1    1    1    1
## 7     0    0    0    8    0    0    0    1    0    0   25    0    0    0    0
## 8     0    0    0   12    0    0    0    3    0    0   25    0    0    2    0
## 9     0    0    0    2    0    0    0    5    0    0    0    0    0    0    0
## 10    0    0    0    3    0    0    0    4    0    0    0    0    0    0    0
## 11    0    0    0    1    0    0    0    4    0    0    0    0    0    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6     1    3    1    1    1    6    3    1    1    1    1    1    2    1    1
## 7     0   11    0    0    0   46    9    0    1    0    0    0    2    0    2
## 8     0   29    0    0    0    0    0    0    0    0    1    0    0    0    0
## 9     0    0    0    0    0    0    0    0    0    0    3    2    0    0    0
## 10    0    0    0    0    0    0    0    0    0    0    1    4    2    0    0
## 11    0    0    0    0    0    0    0    0    1    0    0    2    0    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6     1    1    1    1    2    1    1    2    1    2    1    1    2    1    2
## 7     0    0    1    4    3    2    7   39   17    1    0    0    1    2   17
## 8     0    0    0    0    5    1    1    0    1    0    0    0    0    6   19
## 9     0    0    0    1    6    1   15    0   10    0    0    0    4    2    0
## 10    0    0    0    2    3    6   32    0    9    0    0    0    4    0    0
```

```
## 11      0      0      0      4      1      1     16      0      4      0      0      0      0      0      0
##      <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>
## 1       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 3       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 4       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 5       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 6       1      1      0      0      0      0      0      0      0      0      0      0      0      0      0
## 7       0      1      7     10      3      2      2      2      5      3      3      1      1      1      1
## 8       0      0      5     15      2      0      0      0      1      2      2      0      0      0      0
## 9       0      0      4      6      2      1      0      0      0      0      0      0      0      0      0
## 10      0      0      6      6      0      0      0      0      1      0      0      0      0      0      0
## 11      0      0      4      3      2      0      0      0      0      0      0      0      0      0      0
##      <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>
## 1       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 3       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 4       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 5       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 6       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 7       2      1      3      1      1      1      3      1     43     15     14     11    133      1      1
## 8       0      0      2      0      4      2      4      0     58     16     20      9     86      0      0
## 9       0      0      1      1      0      1      2      0     64      2     11     15      0      0      0
## 10      0      0      1      0      0      0      9      0     51      5     20     24      0      1      0
## 11      0      0      3      0      0      0      4      0     29      1      7     11      0      1      0
##      <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>
## 1       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 3       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 4       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 5       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 6       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 7       3      1      1     16     18      1      1      1      1    111      5     47      2      2      2
## 8       3      0      0     13      0      1      0      0      1    104      3     63      0      0      3
## 9       1      0      0     12      7      0      0      0      0     47      0     53      0      2      0
## 10      3      0      0     18      5      0      0      0      0     51      0     15      0      3      0
## 11      4      0      0     13      3      0      0      0      0     22      0      0      0      0      0
##      <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>
## 1       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 3       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 4       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 5       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 6       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 7     108     60      1      2      2      3      1      1      1      1     47     43      3      1      2
## 8      53     56      2      0      1      2      0      0      1      8     13     18      3      2      1
## 9      43     47      0      0      0      2      0      0      2      0      0      0      3      0      0
## 10     28     58      0      0      0      0      0      0      3      0      0      0      3      0      1
## 11      0     26      0      0      0      3      0      0      1      0      0      0      0      0      0
##      <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>
## 1       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 3       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 4       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
```

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```
## 5      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 7      2    8    9    5    5    1    1    1    1    1    5    1    1   11    2
## 8      1    0    0    1    5    0    0    0    0    0    3    0    1   11   12
## 9      0    0    5    1    4    0    0    0    0    0    0    0    0    2    0
## 10     0    0    0    3    3    0    0    0    0    0    0    0    0    7    0
## 11     0    0    0    0    1    0    0    0    0    0    0    0    0    0    4
##     <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 7      1    4    2    2    3    3   18    1    1    3    4    3    1    9    5
## 8      0    7    0    0    1    1   18    0    0    3    2    2    3    8    0
## 9      0    2    0    0    0    0   13    0    0    7    1    6    0    7    0
## 10     0    1    0    0    0    0   36    0    0    5    0   12    3    0    0
## 11     0    1    0    0    0    0   10    0    1    3    1    7    0    0    0
##     <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 7      6    2    3    2    1    2    2    1    1    2    3    1    3    4    5
## 8      0    0    0    0    0    2    0    0    0    5    3    0    0    2    4
## 9      0    0    0    0    4    0    0    0    0    3    0    1    0    1    4
## 10     0    0    0    0    8    0    0    0    0    9    0    1    0    6    3
## 11     0    0    0    0    3    0    0    0    0    3    0    0    0    2    1
##     <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 7      3    3    1    2    1    1   53   50    1    1    1    1    2    1    1
## 8      6    4    2    3    0    0  117  109    5    0    0    0    0    0    0
## 9      8    1    2    1    0    1   39   74    0    0    0    0    0    0    0
## 10     4    0    0    1    0    0   55   68    0    0    0    0    0    0    0
## 11     3    0    0    0    0    0   35   33    0    0    0    0    0    0    0
##     <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 7      1    1    1    2    1    1    1    1    1    1    1    1    1    2    4
## 8      0    0    0    4    0    0    2    0    0    0    0    0    0    7    3
## 9      0    0    0   14    0    0    0    1    0    0    0    0    0    0    2
## 10     0    0    0   11    0    0    0    0    0    0    0    0    0    0    0
```

```
## 11    0    0    0    9    0    0    0    0    0    0    0    0    0    0    0
##     <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 7     1    1    4    5    1   20   41   31    5   14    1    6    5    1    1
## 8     1    0    5   18    4   77   64    0    8   33    0    9   11    0    0
## 9     0    0    6    5    2   30    8    0    2   17    0    2    3    0    0
## 10    2    0    5    4    8   74   28    0    6   25    0    1    8    0    0
## 11    0    0    3    0    3   37   15    0    4   11    0    0    1    0    0
##     <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 7    30   28   19   19    1   14   16   14    1    1    1    3   23    4    1
## 8    18   98    0    0    0   46   42   46    0    0    0    0   53    1    0
## 9     2   53    0    0    0   13   18   17    0    1    0    0   21    1    1
## 10    0   47    0    0    0    0   20   16    0    0    0    0   30    3    1
## 11    0   27    0    0    0    0   12   11    0    0    0    0   19    4    0
##     <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 7     1    1    2    2    1    1    3    5    2    1    1    1    4    1    6
## 8     0    0    1    4    2    0    1   14    0    1    0    0    0    1   14
## 9     3    3    0    6    2    0    0   24    0    0    0    0    0    3    1
## 10    2    1    0    2    6    0    0   30    0    0    0    0    0    4    2
## 11    0    0    0    0    1    0    0   11    0    0    0    0    0    3    2
##     <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 7     2    2    1    1    1    0    0    0    0    0    0    0    0    0    0
## 8     6    6    7    0    0    6    2    1    1    1    7    2    1    6    4
## 9     0    0    3    0    0    7    1    1    0    0    0    0    0    0    0
## 10    0    2    6    0    0    0    0    2    0    0    0    0    0    0    0
## 11    0    3    7    0    1    0    0    0    0    0    0    0    0    3    0
##     <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
## 5     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 7     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 8    27    5    6   16    1   57    1    2    2    3    2    3    1   19    1
## 9     4    2   11    0    2   53    0    0    0    1    0    0    1   13    0
## 10    0    4   12    0    0   42    0    0    0    1    0    0    0    6    0
## 11    0    2    1    0    2   14    0    0    0    1    0    0    0    6    0
##     <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 7     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 8     1    1    1    1    1    1    1    1    1    1    1    8   24   35   66
## 9     0    0    0    0    0    0    0    0    0    0    0    4    4   27   70
## 10    0    0    0    0    0    0    0    0    0    0    0    3    0    0   57
## 11    0    1    1    1    0    0    1    0    0    1    1    2    0    0   33
##     <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 7     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 8     1    2    1    5    1    5    5   38    1    1   27   10   51   66    8
## 9     0    0    0    0    0    0    0    0    0    3    0    0   48   55    0
## 10    0    0    0    4    0    4    0    0    0    1    0    0   72   46    0
## 11    0    0    0    0    0    0    0    0    0    0    0    0   36   22    0
##     <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 7     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 8     7    6    1   10    3    4    2    4    5    3    5    4    4    2    2
## 9     1    0    0    0    0    0    0    1    6    7    5    0    1    0    0
## 10    5    0    0    0    0    0    0    0    0    4    4    0    0    0    0
## 11    0    0    0    0    0    0    0    0    0   11    0    0    0    0    0
##     <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 7     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 8     2    1    1    1    1    3    1    1    1    1    1    1    1    6    2
## 9     0    0    0    0    0    1    8    0    5    0    0    0    0    5    3
## 10    0    0    0    0    0    0    0    0    4    0    0    0    1    3    0
```

```
## 11     5     0     1     0     0     1     0     0     4     0     0     0     0     3     1
##     <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 5      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 6      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 7      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 8      3     1     3     2     1     1     2     1     1    18     2     2     6     2     3
## 9      0     0     1     1     3     0     0     0     0    50     4     4     2     0     0
## 10     1     0     2     0     6     0     1     0     0    68     2     2     0     0     0
## 11     0     0     1     0     2     0     0     1     0    28     0     0     0     0     0
##     <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 5      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 6      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 7      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 8      4     1     4     4     1     1    11     1     3     2     3     6     5    11     5
## 9      8     0     0     0     6     0    49     0     2     1     1     9     7    26    11
## 10     5     0     1     0     0     2    55     0     2     0     0     6    12    39    21
## 11     6     0     7     0     0     2    34     0     1     0     0     3     4     6     5
##     <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 5      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 6      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 7      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 8      1     1     1     1    10     1     1     1     1     1     1     1     1     5     1
## 9      0     3     3     0    55     1     0     0     0     1     1     1     2    42     0
## 10     0     0     2     0    52     0     0     2     0     0     0     0     2    40     0
## 11     0     0     0     0    37     1     0     0     0     0     0     0     2    25     0
##     <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 5      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 6      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 7      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 8      1     1     3     1     1     1     1     1     1     2     1     1     1     1     1
## 9      0     1     3     0     0     2     0     1     0     0     0     0     0     0     0
## 10     0     1     1     0     1     0     0     0     0     0     0     0     0     0     1
## 11     1     0     0     0     1     0     0     0     0     0     0     0     0     0     2
##     <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
```

```
## 5       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 6       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 7       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 8       1     1     1     1     0     0     0     0     0     0     0     0     0     0     0
## 9       0     1     0     0     2     2     1     1     1     1     1     1     1     9    57
## 10      0     6     0     0     0     1     2     1     0     0     0     0     0     0    65
## 11      0     0     0     0     0     0     0     0     0     0     0     0     0     0    35
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 5       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 6       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 7       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 8       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 9      15     1     1     1     1    39    51    61    18    30    19    33    18     1     5
## 10     32     0     0     0     0     0    90    78    30    39    13    73     0     0     1
## 11      4     0     0     0     0     0    30    26    26    26     0    35     0     0     2
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 5       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 6       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 7       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 8       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 9       1     6     1    42    60     3     4     2    47    16    13     2     4     1     6
## 10      0     8     0    77     0     0     2     1    88    25    31     0     4     1     0
## 11      0     1     0    45     0     0     1     0    38     7    11     0     0     0     0
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 5       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 6       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 7       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 8       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 9       5     3     1     2     1     2    29     3     2    12     1     1     2     2     4
## 10      5     0     0     0     0     0    44     6     0    20     0     2     0     2     0
## 11      1     1     0     0     0     0     7     2     0     9     0     0     0     4     0
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 5       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 6       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 7       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 8       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 9       2     2     2     1     1     1     2     1     2     1     1     1     1     4     6
## 10      0     0     0     0     0     0     0     0     0     2     1     0     0     0     0
```

```
## 11    0    1    0    0    0    0    0    0    0    3    0    0    0    1    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 7     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 8     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 9     1    2    1    1    6    1    1    1    1    1    1    1    1    1    3
## 10    0    0    0    1    0    1    0    2    0    0    0    0    0    0    1
## 11    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 7     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 8     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 9     1    1    2    2    2    1    4    3    1    1    1    1    1    2    2
## 10    0    0    0    2    2    0    1    1    1    1    0    0    0    0    0
## 11    0    0    0    0    0    2    0    0    0    0    0    0    0    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 7     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 8     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 9     2    2    2    1    3    1    1    1    1    1    1    3    1    2    1
## 10    0    1    0    0    2    1    3    1    0    0    0    0    0    4    1
## 11    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 7     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 8     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 9     2    2    1    1    3    1    1    1    6    2    4    2    2    2    2
## 10    0    0    0    0    2    0    0    0    0    0   11    2    0    0    0
## 11    0    0    1    0    0    0    0    0    0    0    6    0    0    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
## 5      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 7      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 8      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 9      1    8    1    1    1    1    1    1    4    6   13    1    1   10    1
## 10     0   52    0    1    0    1    0    0   17    0   43    4    0   55    0
## 11     0   30    0    1    0    0    0    0   17    0   12    6    0   35    0
##     <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 7      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 8      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 9      1    4    1    2    2    2    3    2    3    1    1   12    1    1    1
## 10     4    8    0    4    1    3    3    3   15    1    0   71    0    0    6
## 11     2    0    0    1    0    0    3    0    6    0    0   40    0    0    3
##     <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 7      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 8      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 9      1    1    1    3    1    4    2    1    1    1   16    1    3    1    1
## 10     0    0    0   40   10    2    9    1    4    1   60    0    5    5    1
## 11     0    0    0   16    5    0    9    2    3    0   29    0    6    1    0
##     <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 7      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 8      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 9      1    1    2    1    1    1    2    1    1    2    1    2    1    0    0
## 10     1    0    7    5    0    0   34    2    0   18    0    0    6    1    1
## 11     0    0    6    0    0    0   10    2    0   12    0    0    2    0    0
##     <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 7      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 8      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 9      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 10     1    1    1    1    1    1    1   28    2   13    2    4    3    6    2
```

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```
## 11      0      0      0      0      0      0      0     21      0      3      0      0      2      6      0
##      <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>
## 1       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 3       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 4       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 5       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 6       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 7       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 8       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 9       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 10      1      3      1      1     86      1      1      1      3      1     19     77     71     35      3
## 11      0      1      0      0     47      0      0      0      4      0      0     27     35     29      0
##      <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>
## 1       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 3       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 4       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 5       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 6       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 7       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 8       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 9       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 10      1      4      1      1     87      2     30      2      2      2      1     54      3     56      7
## 11      0      4      0      0     25      0     11      0      0      0      0     27      0     40      6
##      <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>
## 1       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 3       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 4       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 5       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 6       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 7       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 8       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 9       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 10      1      3      3      1      1      1      1     12      2      3     17      1      1      1      1
## 11      0      4      0      0      0      0      0      2      1      1      0      0      0      0      0
##      <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>
## 1       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 3       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 4       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 5       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 6       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 7       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 8       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 9       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 10      1      1      2      2      1     63      4      7      2      1      1      1      1      1      1
## 11      0      0      1      0      0     31      1      5      0      0      0      0      0      0      0
##      <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>
## 1       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 3       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 4       0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
```

```
## 5      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 7      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 8      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 9      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 10     1    7    1    1    2    2    2    1    1    1    3    1    2    1    1
## 11     0    4    0    0    0    0    1    0    0    0    0    0    0    0    0
##     <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 7      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 8      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 9      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 10     1    2    1    4    4    7    6    1    1    2    2    2    3    3    2
## 11     0    0    0    3    1    3    5    0    0    0    0    0    0    0    0
##     <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 7      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 8      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 9      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 10    32   45    7    7    1    1    3    1    1   20    6    3    1   33    5
## 11     8   41    0    1    0    0    0    0    0   23    0    1    2    0    0
##     <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 7      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 8      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 9      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 10    25    2    2    1    2    1    3    3    4    3    3    3    1    4    3
## 11    17    1    0    1    9    0   13    0    9    0   10    0    0    7    0
##     <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 7      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 8      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 9      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 10     1    1   27   11   32    8    1    3    3    6    1   36    6    1    1
```

```
## 11    0    1   23   17   29    0    0    6    3    0    0   28    5    0    0
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 7     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 8     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 9     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 10    8    5    2    8    1    1    1    1    1    6    1    2    7    1    2
## 11   16   12    0   11    0    0    0    0    0   22    0    0    6    0    3
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 7     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 8     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 9     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 10    1    1    1    1    1    1    1    1    1    2    2    1    1    3    1
## 11    0    0    0    0    0    0    0    1    1    0    0    0    0    2    0
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 7     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 8     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 9     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 10    1    1    1    9    1    1    1    1    1    2    1    1    1    1    1
## 11    0    0    0   27    0    0    0    0    0    2    0    0    0    0    0
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 7     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 8     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 9     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 10    1    2    1    2    2    1    1    1    1    1    1    0    0    0    0
## 11    0    0    0    0    0    0    0    0    0   12    4   10    4    3    1
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
## 5      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 7      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 8      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 9      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 10     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 11     1    1    1    1    1    1    1    1    1    1    1    2    2    4    1
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 7      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 8      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 9      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 10     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 11     2    9    4    1    2    2    8   10   16   16    1    2    1    1    1
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 7      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 8      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 9      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 10     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 11     1    1    1    1    1    5   19   25    5    1    1    1    5    1    1
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 7      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 8      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 9      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 10     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 11     1    1    3    1    1    2    4    2    1    1    1    1   14    1    2
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1      0    0    0    0    0    0    0    0
## 2      0    0    0    0    0    0    0    0
## 3      0    0    0    0    0    0    0    0
## 4      0    0    0    0    0    0    0    0
## 5      0    0    0    0    0    0    0    0
## 6      0    0    0    0    0    0    0    0
## 7      0    0    0    0    0    0    0    0
## 8      0    0    0    0    0    0    0    0
## 9      0    0    0    0    0    0    0    0
## 10     0    0    0    0    0    0    0    0
```

```
## 11    1    1    1    1    6    1    1    1
```

```r
# Transforming into binary matrices
p2y <- as.matrix(p2y); p2y[which(p2y>=1)] = 1; p2y[which(p2y<1)] = 0


# -------------------- 7 sets of 3 year increments----------------------------
# Make a list of 3 years per dataframe
sample_data$ThreeYearIncrement <- cut(sample_data$Year, breaks = seq(min(sample_data$Year), max(sample_d
list_threeyears <- split(sample_data, sample_data$ThreeYearIncrement)
# Apply the count_instances function to each two years
instances_per_threeyear <- lapply(list_threeyears, count_instances)
# Convert the list of counts to a data frame
p3y <- do.call(rbind, instances_per_threeyear)
p3y
```

```
##    FB41 FB05 FB36 FB38 FB55 FB96 FB98 F108 F153 FB15 FB23 FB78 FB93 F155 FB01
## 1   67  109  136  151  118   57   38   40   53   50   68   82   63  170  140
## 2    0   80   92   90   87   31    0   33   47   95    0   69   75  113   85
## 3    0  144   83    0  182   24    0   44   50  107    0   80  142  153  163
## 4    0   77   74    0  102    0    0   33   30   82    0   63   60   84    9
## 5    0   49   74    0  103    0    0   42   56  138    0   90  109  157    0
## 6    0    7   56    0   62    0    0   65   48   58    0   87   57   75    0
## 7    0    0    0    0  107    0    0   37   67   72    0   70   28  101    0
##    FB43 FB92 F118 F122 FB29 <NA> FB54 FB71 FB90 F100 F119 FB14 FB27 <NA> FB57
## 1   60  125  203  165   89    0  229   87  221   88  142  112   97    0  103
## 2   52   94  106    0   42    0  140    0  114   66  135   83   81    0    0
## 3   79  152  170    0    0    0  180    0  201  104  147  268  115    0    0
## 4   43   83  110    0    0    0  141    0  146   68   48   43   83    0    0
## 5  113  155  142    0    0    0  105    0  231    4    0   14   70    0    0
## 6   51   87   91    0    0    0   80    0   78    0    0    0   53    0    0
## 7    7   95    3    0    0    0  112    0   88    0    0    0   84    0    0
##    FB66 FB76 FB94 F112 FB12 FB03 <NA> F106 FB44 FB62 F175 FB10 FB46 FB75 FB79
## 1   92   89  131   55   66   92    0  119  106  111  145  137  123   90  118
## 2   94   90  102    0    0   99    0  114   47    4  123   91   83   67  112
## 3  201  194  264    0    0  199    0  152   36    0  200  140  139  137  114
## 4  105   93   49    0    0   11    0   72   33    0  129   86   13   97  101
## 5   71    0    0    0    0    0    0  138   36    0  167   84    0    3  172
## 6   39    0    0    0    0    0    0    0   45    0  104   59    0    0  120
## 7   33    0    0    0    0    0    0    0   55    0  125   62    0    0   81
##    FB60 FB13 F138 FB63 FB07 FB11 F132 FB25 F102 F111 F130 F134 F136 F154 F160
## 1   32   62  148  148  180  190   10  132   13   87    7   12   13   59   28
## 2    0  127   55   48  108  146    5   86    9  106    1   28   23   34   17
## 3    0  123  108   80  190  234    5   97   13   82    2   12    9    9   13
## 4    0   64   90   62   98  119    2   80    8    0    0   10    9   15   10
## 5    0   72  139   38  153  197    2   85   28    0    0   17    0   27    3
## 6    0    9   96    0   84   88    0   82   22    0    0   10    0    2    0
## 7    0    0  119    0  100   96    0   88   21    0    0    0    0   13    0
##    F162 <NA> FB20 FB65 HIQQ POOF FB28 <NA> FB09 FB33 ATNA CWM3 NKLN WTMA FB48
## 1   28    0  128  169   13    8   32    0  154  146    2   14    4   14   27
## 2   18    0   76   99    3    8   76    0   76   94    0   17    0    1   20
## 3   14    9  133  184   12    4  155    0  122  129    0    9    2    0   72
## 4    6    2  100  145    5    1   31    0  102  111    0    4    1    0   21
## 5    8    0  131  174   26    2   49    0   99  123    6   14   11    0   24
```

```
## 6     17      0  110   85   21    0   27    0   11   75    0   13    9    0    2
## 7     20      0  121   91   21    0   37    0    0  111    1   11    0    0    0
##     F105 1054 <NA> FB32 49C3 49LA <NA> <NA> <NA> <NA> F164 <NA> KMSN MIDF 5NK2
## 1      5    1    0   85    9   34    0    0    0    0    5    0    3    1    1
## 2      6    1    0   58    0   14    0    1    0    1   22    0    0    4    3
## 3      4    0    0  148    0   20    0    0    0    0   31    0    0    2    0
## 4      1    0    0    0    0    4    0    0    0    0   67    0    0    2    0
## 5      0    0    0    0    0    0    0    0    2    0   69    0    0    8    0
## 6      0    0    0    0    0    0    0    0    0    0   57    0    0    4    0
## 7      0    0    0    0    0    0    0    0    0    0   95    0    0    3    0
##     <NA> <NA> <NA> <NA> <NA> WTAB <NA> BTTV <NA> F147 <NA> F237 <NA> <NA> FB84
## 1      0    0    0    0    0    2    0   14    0    5    0   17    0    0   91
## 2      0    0    2    0    0    0    0    7    0    6    4   14    0    0   73
## 3      0    0    1    0    2    0    0    0    0    0   14   55    0    1   91
## 4      0    0    0    0    1    1    0    0    0    0    7   40    0    0    0
## 5      0    1    1    0    8    2    0    0    0    0   10  131    0    0    0
## 6      0    0    1    0    2    0    0    0    0    0    0   39    0    1    0
## 7      0    0    0    0    0    0    0    0    0    0    0   56    0    1    0
##     CRAG HVMS LCKL RUFF FB59 FB83 FB02 C834 BBMB LDSL LSMS MCMA PN06 F276 FB24
## 1      5    1   10    3  105   53  109   25    5    5    1   21    1   12   73
## 2      5    2    0    5   61   67   46   57    3    3    0   16    0   30   32
## 3      3    4    0    3  141   86   97   87    5    6    0   39    0   77    0
## 4      0    3    0    6    1   35   77   45    2    2    0    0    0   35    0
## 5      0   18    1    0    0    0  131   99    0    1    0    0    1  118    0
## 6      0   15    1    0    0    0   65   64    0    0    0    0    0   77    0
## 7      0   12    1    0    0    0   70   79    0    0    0    0    0  119    0
##     FB35 F182 DRSN <NA> F128 F131 DIPT SLMS 2SDN BBL2 BBLN BTLN CHK2 ETMA <NA>
## 1     20   88   44    0   60  165    6    2    1    1    2    4    2    3    0
## 2     22   78   47    0  107  117    8    0    1    1    2    1    0    6    0
## 3     16   96   16    0  137  170    5    0    0    0    1    3    0    2    0
## 4     12   56   32    0   85   88    0    0    0    0    1    1    0    3    0
## 5     37   86   36    0  165  190    0    0    0    0    8    0    0    2    0
## 6     36   61   38    0   79  108    0    0    0    0    1    0    0    0    0
## 7     30   68    0    0   98  135    0    0    0    0    2    0    0    0    0
##     HNBT <NA> JAGG JIG3 KMBT LOBE MLTS <NA> <NA> <NA> <NA> <NA> SHOT SURR TFMS
## 1      2    0    3    4    1    3    1    0    0    0    0    0    4    3    2
## 2      1    0    0    3    0    0    3    0    0    0    0    0    2    0    0
## 3      0    0    0    1    0    0    1    0    1    1    0    0    3    0    0
## 4      0    0    0    1    0    0    1    0    0    0    0    0    1    0    0
## 5      3    0    0    1    0    0    2    0    0    0    0    1    1    0    0
## 6      1    0    0    2    0    0    1    0    0    1    0    0    0    0    0
## 7      0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
##     TSMV <NA> <NA> FB17 F110 F191 FB73 <NA> <NA> PSD2 PSDZ <NA> HSNS <NA> <NA>
## 1      6    0    0   33   35   18   14    0    0    2    1    0    5    0    0
## 2      6    0    0   20   38   20    7    0    0    0    0    0    2    0    1
## 3     14    0    0   22   55   11   18    0    0    0    0    0    1    0    1
## 4      1    0    0   27   45    0    0    0    0    0    0    0    2    0    0
## 5     15    0    0    5   63    0    0    0    0    0    0    0    6    0    0
## 6     20    0    0    0   43    0    0    0    0    0    0    0    3    0    1
## 7      7    0    0    0   47    0    0    0    0    1    0    0   13    0    2
##     <NA> ETSC <NA> <NA> <NA> LGSC <NA> <NA> MTMN NLPS <NA> <NA> <NA> F183 THUB
## 1      0    1    0    0    0    1    0    0   15    1    0    0    0   33    1
## 2      0    0    1    1    0    0    1    0    0    0    6    0    1   46    2
## 3      1    0    0    0    0    0    0    0    0    0    1    1    2   56    2
```

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```
## 4     2    0    0    0    0    0    0    0    0    1    2    0    0   38    0
## 5     7    0    0    0    0    0    0    0    0    3   22    0    0    1    0
## 6     8    0    0    0    0    0    0    0    0    1    7    1    0    0    0
## 7     0    0    0    2    0    0    0    0    0    1    2    1    0    0    0
##    F114 C791 FB26 FB34 F180 <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> SCOR
## 1  100   11   31   37   23    0    0    0    0    0    0    0    0    0    1
## 2   62    0   23    0   43    0    0    0    0    0    0    1    0    0    0
## 3   96    0   72    0    9    0    1    1    0    0    2    1    0    1    0
## 4   33    0    0    0    6    0    0    0    0    0    0    0    0    0    0
## 5   53    0    0    0    8    1    1    1    0    0    1    0    0    0    0
## 6   16    0    0    0    2    0    0    1    0    0    0    0    0    0    0
## 7   29    0    0    0    3    0    0    0    0    0    0    0    0    0    0
##    SPIK FJSL F117 <NA> <NA> ELFF PN04 <NA> TTM3 <NA> LNST <NA> <NA> <NA> <NA>
## 1    5    1  109    0    0   17    7    0    1    0    2    0    0    0    0
## 2    0    0   75    0    0    6    0    0    3    0    0    0    0    0    0
## 3    0    0  154    0    0    7    0    0    5    0    1    0    0    0    0
## 4    0    2    0    0    0    3    0    0    2    0    1    0    0    0    0
## 5    0    1    0    0    0    1    0    0    1    0    1    0    0    0    0
## 6    0    0    0    0    0    0    0    0    4    0    2    0    0    0    0
## 7    0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
##    FB39 CMRS CONC CONS F163 F181 HAIR HITS MSQ2 RTMW <NA> SPGT TABB MDNK KNOB
## 1   36    2    2    4   41   33    9    5    4   15    0    3    9    4   16
## 2    0    0    0    3   83   79    7    0    5   15    0    0    5    2    7
## 3    0   10    0    8  112  122   16    5    5   15    0    0    3    0    0
## 4    0   26    0    4   12   86   18   21    6   12    0    0    3   12    0
## 5    0   24    0    0    0   70   28   25    3   11    0    0    6   47    0
## 6    0   28    0    0    0    0   24   27    0   24    0    0    0    0    0
## 7    0   30    0    0    0    0   27   27    0   20    0    0    0    0    0
##    <NA> <NA> NIK2 <NA> <NA> BFWT JAWS <NA> <NA> <NA> <NA> ALHK LHLV <NA> FB06
## 1    0    0    3    0    0    6    9    0    0    0    0    6    1    0  109
## 2    0    0    1    0    0    0    0    0    2    0    0    2    0    0   81
## 3    0    0    0    0    0    0    0    0    0    0    0    5    1    0  158
## 4    0    1    1    0    0    0    0    0    0    0    0    7    0    0   91
## 5    0    0    1    0    0    0    0    0    0    0    0    7    4    0   14
## 6    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 7    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##    <NA> <NA> FB87 <NA> CKB2 1832 <NA> F157 <NA> SOLB TCTV IKNO F101 <NA> <NA>
## 1    0    0   35    0    6   17    0   18    0   28   14    9  141    0    0
## 2    0    0   81    0    0    7    3   80    0   27   20   54  138    0    0
## 3    0    0   54    0    0    0    8  176    0   55    4   28  135    0    0
## 4    0    0   28    0    0    0   17  139    0   38   24    0   55    0    0
## 5    0    0   57    0    0    0   21  104    0   56   22    0    0    0    0
## 6    0    0   49    0    0    0    0   16    0   37   11    0    0    0    0
## 7    0    0   64    0    0    0    0    0    0   43   10    0    0    0    0
##    VRIP HFLT ZENN <NA> CLAW AOTA <NA> <NA> <NA> <NA> <NA> F254 <NA> MPTB <NA>
## 1    1    2   12    0    1    2    0    0    0    0    0    2    0    5    0
## 2    1    8    1    0    0    1    4    0    0    0    0    5    0    8    0
## 3    1    7    0    0    0    1    6    0    0    0    0    5    0   61    0
## 4    1   10    0    0    0    3    4    0    0    0    0   28    0   45    0
## 5    1   13    0    0    0    0    4    0    0    0    0   35    0   75    0
## 6    2    0    0    0    0    0    3    0    0    0    0   43    0   46    0
## 7    1    0    0    0    0    0   12    0    0    0    0   56    0   45    0
##    SHTC TRIF <NA> <NA> PHNE PN10 PNSN FEAT LUMP BEGR MOCH F116 SLIF OTH_604 THOR
## 1    1    4    0    0    8    4    3    2    6   21   16   17    1       1    8
```

```
## 2    14    0    0    0    3    3    1    2    0   82    0    0    0         0    0
## 3    81    1    0    0    0    2    0    2    0   95    0    0    0         0    0
## 4    11    1    0    0    0    0    0    1    0   49    0    0    0         0    0
## 5     0    2    0    0    0    0    0    8    0   99    0    0    0         0    0
## 6     0    1    0    0    0    0    0    2    0  283    0    0    0         0    0
## 7     0    3    0    0    0    0    0    0    0   30    0    0    0         0    0
##    F192 F194 MCM2 CATR LFLA OTH_199 TN3N MTSS SIMP BRDO RPPL DTHB GTFG UPBK MNIK
## 1    18   14    3    4    7       1    1   14    5    9    4    1    2    2    3
## 2    60   53    0    1    0       0    0    7    1   15    0    0    4    1    6
## 3    71   71    0    1    2       0    0    6    0   20    0    0    2    0    7
## 4     0   25    0    0    0       0    0    4    6    2    0    0    1    0    3
## 5     0   39    0    0    0       0    0    4   13    0    0    3    1    2    0
## 6     0   63    0    1    0       0    0    5    9    0    0    0    0    1    0
## 7     0   17    0    0    0       0    0    5    6    0    0    1    0    1    0
##    C652 THMN RY34 TBTN CCL4 F172 L106 C391 BTHV NKNN PNKD C754 RTMC WLDC F149
## 1   163    4    7    2   14    5    2   35    3    3    4   13    4    2   21
## 2    54    0   13    2    0    2    1    0    0    1    0    0    0    0   61
## 3     0    0   80    0    0    0    2    0    0    2    2    0    0    4   64
## 4     0    0   48    0    0    0    1    0    0    0    0    0    0    0   63
## 5     0    0   78    0    0    0    3    0    0    0    0    0    0    1  104
## 6     0    0   45    0    0    0    0    0    0    0    1    0    0    4   38
## 7     0    0   45    0    0    0    0    0    0    0    0    0    0    4   29
##    C595 C091 LEMS C991 FB99 LBMA PNTH HNSC LIWB LCDB TTOO TWHN LWMN LFLG LDMA
## 1    81    1    1   17   19   26    1    2    1    4    6    1    2    1    6
## 2     0    0    0    3    4   22    0    0    0    0    0    0    3    2    5
## 3     0    0    0   15  104    0    0    0    0    0    0    1    5    1   12
## 4     0    0    0   46   12    0    0    0    0    0    0    2    1    2   12
## 5     0    0    0   56    0    0    0    0    0    0    0    4    0    0   24
## 6     0    0    0   27    0    0    0    0    0    0    0    1    0    0   17
## 7     0    0    0   33    0    0    0    0    0    0    0    1    0    0    0
##    LNPF WHIS F141 FANT LLIN FTMW GAFF HAGR PRFR F174 FB58 MIDM M145 MANT ONIP
## 1     3    1   12    1    1    1    1    1   11    9    9    1   18    7    1
## 2     6    1   17    0    0    0    0    0    9   59   69    0    9    4    1
## 3     9    0  100    0    0    2    0    0    6   86  110    1    5    4    0
## 4     8    1  102    0    0    0    0    0    1   25   19    0   13    2    0
## 5    26    0   93    0    0    0    0    0   19    1    0    1   38    6    0
## 6    22    0   26    0    0    0    0    0    7    0    0    0   18    7    0
## 7    28    0   18    0    0    0    1    0    4    0    0    3   15    5    0
##    STDO TLN2 PSDQ HBMB ALIN HIPC HIPM BARE BOXX CURD LET2 MOPS MTWN NEWT SBTT
## 1     1    1   15    7    1    1    6    3    1    1    1    1    1    1    1
## 2     0    0    7    7    0    0    3    2    0    0    0    0    0    2    0
## 3     0    0    9   11    0    0    0    2    0    0    0    0    0    2    0
## 4     0    0    4   14    0    0    2    1    0    0    0    0    1    0    0
## 5     0    0   23   33    0    0    2    0    0    0    0    0    0    0    0
## 6     0    0   16   16    0    0    0    2    0    0    0    0    1    4    0
## 7     0    0   10   15    0    0    0    2    0    0    0    0    1    4    0
##    TPLS PN05 BRCH LYLU TNSL TRNO SUFL CATW CLOX MM49 MSUM SCKB THNM LBLS LBSC
## 1     2    5    1    1    1    1    2    3    2    2    6    1    2    8    2
## 2     1    2    0    0    0    0    5    0    0    1    3    0    2    2    0
## 3     1    5    0    1    1    0    3    2    0    0    1    0    2    3    0
## 4     1    0    0    0    0    0    2    2    0    0    1    0    1    0    0
## 5     1    3    0    0    0    0    0    8    0    0    1    0    4    0    0
## 6     0    2    0    0    0    1    3    4    0    0    0    1    3    0    0
## 7     0    0    0    0    0    0    1    2    0    0    0    0    1    0    0
```

```
##     LBTY LTET HMLS MM62 GWEN KNNN OTH_596 OTH_610 Q5LA SPTL F219 1452 CPS2 BTHS
## 1      3    2    3    1    2    2       1       1    6   10   22    8    5    1
## 2      0    0    0    0    5    4       0       0    6    0    0    0    0    2
## 3      0    0    0    0    0    4       0       0    3    0   16    0    0    3
## 4      0    0    0    0    0    1       0       0    2    0   17    0    0    1
## 5      0    0    0    0    0    5       0       0    4    0   43    0    0    0
## 6      0    0    0    0    0    2       0       0    5    0   28    0    0    1
## 7      0    0    0    0    0    1       0       0    5    0   35    0    0    2
##     F107 ANGL GRIN HMLA PTHD RCLA SROM SUMM HNLN KLNN SKIT GRC1 GRC2 BTLE CWM4
## 1      3    2    1    1    1    1    1    1    1    1    1    1    1    4    3
## 2      0    0    0    1    1    0    0    0    0    0    3    0    0    0    0
## 3      0    0    0    0    0    0    0    0    3    3    0    0    0    0    0
## 4      0    0    1    0    0    0    0    1    0    0    0    0    0    0    0
## 5      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6      0    2    3    3    3    0    6    0    0    0    0    0    0    0    0
## 7      0    2    0    2    0    0    0    0    1    0    0    0    0    0    0
##     MSUC USLN RUBB 1535 MLOB MLOC OTH_487 OTH_441 F178 BOXR OTH_422 OTH_373 THOC
## 1      4    1    1   21    1    1       1       1   75    3       2       1    5
## 2      5    0    0   26    1    1       0       0   84    8       0       0    0
## 3      1    0    0    0    4    0       0       0  190   40       0       0    0
## 4      0    0    0    0    2    0       0       0  106   30       0       0    0
## 5      2    0    0    0    0    0       0       0  189   99       0       0    0
## 6      0    0    0    0    0    0       0       0   81   70       0       0    0
## 7      0    0    0    0    0    0       0       0   96   50       0       0    0
##     OTH_601 F109 F127 MDLB LBT1 BZPN F231 F120 F124 LOTB PPSL LBHL OTH_456
## 1         1   59   31    1    1    2    1    3    5    1    1    1       1
## 2         0  108  121    2    0    0    1    4    4    0    0    1       0
## 3         0  191  129    0    0    0    2    3    0    8    0    2       0
## 4         0   87   62    0    0    0   18   11    0    6    0    3       0
## 5         0  209  154    1    0    0   22    0    0    5    0    1       0
## 6         0   83   98    0    0    0    6    0    0    7    3    3       0
## 7         0  127   18    0    0    0    1    0    0    2    1    1       0
##     OTH_707 BUZM JDLA MTHS OTH_591 CLIF MNCB TOT2 DEDO F144 MDPK NIPP IKNC WAVE
## 1         1    1    1    1       1    1    2    1    1   46    6    1    1    1
## 2         0    0    0    0       0    1    1    1    0   34    7    0    0    1
## 3         0    0    1    0       0    3    0    1    3    0    0    0    0    0
## 4         0    0    1    0       0    2    0    0    0    0    0    1    0    1
## 5         0    0    2    0       0    4    0    0    0    0    0    1    0    2
## 6         0    0    0    0       0    0    0    0    0    0    0    0    0    1
## 7         0    0    0    0       0    0    0    0    0    0    0    0    0    0
##     EFHT MRMS CSTK LSPL SBPE C717 LAT2 TNFG DMDI F188 C073 TEEN F159 WAND F198
## 1      1    1    1    3    2   16    2    2    3   49   31    7   47    1   34
## 2      1    0    0    1    2    0    1    1    1   88    0   14   89    3   76
## 3      0    3    0    2    4    0    1    0    0  110    0    0    8   66  167
## 4      0    1    0    0    0    0    0    0    0   95    0    0  129   29  105
## 5      0    0    0    0    3    0    0    0    0  191    0    0  205    0  176
## 6      0    0    0    0    0    0    0    0    0   78    0    0   83    0   94
## 7      0    0    0    0    0    0    0    0    0   96    0    0  124    0   48
##     PSB2 PSBZ PHIN F148 C574 F184 JOSE F202 INHF KATT ROOS RP61 C755 F113 F190
## 1      1    1   16   54   23   11   13    1    1    1    1    1    1   52   14
## 2      0    0    0  137    0   45   48    5    0    2    0    0    0  103   62
## 3      0    0    0  130    0   30   59    1    0    1    6    2    0  188  118
## 4      0    0    0  102    0    0   32    1    0    1    0    1    0  136   64
## 5      0    0    0  202    0    0    1    0    0    0    0    0    0  198   55
```

```
## 6      0     0     0    82     0     0     0     0     0     0     0     1     0    69    25
## 7      0     0     0   120     0     0     0     0     0     0     0     3     0   102    20
##     XYLO  C295  MSLB  TDTL  BTOK  LPSK  F152  GALO  WORM  F186  FLTP  FB70  BTMV  MTMS  MOFG
## 1      1    13    21     1     1     1    32     1     6    12     1     1     1     1     1
## 2      1     0    19     5     0     3    63     4     5    69     0     0     0     0     0
## 3      0     0     0    12     0     1     0     3     0    83     0     0     0     0     0
## 4      0     0     0     5     0     0     0     3     0     0     0     0     0     0     0
## 5      1     0     0    18     0     0     0     0     0     0     0     0     0     0     0
## 6      0     0     0    16     0     0     0     2     0     0     0     0     0     0     1
## 7      0     0     0    18     0     0     0     1     0     0     0     0     0     0     0
##     F146  CTS2  MSQL  PSC3  BTCH  DIGT  PORT  LTS2  LTSM  ALKC  CHMA  PN03  BRD2  C871  PROF
## 1     25     2     1     1     1     1     1     1     1     1     1     1     4     1     1
## 2    143     0     0     2     6     4     2     0     0     0     0     0    16    71     0
## 3    255     0     0     3     0     4     0     0     0     0     0     0     7    40     0
## 4    126     0     0     2     0     3     1     0     0     0     2     0     0     0     2
## 5    208     0     0     8     0     0     0     0     0     0     0     0     0     0     1
## 6     84     0     0    11     0     0     0     0     0     0     0     0     0     0     0
## 7    114     0     0     6     0     0     0     0     0     0     0     0     0     0     2
##     STMN  VTHN  SLLP  INDT  BTTN  SOLS  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      1     1     1     1     1     1     0     0     0     0     0     0     0     0     0
## 2      0     0     1     0     0     0     4     1     1     3     1     1     1     1     1
## 3      0     0     0     0     0     0     2     0     0     0     1     0     0     0     0
## 4      0     0     0     0     0     2     0     0     0     4     0     0     0     0     0
## 5      1     1     0     0     0     3     0     0     0     1     0     0     0     0     0
## 6      0     0     0     0     0     3     0     0     0     0     1     0     0     0     0
## 7      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
##     <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2      6     1     4     4     2     2     1    12    31     8     1     1     1     1     1
## 3      6     2     0     4     0     0     0     1     0     2     1     0     0     0     0
## 4      0     0     2     5     0     0     0     0     0     1     0     0     0     0     0
## 5      0     0     7     3     1     0     0     0     0     1     0     0     0     0     0
## 6      0     5     7     2     0     0     0     0     0     6     0     0     0     0     0
## 7      0     3    14     0     0     0     0     0     0     1     0     0     0     0     0
##     <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2      1     2     1     3     1     5    43    58    38     7     2     1     1     1    45
## 3      0     0     0     1     2     1     0    74    60     4     9     0     3     5    59
## 4      0     0     0     0     0     2     0    46    33     7    24     0     0     0    46
## 5      0     0     0     0     1     3     0   110    29     0    25     0     0     0    85
## 6      0     0     0     0     2     6     0    67    41     0    22     0     0     0    50
## 7      0     1     0     0     1     4     0   116    21     0    21     0     0     0    44
##     <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2      4     1     3    30     4     1     5     2     1     1     4     6     1     1     4
## 3      0     1     1    65    12     0     6     0     0     0     2     9     0     0     6
## 4      0     0     0    51    17     0     4     0     0     0     0    11     0     0     0
## 5      0     1     1     0    38     0     0     0     0     0     0    29     0     0     0
## 6      0     0     1     0    15     0     0     0     0     6     0    28     0     0     0
## 7      0     0     0     0     8     0     0     0     0     6     0    17     0     0     0
##     <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2      2     1     2     1     2     1     1     2     3     1     1    15     1     4     2
## 3      6     2     0     6     3     7     1     0     5     0     0    24     0     2     3
```

```
## 4    17     0     0     1     0     2     2     0     0     0     0    13     0     0     0
## 5    25     1     0     1     3     3     4     1     0     5     0     7     0     1     0
## 6    23     2     0     2     2     4     2     0     0     4     0     9     0     1     0
## 7    25     3     0     1     1     5     0     1     0     1     0    10     0     2     0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     1     2     2     1     1    11     2    26     1     1     1     1     1     1     2
## 3     2     3     3     0     0     0     1    76     0     0     0     0     1     0     0
## 4     0     0     0     0     0     0     2    26     0     0     0     7     0     0     2
## 5     2     0     1     0     0     0     0     3     0     0     0    35     0     0     2
## 6     0     0     2     0     0     0     8     0     0     0     0    43     0     0     3
## 7     0     0     3     0     0     0     3     0     0     0     0    18     0     0     0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     2     1     1     1     1     2     4     1     1     2     1     3    22     1     5
## 3     4     1     0     0     0     0     1     0     0     0     0     2     5     0     4
## 4     5     1     0     0     0     1     9     0     0     0     0     0     0     0     1
## 5    11     2     0     0     0     0    24     1     0     0     0     0     0     0     0
## 6     6     0     0     0     0     4    30     0     0     0     0     0     0     0     0
## 7     8     0     0     0     0     8    33     0     0     0     0     0     0     0     0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     1     1    17    68    10    10    13     3     1     1     1     1     1     1     1
## 3     1     0     0   151    69     0    33     5     0     0     3     0     0     0     0
## 4     0     0     0    91    54     0    12     0     0     0     1     0     0     0     0
## 5     0     0     0   221    62     0    11     2     0     0     1     1     0     0     0
## 6     0     0     0    92    35     0     8     0     0     0     0     0     0     0     0
## 7     0     0     0   114    55     0     0     0     0     0     0     1     0     0     0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     2     2    64    34     1     1     1     4    47    23     2     1     1     1     1
## 3     0     0   140    67     1     0     0    31   106    95    20     0     0     0     0
## 4     0     0    75     0     0     2     0    51    82    57     0     1     0     0     0
## 5     0     0   147     0     0     4     0    91   145   105     4     0     0     0     0
## 6     0     0    90     0     0     5     1    50    68    12     8     0     0     0     0
## 7     0     0   109     0     0     6     0    43   124     0     7     0     0     0     0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     1    24    30     3     1     1     4     1     1     1     3     1     1    13     1
## 3     0    38    77     0     0     0     1     1     0     1     0     0     0     8     0
## 4     0    52    44     0     0     0     2     0     0     0     0     0     0     1     2
## 5     0     0    84     0     0     0     0     1     0     0     0     0     0     1     0
## 6     0     0    56     0     0     0     0     0     0     0     0     0     0     2     0
## 7     0     0    46     0     0     0     3     0     0     0     0     0     0     0     0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     1    17     1     1     2    25    11     2     3    16    18    27    10    21    21
## 3     0    70     1     1    18   178   114    35     0    92   119   180     0   198   131
## 4     0     0     0     0     3    74    10     0     0     0    79   145     0   138     0
## 5     0     0     4     0    18    78     0     0     0     0   149   181     0   294     0
## 6     0     0     0     0     5     0     0     0     0     0    48    55     0    92     0
## 7     0     0     1     0     8     0     0     0     0     0    59    80     0   107     0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
```

```
## 2     1    17     5     1     1    21     3     1     1     1     3    20     1    13     8
## 3     0     0    49     2     0   158    19     0     0     0    32   181     0    46     0
## 4     0     0    13     3     0     0     2     0     0     0     4   108     0     2     0
## 5     0     0     0     6     0     0     6     0     0     0     0   181     0     0     0
## 6     0     0     0     6     0     0     5     0     0     0     0    40     0     0     0
## 7     0     0     0     2     0     0     0     0     0     0     0    35     0     0     0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     1     3     2     1     1     1     1     1     1     1     1     2     1     1     1
## 3     0     0     1     0     4     0     2     0     2     4     3     0     1     0     0
## 4     0     0     0     0     1     0     0     0     0     0     0     0     0     0     0
## 5     0     0     0     0     2     0     2     0     1     1     0     0     0     0     0
## 6     0     0     0     0     0     0     0     0     0     0     0     0     5     2     0
## 7     0     0     0     0     0     0     0     0     0     0     0     0     1     0     0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     2     1     1     1     1     1     1     1     1     1     1     1     1     1     2
## 3     0     0     2     1     0     3     1     0     0     0    10     0     0    78     4
## 4     0     0     1     1     0     0     0     0     0     2    22     5     0    81     0
## 5     0     0    22     0     0     6     0     0     0     0    26     0     7   120     0
## 6     0     1     8     0     0     5     0     0     0     1    23     0    10    67     2
## 7     0     0    10     0     0     6     0     0     0     0    15     0     7    73     2
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     1     1     1     1     1     1     1     1     1     1     0     0     0     0     0
## 3     0     0     0     0     0     1     3     0    71    71     2     2     1     1     2
## 4     0     0     0     0     0     1     0     0    76    73     2     3     0     0     0
## 5     0     0     0     0     0     2     0     0   129   181     0     3     2     0     2
## 6     0     0     0     0     0     0     0     0   106    89     0     5     0     0     0
## 7     0     0     0     0     0     0     0     0   118   112     0     0     0     0     0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     3     2     4    42     3    24    19     1     2     4     2     2     5     1     2
## 4     0     0     1     0     1    25    35     0     2     0     3     0     6     0     2
## 5     0     1     0     0     3    35    79     5     4     9     0     0     4     0     4
## 6     0     0     0     0     1    33    41     0     4     1     0     0    11     0     0
## 7     0     0     1     0     3    53    43     0     3     0     0     0     1     0     0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3    58     1     1   131     1   151     5    13   133     1     1     1     1   151     7
## 4    67     0     0    38     0   143     0     1    75     0     0     0     2   139     9
## 5   214     0     0     0     0   127     0     0     0     0     1     0     1   154     0
## 6    35     0     0     0     0    51     0     0     0     0     0     4     1    83     0
## 7     0     0     0     0     0    79     0     0     0     0     0     1     1   119     0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3    16    20     2     1    20     1     1     2     8     6    84    81    45    18    18
## 4     8     6     0     1     2     0     0     0    16     0   130    10     4     2     2
## 5     0    19     0     0    29     0     0     1    40     0   174    69     0    61    58
## 6     0     7     0     0     0     0     0     0    10     0    52    51     0     7     5
## 7     0    18     0     0     0     0     0     1    11     0    55    92     0    15     3
```

```
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3   16   11    7    6    1    4    1    5    1    4    6    1    2    1    1
## 4    0    0    0    5    0    3    0    1    0    0    0    0    1    0    0
## 5    0    0   41   52    1    2    0    4    1    0    0    0    2    0    0
## 6    0    0    9   11    0    1    0    6    0    0    0    0    0    0    0
## 7    0    0    0   41    0    0    0    2    0    0    0    0    0    0    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    1    1    2    2    1    1    1    2    4    1   39    2    2    2    1
## 4    0    1    0    1    0    2    0    0    0    0    7    0    0    0    0
## 5    0    0    1    0    1    3    0    2    0    1    9    1    0    1    0
## 6    0    0    0    0    0    0    0    0    0    1    8    1    0    0    0
## 7    0    0    1    0    0    0    0    1    0    1    0    0    0    0    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    1    1    1    1    1    1    1    1    1    2    3    1    1    1    1
## 4    0    0    0    0    0    0    0    0    0    0    0    0    1    0    1
## 5    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6    0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
## 7    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    1    1    1    1    1    1    1    1    2    2    2    1    1    1    1
## 4    0    0    0    0    0    2    0    0    3    0    0    0    0    0    0
## 5    0    0    0    0    0    0    0    0   17    1    0    0    0    1    0
## 6    0    0    0    0    0    0    0    1   15    0    0    0    0    0    1
## 7    0    0    0    0    0    0    0    3   12    0    0    0    0    0    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    1    1    1    1    1    2    1    1    3    1    1   27    1    1    8
## 4    0    0    0    0    0    0    0    0    0    0    3    0    0    0    7
## 5    1    0    0    0    1    0    1    0    0    0    0    0    0    0   23
## 6    0    0    0    0    0    0    1    0    1    3    0    0    0    0    5
## 7    0    0    0    0    0    0    0    0    0    0    0    0    0    0    3
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    1    1    3    3    6    3    2    1    1    1    3    2    1    1    2
## 4    0    0    1    1    6    1    4    2    0    0    2    5    0    0    0
## 5    0    0    4    2    2    0    0    0    0    4    4    3    0    0    0
## 6    0    0    3    3    4    2    0    0    0    1    5    1    0    0    0
## 7    0    0    0    2    3    2    0    0    0    1    3    2    0    0    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    2   28    1    4    1    7    3    1    1    1    2    1    1    4    1
## 4    0   34    0    0    0    0    0    1    4    2    0    3    0    0    0
## 5    0    6    0    0    0    0    0    4    1    6    0    0    0    0    1
```

```
## 6    0    9    0    0    0    0    0    1    0    0    0    0    0    0    0
## 7    0    7    0    1    0    0    1    1    0    0    0    0    0    0    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    1    1    1    1    6    4    3    1    1    2    2    1    1    1    1
## 4    0    0    0    0    5   23   20    1    0    0    0    0    0    0    0
## 5    0    0    0    0   20   30    3    0    2    0    0    1    0    0    0
## 6    0    0    0    0   10    3    0    0    0    0    0    0    0    0    0
## 7    0    0    0    0   13   11    0    0    0    0    0    0    0    0    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    1    1    1    1    3    3    1    2    2    1    1   32    1    9   13
## 4    0    0    0    0    3    2    0    0    0    0    0   65    0    0   79
## 5    0    0    0    0    0    6    0    3    3    0    0  120    0    0   11
## 6    0    0    0    5    0    6    0    2    2    0    0   66    0    0    0
## 7    0    0    0    0    0    2    0    1    1    0    0   80    0    0    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3   15    1    1    1    1    1   16   10   17    3    2    7    1    1    1
## 4    0   10    0    5    0    0   79   88   81    0    0   74    0    2    2
## 5    0   24    0    9    0    0  284  216    0    9    1   40    0    0    1
## 6    0   16    1    8    0    0   48   47    0    8    0    0    0    0    3
## 7    0   15    9    2    0    0   13   54    0    0    0    0    0    0    4
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    1    9    4    2   21   19   13    4    3    1    1    3    2    3    1
## 4    1   28    0    0  105  121  108   87    4    0    0   16    0    4    0
## 5    0  136    0    0  203    0  186  187    0    0    4    0    0    0    0
## 6    0   67    0    0  124    0   77   65    0    0    0    0    0    0    0
## 7    0   86    0    0  147    0   79  100    0    0    0   12    0    0    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    1    1    1    1    1    1    1    1    1    1    1    1    0    0    0
## 4    0    0    1    0    0    0    0    5    3    0    1    3    5   10   50
## 5    0    0    5    0    0    0    0    0    0    0    0    1    0   34    0
## 6    0    0    7    1    0    0    0    0    1    0    0    0    0   21    0
## 7    0    0    6    0    0    0    0    0    0    1    0    0    0   19    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4   17    1    1    1   64    6    1    1    1    1    1    1   13   92    1
## 5    0    0    2    0  160    4    0    0    0    0    0    0    0  207    0
## 6    0    4    2    0  122    2    0    0    3    1    0    0    0   94    0
## 7    0    2    1    0  148   15    0    0    4    0    0    0    0   95    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
## 4      3     2     2     1     7    29     7     8     1     1     1    41    20     1    10
## 5      5     1     4     0     4     6     0    21     0     0     0    75    66     0    65
## 6      0     4     0     0     0     0     0     8     0     0     0    56    41     0     0
## 7      0     1     1     0     0     0     0     6     0     0     0    96    48     0     0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4     1     4     1     2     2     1     1     1     1    14     2     4    12    11     2
## 5     0    26     0     0     0     2     0     0     0     0     2    27    34     0     0
## 6     0     5     0     0     0     0     0     1     0     0     0    21     9     0     0
## 7     0    10     0     0     0     1     0     0     0     0     0    16    20     0     0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4     3     3     2     1     1    38    66    65    45    26    47    25    63     3     6
## 5    35     3     1     0     0     0     0    94   102    10   121     1   227     3    23
## 6     0     6     0     0     0     0     0     0    83     0    54     0    84     0    10
## 7     0     2     0     0     0     0     0     0    82     0    11     0    85     0     7
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4    24     2     3     5     3     3     2     5     2     1     8     7     7     4     4
## 5    17     0     0     2     3     3     0     0     0    43     4     0     3     6     3
## 6     0     0     0     0     3     2     0     0     0     6     0     0     2     4     0
## 7     0     0     0     0     1     2     0     0     0    16     0     0     0    10     0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4    18     9     2     4     1     4     3     1     1     3    10    19     3     9     3
## 5   100    10     0    11     0    14     2     0     0     5     0     0     0    18     3
## 6    38    21     0    11     2     2     2     0     0     4     0     0     0     0     4
## 7    50    22     0     8     1     1     1     0     0     2     0     0     0     0     6
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4    10     2     1     1    23     1     1     1     1     1     1     1     4    10     1
## 5     5     6     0     0    81     0     0     0     1     0     0     2    61    37     0
## 6     2     0     0     1    49     0     0     0     0     0     1     0     0    15     0
## 7     0     0     0     1    39     0     0     0     0     0     1     0     0    35     1
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4     1     1     1     2    18    25    30    21     3     4     4    11    33     1     1
## 5     0     0     0    24     3   162    99    63     5    13   131   102   197     0     0
## 6     0     0     0    24     7    87    62     1     0     0   115    39   102     0     0
## 7     1     1     1    54     3   109    78     0     0     0    88    28    90     0     0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
```

```
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    1    1    1    1    1    2    3    1    1    1    1    1    1    1    3
## 5    0   15    0    0    0    3    0    0   50    0    0    2    0    0   36
## 6    0    7    0    0    0    6    0    0    0    0    0    0    0    0    4
## 7    0    4    0    0    0    8    0    0    0    0    0    0    0    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    1    1    1    6    3    1    1    1    1    1    2    1    1    1    1
## 5    0    0    0   46    9    0    1    0    0    0    2    0    2    0    0
## 6    0    0    0    0    0    0    0    0    4    2    0    0    0    0    0
## 7    0    0    0    0    0    0    1    0    1    6    2    0    0    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    1    1    2    1    1    2    1    2    1    1    2    1    2    1    1
## 5    1    4    7    3    7   39   17    1    0    0    1    5   31    0    1
## 6    0    1    7    1   16    0   11    0    0    0    4    5    5    0    0
## 7    0    6    4    7   48    0   13    0    0    0    4    0    0    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5    9   22    5    2    2    2    6    5    5    1    1    1    1    2    1
## 6    7    9    2    1    0    0    0    0    0    0    0    0    0    0    0
## 7   10    9    2    0    0    0    1    0    0    0    0    0    0    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5    5    1    5    3    4    1   73   27   25   16  195    1    1    6    1
## 6    1    1    0    1    5    0   92    6   20   19   24    0    0    1    0
## 7    4    0    0    0   13    0   80    6   27   35    0    2    0    7    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5    1   21   18    1    1    1    1  176    8   94    2    2    3  146   95
## 6    0   20    7    1    0    0    1   86    0   69    0    2    2   58   68
## 7    0   31    8    0    0    0    0   73    0   15    0    3    0   28   84
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5    3    2    3    4    1    1    2    4   60   56    3    3    3    3    8
## 6    0    0    0    3    0    0    2    5    0    5    6    0    0    0    0
## 7    0    0    0    3    0    0    4    0    0    0    3    0    1    0    0
```

```
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5    9    5    7    1    1    1    1    1    8    1    2   19   10    1   10
## 6    5    2    7    0    0    0    0    0    0    0    0    5    4    0    3
## 7    0    3    4    0    0    0    0    0    0    0    0    7    4    0    2
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5    2    2    3    3   28    1    1    5    5    3    3   14    5    6    2
## 6    0    0    1    1   21    0    0    8    2    8    1   10    0    0    0
## 7    0    0    0    0   46    0    1    8    1   19    3    0    0    0    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5    3    2    1    4    2    1    1    3    6    1    3    6    7    5    6
## 6    0    0    4    0    0    0    0    7    0    1    0    1    6   12    2
## 7    0    0   11    0    0    0    0   12    0    1    0    8    4    7    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5    3    5    1    1  137  126    6    1    1    1    2    1    1    1    1
## 6    2    1    0    1   72  107    0    0    0    0    0    0    0    0    0
## 7    0    1    0    0   90  101    0    0    0    0    0    0    0    0    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5    1    2    1    1    3    1    1    1    1    1    1    4    6    1    1
## 6    0   18    0    0    0    1    0    0    0    0    0    5    3    1    0
## 7    0   20    0    0    0    0    0    0    0    0    0    0    0    2    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5    6   22    4   68   85   31   10   34    1   10   12    1    1   41   93
## 6    9    6    3   59   28    0    5   30    0    7    7    0    0    9   86
## 7    8    4   11  111   43    0   10   36    0    1    9    0    0    0   74
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5   19   19    1   49   46   49    1    1    1    3   64    5    1    1    1
```

```
## 6    0    0    0   24   30   28    0    1    0    0   33    1    1    3    3
## 7    0    0    0    0   32   27    0    0    0    0   49    7    1    2    1
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5    3    3    3    1    4   13    2    1    1    1    4    2   19    5    5
## 6    0    9    2    0    0   30    0    1    0    0    0    3    2    3    3
## 7    0    2    7    0    0   41    0    0    0    0    0    7    4    0    5
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5    6    1    1    4    1    1    1    1    5    2    1    2    4   17    5
## 6    5    0    0    9    2    1    0    0    2    0    0    4    0   14    2
## 7   13    0    1    0    0    2    0    0    0    0    0    3    0    0    6
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5    6   16    1   30    1    2    2    3    2    2    1   10    1    1    1
## 6   11    0    2   80    0    0    0    1    0    1    1   22    0    0    0
## 7   13    0    2   56    0    0    0    2    0    0    0   12    0    0    1
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5    1    1    1    1    1    1    1    1    1    4   22   13   32    1    2
## 6    0    0    0    0    0    0    0    0    0    8    6   49  104    0    0
## 7    1    1    0    0    1    0    0    1    1    5    0    0   90    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5    1    1    1    1    5   38    1    1   26   10   24   22    3    7    6
## 6    0    4    0    4    0    0    0    3    1    0   75   99    5    1    0
## 7    0    4    0    4    0    0    0    1    0    0  108   68    0    5    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5    1   10    3    1    1    4    2    1    2    4    4    2    2    2    1
## 6    0    0    0    3    1    1    9    9    8    0    1    0    0    0    0
## 7    0    0    0    0    0    0    0   15    4    0    0    0    0    5    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
## 4      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 5      1      1      1      2      1      1      1      1      1      1      1      2      1      2      1
## 6      0      0      0      2      8      0      5      0      0      0      0      9      4      1      0
## 7      1      0      0      1      0      0      8      0      0      0      1      6      1      1      0
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 3      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 4      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 5      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 6      4      3      4      1      2      1      1     68      6      6      8      2      3     12      1
## 7      3      0      8      0      1      1      0     96      2      2      0      0      0     11      0
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 3      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 4      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 5      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 6      4      4      7      1     60      1      5      3      4     15     12     37     16      1      4
## 7      8      0      0      4     89      0      3      0      0      9     16     45     26      0      0
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 3      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 4      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 5      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 6      4      1     65      2      1      1      1      2      2      2      3     47      1      1      2
## 7      2      0     89      1      0      2      0      0      0      0      4     65      0      1      1
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 3      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 4      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 5      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 6      6      1      1      3      1      2      1      2      1      1      1      1      1      1      2
## 7      1      0      2      0      0      0      0      0      0      0      0      0      3      0      6
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 3      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 4      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 5      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 6      1      1      2      2      1      1      1      1      1      1      1      9     57     15      1
## 7      0      0      0      1      2      1      0      0      0      0      0      0    100     36      0
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 3      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 4      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 5      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 6      1      1      1     39     51     61     18     30     19     33     18      1      5      1      6
## 7      0      0      0      0    120    104     56     65     13    108      0      0      3      0      9
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
```

100

```
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 5     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 6     1    42    60     3     4     2    47    16    13     2     4     1     6     5     3
## 7     0   122     0     0     3     1   126    32    42     0     4     1     0     6     1
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 5     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 6     1     2     1     2    29     3     2    12     1     1     2     2     4     2     2
## 7     0     0     0     0    51     8     0    29     0     2     0     6     0     0     1
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 5     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 6     2     1     1     1     2     1     2     1     1     1     1     4     6     1     2
## 7     0     0     0     0     0     0     0     5     1     0     0     1     0     0     0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 5     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 6     1     1     6     1     1     1     1     1     1     1     1     1     3     1     1
## 7     0     1     0     1     0     2     0     0     0     0     0     0     1     0     0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 5     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 6     2     2     2     1     4     3     1     1     1     1     1     2     2     2     2
## 7     0     2     2     2     1     1     1     1     0     0     0     0     0     0     1
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 5     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 6     2     1     3     1     1     1     1     1     1     3     1     2     1     2     2
## 7     0     0     2     1     3     1     0     0     0     0     0     4     1     0     0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 5     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 6     1     1     3     1     1     1     6     2     4     2     2     2     2     1     8
## 7     1     0     2     0     0     0     0     0    17     2     0     0     0     0    82
```

```
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6    1    1    1    1    1    1    4    6   13    1    1   10    1    1    4
## 7    0    2    0    1    0    0   34    0   55   10    0   90    0    6    8
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6    1    2    2    2    3    2    3    1    1   12    1    1    1    1    1
## 7    0    5    1    3    6    3   21    1    0  111    0    0    9    0    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6    1    3    1    4    2    1    1    1   16    1    3    1    1    1    1
## 7    0   56   15    2   18    3    7    1   89    0   11    6    1    1    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6    2    1    1    1    2    1    1    2    1    2    1    0    0    0    0
## 7   13    5    0    0   44    4    0   30    0    0    8    1    1    1    1
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 7    1    1    1    1    1   49    2   16    2    4    5   12    2    1    4
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 7    1    1  133    1    1    1    7    1   19  104  106   64    3    1    8
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
## 6      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 7      1     1   112     2    41     2     2     2     1    81     3    96    13     1     7
##     <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 5      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 6      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 7      3     1     1     1     1    14     3     4    17     1     1     1     1     1     1
##     <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 5      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 6      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 7      3     2     1    94     5    12     2     1     1     1     1     1     1     1    11
##     <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 5      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 6      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 7      1     1     2     2     3     1     1     1     3     1     2     1     1     1     2
##     <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 5      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 6      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 7      1     7     5    10    11     1     1     2     2     2     3     3     2    40    86
##     <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 5      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 6      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 7      7     8     1     1     3     1     1    43     6     4     3    33     5    42     3
##     <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 5      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 6      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 7      2     2    11     1    16     3    13     3    13     3     1    11     3     1     2
##     <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
```

```
## 4    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 7   50   28   61    8    1    9    6    6    1   64   11    1    1   24   17
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 7    2   19    1    1    1    1    1   28    1    2   13    1    5    1    1
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 7    1    1    1    1    1    2    2    2    2    1    1    5    1    1    1
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 7    1   36    1    1    1    1    1    4    1    1    1    1    1    1    2
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 7    1    2    2    1    1    1    1   13    5   10    4    3    1    1    1
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 7    1    1    1    1    1    1    1    1    1    2    2    4    1    2    9
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 7    4    1    2    2    8   10   16   16    1    2    1    1    1    1    1
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 5     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 6     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 7     1     1     1     5    19    25     5     1     1     1     5     1     1     1     1
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 5     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 6     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 7     3     1     1     2     4     2     1     1     1     1    14     1     2     1     1
##    <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0
## 2     0     0     0     0     0     0
## 3     0     0     0     0     0     0
## 4     0     0     0     0     0     0
## 5     0     0     0     0     0     0
## 6     0     0     0     0     0     0
## 7     1     1     6     1     1     1
```

```r
# Transforming into binary matrices
p3y <- as.matrix(p3y); p3y[which(p3y>=1)] = 1; p3y[which(p3y<1)] = 0


# -------------------- 6 sets of 4 year increments---------------------------
# Make a list of 4 years per dataframe
sample_data$FourYearIncrement <- cut(sample_data$Year, breaks = seq(min(sample_data$Year), max(sample_da
list_fouryears <- split(sample_data, sample_data$FourYearIncrement)
# Apply the count_instances function to each two years
instances_per_fouryear <- lapply(list_fouryears, count_instances)
# Convert the list of counts to a data frame
p4y <- do.call(rbind, instances_per_fouryear)
p4y
```

```
##    FB41 FB05 FB36 FB38 FB55 FB96 FB98 F108 F153 FB15 FB23 FB78 FB93 F155 FB01
## 1    67  144  177  192  149   65   38   56   67   86   68  113   88  227  174
## 2     0  163  121   49  209   47    0   47   65  138    0  109  159  174  186
## 3     0  103   87    0  131    0    0   47   48  110    0   72   93  119   37
## 4     0   56  105    0  133    0    0   62   72  163    0  123  125  177    0
## 5     0    0   25    0  111    0    0   66   76   82    0  107   69  129    0
## 6     0    0    0    0   28    0    0   16   23   23    0   17    0   27    0
##    FB43 FB92 F118 F122 FB29 <NA> FB54 FB71 FB90 F100 F119 FB14 FB27 <NA> FB57
## 1    84  174  250  165  118    0  295   87  266  119  194  145  146    0  103
## 2    83  159  186    0   13    0  219    0  217  118  185  295  116    0    0
## 3    67  121  153    0    0    0  176    0  199   89   93   66  114    0    0
## 4   130  187  177    0    0    0  132    0  259    4    0   14   94    0    0
## 5    41  111   59    0    0    0  137    0  104    0    0    0   81    0    0
## 6     0   39    0    0    0    0   28    0   34    0    0    0   32    0    0
##    FB66 FB76 FB94 F112 FB12 FB03 <NA> F106 FB44 FB62 F175 FB10 FB46 FB75 FB79
## 1   130  127  176   55   66  136    0  171  131  115  205  187  169  115  160
## 2   214  208  290    0    0  203    0  184   51    0  212  151  146  149  156
```

```
## 3    148    131     80      0      0     62      0    102     40      0    180    116     43    127    129
## 4     84      0      0      0      0      0      0    138     55      0    201    112      0      3    205
## 5     59      0      0      0      0      0      0      0     59      0    170     77      0      0    139
## 6      0      0      0      0      0      0      0      0     22      0     25     16      0      0     29
##      FB60   FB13   F138   FB63   FB07   FB11   F132   FB25   F102   F111   F130   F134   F136   F154   F160
## 1     32    113    181    177    227    259     15    173     18    153      8     31     27     90     34
## 2      0    175     96     67    203    258      5    117     16    103      2     21     18      9     22
## 3      0     88    124     94    146    172      2    105      9     19      0     10      9     18     12
## 4      0     81    173     38    175    230      2    117     38      0      0     24      0     28      3
## 5      0      0    147      0    127    124      0    104     28      0      0      3      0      6      0
## 6      0      0     34      0     35     27      0     34      5      0      0      0      0      8      0
##      F162   <NA>   FB20   FB65   HIQQ   POOF   FB28   <NA>   FB09   FB33   ATNA   CWM3   NKLN   WTMA   FB48
## 1     34      0    163    217     15     15     64      0    195    186      2     18      4     14     33
## 2     24      7    137    194     13      5    170      0    130    152      0     17      1      1     80
## 3      8      4    137    186      5      1     60      0    129    142      0      9      2      0     27
## 4     15      0    167    208     36      2     58      0    110    150      6     17     14      0     26
## 5     24      0    166    112     27      0     38      0      0    130      1     17      6      0      0
## 6      6      0     29     30      5      0     17      0      0     29      0      4      0      0      0
##      F105   1054   <NA>   FB32   49C3   49LA   <NA>   <NA>   <NA>   F161   F164   <NA>   KMSN   MIDF   5NK2
## 1      7      2      0    108      9     38      0      0      0      1     13      0      3      4      2
## 2      8      0      0    163      0     22      0      1      0      0     41      0      0      1      2
## 3      1      0      0     20      0     12      0      0      0      0     71      0      0      4      0
## 4      0      0      0      0      0      0      0      0      2      0     85      0      0      8      0
## 5      0      0      0      0      0      0      0      0      0      0    109      0      0      6      0
## 6      0      0      0      0      0      0      0      0      0      0     27      0      0      1      0
##      <NA>   <NA>   MBAB   <NA>   <NA>   WTAB   <NA>   BTTV   <NA>   F147   F210   F237   <NA>   <NA>   FB84
## 1      0      0      2      0      0      2      0     19      0      9      1     24      0      0    126
## 2      0      0      1      0      2      0      0      2      0      2     16     46      0      1    105
## 3      0      0      0      0      1      1      0      0      0      0      8     56      0      0     24
## 4      0      1      2      0      9      2      0      0      0      0     10    144      0      0      0
## 5      0      0      0      0      1      0      0      0      0      0      0     56      0      2      0
## 6      0      0      0      0      0      0      0      0      0      0      0     26      0      0      0
##      CRAG   HVMS   LCKL   RUFF   FB59   FB83   FB02   C834   BBMB   LDSL   LSMS   MCMA   PN06   F276   FB24
## 1      5      1     10      3    130     78    123     37      5      5      1     24      1     22     92
## 2      8      5      0      8    134    111    101    111      6      6      0     52      0     85     13
## 3      0      4      0      6     44     52    105     66      4      5      0      0      0     47      0
## 4      0     23      2      0      0      0    153    120      0      1      0      0      1    142      0
## 5      0     18      1      0      0      0    100    103      0      0      0      0      0    136      0
## 6      0      4      0      0      0      0     13     19      0      0      0      0      0     36      0
##      FB35   F182   DRSN   <NA>   F128   F131   DIPT   SLMS   2SDN   BBL2   BBLN   BTLN   CHK2   ETMA   <NA>
## 1     30    125     63      0    109    227      9      2      2      2      3      4      2      3      0
## 2     23    117     39      0    162    182     10      0      0      0      2      2      0      7      0
## 3     17     76     37      0    118    131      0      0      0      0      1      3      0      4      0
## 4     48    106     52      0    197    228      0      0      0      0      9      0      0      2      0
## 5     49     92     22      0    106    163      0      0      0      0      1      0      0      0      0
## 6      6     17      0      0     39     42      0      0      0      0      1      0      0      0      0
##      HNBT   <NA>   JAGG   JIG3   KMBT   LOBE   MLTS   <NA>   <NA>   <NA>   <NA>   <NA>   SHOT   SURR   TFMS
## 1      2      0      3      5      1      3      2      0      0      0      0      0      4      3      2
## 2      1      0      0      3      0      0      3      0      0      1      0      0      4      0      0
## 3      0      0      0      1      0      0      1      0      1      0      0      0      2      0      0
## 4      3      0      0      3      0      0      2      0      0      1      0      1      1      0      0
## 5      1      0      0      1      0      0      1      0      0      0      0      0      0      0      0
## 6      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
##      TSMV   <NA>   <NA>   FB17   F110   F191   FB73   <NA>   <NA>   PSD2   PSDZ   <NA>   HSNS   <NA>   <NA>
```

```
## 1    8    0    0   44   49   26   19    0    0    2    1    0    6    0    0
## 2   12    0    0   23   61   23   15    0    0    0    0    0    1    0    1
## 3    7    0    0   35   63    0    5    0    0    0    0    0    3    0    1
## 4   24    0    0    5   81    0    0    0    0    0    0    0    7    0    0
## 5   14    0    0    0   56    0    0    0    0    1    0    0   10    0    2
## 6    4    0    0    0   16    0    0    0    0    0    0    0    5    0    1
##   <NA> ETSC FNOT <NA> <NA> LGSC <NA> <NA> MTMN NLPS PLUG <NA> TOTW F183 THUB
## 1    0    1    1    0    0    1    0    0   15    1    6    0    1   48    2
## 2    0    0    0    1    0    0    1    0    0    0    0    0    0   76    3
## 3    3    0    0    0    0    0    0    0    0    1    3    1    2   49    0
## 4    8    0    0    0    0    0    0    0    0    3   24    0    0    1    0
## 5    7    0    0    1    0    0    0    0    0    2    7    2    0    0    0
## 6    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
##   F114 C791 FB26 FB34 F180 <NA> <NA> <NA> <NA> <NA> <NA> PKUP <NA> <NA> SCOR
## 1  124   11   37   37   54    0    0    0    0    0    0    1    0    0    1
## 2  104    0   89    0   19    0    1    1    0    0    1    0    0    1    0
## 3   63    0    0    0    8    0    0    0    0    0    1    1    0    0    0
## 4   59    0    0    0    8    1    1    2    0    0    1    0    0    0    0
## 5   21    0    0    0    4    0    0    0    0    0    0    0    0    0    0
## 6   18    0    0    0    1    0    0    0    0    0    0    0    0    0    0
##   SPIK FJSL F117 <NA> <NA> ELFF PN04 <NA> TTM3 <NA> LNST <NA> <NA> <NA> <NA>
## 1    5    1  109    0    0   20    7    0    2    0    2    0    0    0    0
## 2    0    0  214    0    0    8    0    0    3    0    0    0    0    0    0
## 3    0    2   15    0    0    5    0    0    6    0    2    0    0    0    0
## 4    0    1    0    0    0    1    0    0    4    0    2    0    0    0    0
## 5    0    0    0    0    0    0    0    0    1    0    2    0    0    0    0
## 6    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##   FB39 CMRS CONC CONS F163 F181 HAIR HITS MSQ2 RTMW <NA> SPGT TABB MDNK KNOB
## 1   36    2    2    5   83   64   14    5    8   27    0    3   12    6   23
## 2    0   10    0    7  147  161   16    5    6   13    0    0    5    0    0
## 3    0   26    0    7   18   95   20   21    6   17    0    0    3   12    0
## 4    0   34    0    0    0   70   38   35    3   23    0    0    6   47    0
## 5    0   36    0    0    0    0   33   32    0   30    0    0    0    0    0
## 6    0   12    0    0    0    0    8   12    0    2    0    0    0    0    0
##   <NA> <NA> NIK2 <NA> <NA> BFWT JAWS <NA> CHPC <NA> <NA> ALHK LHLV <NA> FB06
## 1    0    0    4    0    0    6    9    0    1    0    0    6    1    0  147
## 2    0    0    0    0    0    0    0    0    1    0    0    5    1    0  166
## 3    0    1    1    0    0    0    0    0    0    0    0    9    0    0  126
## 4    0    0    1    0    0    0    0    0    0    0    0    7    4    0   14
## 5    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 6    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##   <NA> <NA> FB87 <NA> CKB2 1832 SUMO F157 <NA> SOLB TCTV IKNO F101 <NA> <NA>
## 1    0    0   77    0    6   24    2   61    0   37   27   25  202    0    0
## 2    0    0   82    0    0    0    7  178    0   54    9   66  193    0    0
## 3    0    0   39    0    0    0   19  174    0   57   26    0   74    0    0
## 4    0    0   75    0    0    0   21  114    0   67   22    0    0    0    0
## 5    0    0   70    0    0    0    0    6    0   52   19    0    0    0    0
## 6    0    0   25    0    0    0    0    0    0   17    2    0    0    0    0
##   VRIP HFLT ZENN <NA> CLAW AOTA BKHO <NA> <NA> <NA> <NA> F254 <NA> MPTB <NA>
## 1    1    2   13    0    1    2    1    0    0    0    0    2    0    6    0
## 2    1   10    0    0    0    2    8    0    0    0    0    6    0   52    0
## 3    2   15    0    0    0    3    5    0    0    0    0   32    0   61    0
## 4    2   13    0    0    0    0    5    0    0    0    0   54    0   92    0
## 5    2    0    0    0    0    0    8    0    0    0    0   57    0   60    0
```

```
## 6     0     0     0     0     0     0     6     0     0     0     0    23     0    14     0
##    SHTC  TRIF  <NA>  <NA>  PHNE  PN10  PNSN  FEAT  LUMP  BEGR  MOCH  F116  SLIF OTH_604  THOR
## 1     2     4     0     0     9     4     3     3     6    45    16    17     1       1     8
## 2    80     1     0     0     2     5     1     3     0   135     0     0     0       0     0
## 3    25     1     0     0     0     0     0     1     0    67     0     0     0       0     0
## 4     0     2     0     0     0     0     0     9     0   127     0     0     0       0     0
## 5     0     4     0     0     0     0     0     1     0   285     0     0     0       0     0
## 6     0     0     0     0     0     0     0     0     0     0     0     0     0       0     0
##    F192  F194  MCM2  CATR  LFLA OTH_199  TN3N  MTSS  SIMP  BRDO  RPPL  DTHB  GTFG  UPBK  MNIK
## 1    40    36     3     4     7       1     1    17     6    21     4     1     4     2     3
## 2   100    92     0     2     2       0     0     7     0    20     0     0     4     1     9
## 3     9    35     0     0     0       0     0     7     6     5     0     0     1     0     7
## 4     0    55     0     1     0       0     0     4    19     0     0     3     1     3     0
## 5     0    64     0     0     0       0     0     9     6     0     0     1     0     1     0
## 6     0     0     0     0     0       0     0     1     3     0     0     0     0     0     0
##    C652  THMN  RY34  TBTN  CCL4  F172  L106  C391  BTHV  NKNN  PNKD  C754  RTMC  WLDC  F149
## 1   210     4    11     2    14     7     2    35     3     3     4    13     4     2    54
## 2     7     0    71     2     0     0     1     0     0     3     1     0     0     4    74
## 3     0     0    66     0     0     0     3     0     0     0     1     0     0     0    81
## 4     0     0    97     0     0     0     3     0     0     0     1     0     0     3   120
## 5     0     0    61     0     0     0     0     0     0     0     0     0     0     4    37
## 6     0     0    10     0     0     0     0     0     0     0     0     0     0     2    14
##    C595  C091  LEMS  C991  FB99  LBMA  PNTH  HNSC  LIWB  LCDB  TTOO  TWHN  LWMN  LFLG  LDMA
## 1    81     1     1    18    20    48     1     2     1     4     6     1     3     2    10
## 2     0     0     0    16   107     0     0     0     0     0     0     1     5     2    10
## 3     0     0     0    47    12     0     0     0     0     0     0     2     3     2    15
## 4     0     0     0    69     0     0     0     0     0     0     0     5     0     0    29
## 5     0     0     0    32     0     0     0     0     0     0     0     1     0     0    12
## 6     0     0     0    15     0     0     0     0     0     0     0     0     0     0     0
##    LNPF  WHIS  F141  FANT  LLIN  FTMW  GAFF  HAGR  PRFR  F174  FB58  MIDM  M145  MANT  ONIP
## 1     4     1    21     1     1     1     1     1    15    31    36     1    21     8     1
## 2    12     1    87     0     0     1     0     0     9   108   132     1     7     5     1
## 3    10     1   123     0     0     1     0     0     3    40    39     0    17     4     0
## 4    38     0   115     0     0     0     0     0    23     1     0     1    48    10     0
## 5    27     0    17     0     0     0     1     0     4     0     0     3    18     7     0
## 6    11     0     5     0     0     0     0     0     3     0     0     0     5     1     0
##    STDO  TLN2  PSDQ  HBMB  ALIN  HIPC  HIPM  BARE  BOXX  CURD  LET2  MOPS  MTWN  NEWT  SBTT
## 1     1     1    16     9     1     1     7     3     1     1     1     1     1     1     1
## 2     0     0    13    12     0     0     2     4     0     0     0     0     0     3     0
## 3     0     0     6    18     0     0     2     1     0     0     0     0     1     1     0
## 4     0     0    30    40     0     0     2     1     0     0     0     0     1     3     0
## 5     0     0    15    17     0     0     0     3     0     0     0     0     0     4     0
## 6     0     0     4     7     0     0     0     0     0     0     0     0     1     1     0
##    TPLS  PN05  BRCH  LYLU  TNSL  TRNO  SUFL  CATW  CLOX  MM49  MSUM  SCKB  THNM  LBLS  LBSC
## 1     2     5     1     1     1     1     4     3     2     2     8     1     2     8     2
## 2     2     3     0     1     1     0     4     0     0     1     1     0     2     5     0
## 3     1     4     0     0     0     0     4     4     0     0     2     0     3     0     0
## 4     1     5     0     0     0     0     1    10     0     0     1     0     6     0     0
## 5     0     0     0     0     0     1     3     4     0     0     0     1     2     0     0
## 6     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
##    LBTY  LTET  HMLS  MM62  GWEN  KNNN OTH_596 OTH_610  Q5LA  SPTL  F219  1452  CPS2  BTHS
## 1     3     2     3     1     2     4       1       1     7    10    22     8     5     1
## 2     0     0     0     0     5     5       0       0     7     0    12     0     0     3
## 3     0     0     0     0     0     2       0       0     3     0    21     0     0     3
```

```
## 4      0      0      0      0      0      7          0          0      4      0     55      0      0      0
## 5      0      0      0      0      0      1          0          0      9      0     46      0      0      3
## 6      0      0      0      0      0      0          0          0      1      0      5      0      0      0
##    F107 ANGL GRIN HMLA PTHD RCLA SROM SUMM HNLN KLNN SKIT GRC1 GRC2 BTLE CWM4
## 1     3    2    1    2    2    1    1    1    1    1    1    1    1    4    3
## 2     0    0    0    0    0    0    0    0    3    2    3    0    0    0    0
## 3     0    0    1    0    0    0    0    1    0    1    0    0    0    0    0
## 4     0    0    0    1    0    0    2    0    0    0    0    0    0    0    0
## 5     0    3    3    3    3    0    4    0    1    0    0    0    0    0    0
## 6     0    1    0    1    0    0    0    0    0    0    0    0    0    0    0
##    MSUC USLN RUBB 1535 MLOB MLOC OTH_487 OTH_441 F178 BOXR OTH_422 OTH_373 THOC
## 1     7    1    1   33    2    2       1       1  116    5       2       1    5
## 2     3    0    0   14    4    0       0       0  186   43       0       0    0
## 3     0    0    0    0    2    0       0       0  153   33       0       0    0
## 4     2    0    0    0    0    0       0       0  207  117       0       0    0
## 5     0    0    0    0    0    0       0       0  124   93       0       0    0
## 6     0    0    0    0    0    0       0       0   35    9       0       0    0
##    OTH_601 F109 F127 MDLB LBT1 BZPN F231 F120 F124 LOTB PPSL LBHL OTH_456
## 1        1   99   77    1    1    2    1    7    9    1    1    2       1
## 2        0  208  181    2    0    0    3    3    0    7    0    2       0
## 3        0  138   85    0    0    0   18   11    0    7    0    3       0
## 4        0  245  199    1    0    0   24    0    0    6    0    3       0
## 5        0  130   71    0    0    0    5    0    0    8    4    2       0
## 6        0   44    0    0    0    0    0    0    0    0    0    0       0
##    OTH_707 BUZM JDLA MTHS OTH_591 CLIF MNCB TOT2 DEDO F144 MDPK NIPP IKNC WAVE
## 1        1    1    1    1       1    1    2    2    1   80   13    1    1    1
## 2        0    0    1    0       0    4    1    1    3    0    0    0    0    1
## 3        0    0    1    0       0    2    0    0    0    0    0    1    0    1
## 4        0    0    2    0       0    4    0    0    0    0    0    1    0    2
## 5        0    0    0    0       0    0    0    0    0    0    0    0    0    1
## 6        0    0    0    0       0    0    0    0    0    0    0    0    0    0
##    EFHT MRMS CSTK LSPL SBPE C717 LAT2 TNFG DMDI F188 C073 TEEN F159 WAND F198
## 1     2    1    1    4    3   16    3    3    3   87   31   16  106    1   74
## 2     0    2    0    2    5    0    0    0    1  125    0    5   30   51  164
## 3     0    2    0    0    0    0    1    0    0  130    0    0  137   47  144
## 4     0    0    0    0    3    0    0    0    0  209    0    0  227    0  204
## 5     0    0    0    0    0    0    0    0    0  120    0    0  162    0  114
## 6     0    0    0    0    0    0    0    0    0   36    0    0   23    0    0
##    PSB2 PSBZ PHIN F148 C574 F184 JOSE F202 INHF KATT ROOS RP61 C755 F113 F190
## 1     1    1   16  118   23   31   35    6    1    3    1    1    1   97   31
## 2     0    0    0  173    0   55   67    0    0    0    6    1    0  185  137
## 3     0    0    0  132    0    0   50    2    0    2    0    2    0  197   90
## 4     0    0    0  238    0    0    1    0    0    0    0    0    0  224   68
## 5     0    0    0  125    0    0    0    0    0    0    0    4    0  124   25
## 6     0    0    0   41    0    0    0    0    0    0    0    0    0   21    7
##    XYLO C295 MSLB TDTL BTOK LPSK F152 GALO WORM F186 FLTP FB70 BTMV MTMS MOFG
## 1     1   13   40    2    1    3   73    2    9   46    1    1    1    1    1
## 2     1    0    0   14    0    2   22    4    2  118    0    0    0    0    0
## 3     0    0    0    7    0    0    0    5    0    0    0    0    0    0    0
## 4     1    0    0   22    0    0    0    1    0    0    0    0    0    0    0
## 5     0    0    0   26    0    0    0    2    0    0    0    0    0    0    1
## 6     0    0    0    4    0    0    0    0    0    0    0    0    0    0    0
##    F146 CTS2 MSQL PSC3 BTCH DIGT PORT LTS2 LTSM ALKC CHMA PN03 BRD2 C871 PROF
## 1    91    2    1    1    4    3    2    1    1    1    1    1   16   39    1
```

```
## 2   274   0   0    4   3   5   1      0       0    0    0    0    0   11  64   0
## 3   184   0   0    3   0   4   1      0       0    2    0    0    0    9   2
## 4   232   0   0   11   0   0   0      0       0    0    0    0    0    0   1
## 5   141   0   0   12   0   0   0      0       0    0    0    0    0    0   2
## 6    33   0   0    2   0   0   0      0       0    0    0    0    0    0   0
##    STMN VTHN SLLP INDT BTTN SOLS LACH OTH_164 OTH_208 RNMA F170 FNGD HTHR PRGO
## 1    1    1    1    1    1    1    3       1       1    3    1    1    1    1
## 2    0    0    1    0    0    0    3       0       0    0    1    0    0    0
## 3    0    0    0    0    0    2    0       0       0    4    0    0    0    0
## 4    1    1    0    0    0    6    0       0       0    1    1    0    0    0
## 5    0    0    0    0    0    0    0       0       0    0    0    0    0    0
## 6    0    0    0    0    0    0    0       0       0    0    0    0    0    0
##    WAAA WOTN CRUM MUCH NIPN BBUK LBLT LEMO LSPO PUMP SGLA TSMN TULP BOZO FLLN
## 1    1    2    1    2    1    1    1    1    1   30    7    1    1    1    1
## 2    0   10    2    2    5    1    1    0   12    1    2    0    0    0    0
## 3    0    0    0    2    7    0    0    0    0    0    2    1    0    0    0
## 4    0    0    1    8    5    1    0    0    0    0    1    0    0    0    0
## 5    0    0    7   15    0    0    0    0    0    0    7    0    0    0    0
## 6    0    0    0    5    0    0    0    0    0    0    0    0    0    0    0
##    MOML HSN2 SMUS BSLV UPBT HILB MORN C272 F142 JOSC HANG F126 STIP WHIT LBLK
## 1    1    1    1    1    1    1    1   43   18   14    1    1    1    1    1
## 2    0    0    1    0    3    2    5    0  102   66    8    7    0    3    5
## 3    0    0    0    0    0    0    2    0   58   51    9   27    0    0    0
## 4    0    0    0    0    0    1    6    0  128   42    0   33    0    0    0
## 5    0    0    1    0    0    3    7    0  132   49    0   28    0    0    0
## 6    0    0    0    0    0    0    0    0   33    0    0    7    0    0    0
##    IKN2 PRFC APEM HMTN SBDO RTM2 PLG2 MJMA MJMC OTH_228 RNMK DAND LNPC TWIG XNDU
## 1   12    3    1    2    6    3    1    2    2       1    1    1    1    1    1
## 2   80    1    1    2   76    7    0    8    0       0    0    5   12    0    0
## 3   58    0    0    0   64   23    0    5    0       0    0    0   13    0    0
## 4   98    0    1    1    0   45    0    0    0       0    2    0   44    0    0
## 5   64    0    0    1    0   14    0    0    0       0    7    0   24    0    0
## 6   17    0    0    0    0    2    0    0    0       0    3    0    6    0    0
##    PECS ULYS ZOEY IVTA NACK POET R27L TAL2 YAHO HBUT HOKA OTH_692 LIZD SCOB SKIL
## 1    3    1    1    1    1    1    1    1    1    1    1       1    1    1    1
## 2    7    6    2    1    5    4    6    0    1    7    0       0   34    0    5
## 3    0   18    0    0    2    0    3    3    0    0    0       0   17    0    0
## 4    0   40    1    0    3    3    5    4    1    0    6       0    9    0    2
## 5    0   23    3    0    1    3    6    2    1    0    4       0   14    0    1
## 6    0   10    2    0    0    0    1    0    0    0    0       0    3    0    1
##    PRTF TUNL GIDN OCTV BUMI <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    1    1    1    1    1    0    0    0    0    0    0    0    0    0    0
## 2    4    2    4    3    0    1   11    3   80    1    1    1    1    1    1
## 3    0    0    0    1    0    0    0    2   48    0    0    0    7    1    0
## 4    0    2    0    2    0    0    0    5    3    0    0    0   44    0    0
## 5    0    0    0    3    0    0    0    4    0    0    0    0   47    0    0
## 6    0    0    0    1    0    0    0    2    0    0    0    0    5    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    2    3    1    1    1    1    2    5    1    1    2    1    5   27    1
## 3    2    8    2    0    0    0    1    9    0    0    0    0    0    0    0
## 4    2   13    2    0    0    0    1   31    1    0    0    0    0    0    0
## 5    3   10    0    0    0    0    6   45    0    0    0    0    0    0    0
## 6    0    2    0    0    0    0    5   11    0    0    0    0    0    0    0
```

```
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    8    2    1   17  183   69   10   31    8    1    1    3    1    1    1
## 3    2    0    0    0  127   64    0   27    0    0    0    2    0    0    0
## 4    0    0    0    0  249   74    0   15    2    0    0    1    1    0    0
## 5    0    0    0    0  143   58    0    4    0    0    0    0    0    0    0
## 6    0    0    0    0   35   20    0    0    0    0    0    0    1    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    1    2    2  169  101    1    1    1   27  125  108   21    1    1    1
## 3    0    0    0  110    0    1    2    0   59  110   67    1    1    0    0
## 4    0    0    0  179    0    0    4    0  106  170  114    9    0    0    0
## 5    0    0    0  128    0    0    9    1   65  130    3    9    0    0    0
## 6    0    0    0   39    0    0    2    0   13   37    0    1    0    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    1    1   56   93    3    1    1    4    2    1    2    3    1    1   21
## 3    0    0   58   58    0    0    0    3    0    0    0    0    0    0    1
## 4    0    0    0  103    0    0    0    0    1    0    0    0    0    0    2
## 5    0    0    0   70    0    0    0    3    0    0    0    0    0    0    1
## 6    0    0    0   13    0    0    0    0    0    0    0    0    0    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    1    1   72    2    2   20  175  105   36    3   93  121  167   10  167
## 3    2    0   15    0    0    3  102   30    1    0   15   95  185    0  190
## 4    0    0    0    4    0   19   78    0    0    0    0  172  202    0  320
## 5    0    0    0    1    0    9    0    0    0    0    0   69   77    0  133
## 6    0    0    0    0    0    3    0    0    0    0    0   15   37    0   40
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2  140    1   17   38    1    1  167   18    1    1    1   27  158    1   44
## 3   12    0    0   29    5    0   12    6    0    0    0   12  151    0   17
## 4    0    0    0    0    6    0    0    7    0    0    0    0  201    0    0
## 5    0    0    0    0    8    0    0    4    0    0    0    0   44    0    0
## 6    0    0    0    0    0    0    0    0    0    0    0    0   11    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    8    1    3    3    1    4    1    3    1    3    5    4    2    2    1
## 3    0    0    0    0    0    2    0    0    0    0    0    0    0    0    0
## 4    0    0    0    0    0    2    0    2    0    1    1    0    0    1    2
## 5    0    0    0    0    0    0    0    0    0    0    0    0    0    5    0
## 6    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    1    2    1    2    2    1    4    1    1    1    1    8    1    1   57
## 3    0    0    0    2    1    0    0    1    0    0    2   25    5    0  103
## 4    0    0    0   26    0    0    8    0    0    0    0   38    0    9  141
## 5    0    0    1    8    0    0    9    0    0    0    1   21    0   14  105
## 6    0    0    0    6    0    0    0    0    0    0    0    5    0    1   14
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    4    1    1    1    1    1    2    4    1   51   53    2    1    1    1
## 3    2    0    0    0    0    0    1    0    0   97   92    2    4    0    0
## 4    1    0    0    0    0    0    2    0    0  163  207    0    5    2    0
```

```
## 5     2     0     0     0     0     0     0     0     0   162   141     0     3     0     0
## 6     1     0     0     0     0     0     0     0     0    28    34     0     0     0     0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     2     3     2     3    36     3    16    11     1     2     3     2     2     4     1
## 3     0     0     0     2     6     1    33    43     0     2     1     3     0     7     0
## 4     2     0     1     0     0     3    49    96     5     6     9     0     0    10     0
## 5     0     0     0     0     0     4    50    51     0     5     1     0     0     6     0
## 6     0     0     0     1     0     0    22    16     0     0     0     0     0     0     0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     1    41     1     1    98     1   116     2    13   104     1     1     1     1   118
## 3     3    84     0     0    71     0   178     3     1   104     0     0     0     2   172
## 4     4   226     0     0     0     0   143     0     0     0     0     1     3     1   183
## 5     0    23     0     0     0     0    89     0     0     0     0     0     1     1   142
## 6     0     0     0     0     0     0    25     0     0     0     0     0     1     1    31
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     5    15    17     1     1    20     1     1     2     7     5    64    81    37    15
## 3    11     9     9     1     1     2     0     0     0    17     1   150    10    12     5
## 4     0     0    26     0     0    29     0     0     1    46     0   203    94     0    68
## 5     0     0     5     0     0     0     0     0     1    10     0    62    89     0     6
## 6     0     0    13     0     0     0     0     0     0     5     0    16    29     0     9
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2    18    16    11     7     6     1     2     1     4     1     4     5     1     1     1
## 3     2     0     0     0     5     0     5     0     2     0     0     1     0     2     0
## 4    63     0     0    48    53     1     3     0     7     1     0     0     0     2     0
## 5     3     0     0     2    40     0     0     0     5     0     0     0     0     0     0
## 6     0     0     0     0    11     0     0     0     0     0     0     0     0     0     0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     1     1     1     2     1     1     1     1     2     3     1    26     2     2     2
## 3     0     0     1     0     2     0     2     0     0     1     0    20     0     0     0
## 4     0     0     0     1     0     1     3     0     2     0     2    10     1     0     1
## 5     0     0     0     1     0     0     0     0     1     0     0     7     1     0     0
## 6     0     0     0     0     0     0     0     0     0     0     1     0     0     0     0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     1     1     1     1     1     1     1     1     1     1     2     3     1     1     1
## 3     0     0     0     0     0     0     0     0     0     0     0     0     0     1     0
## 4     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 5     0     0     0     0     0     0     0     0     1     0     0     0     0     0     0
## 6     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     1     1     1     1     1     1     1     1     1     2     1     1     1     1     1
## 3     1     0     0     0     0     0     2     0     0     3     1     1     0     0     0
## 4     0     0     0     0     0     0     0     0     0    22     1     0     0     0     1
## 5     0     0     0     0     0     0     0     0     3    17     0     0     0     0     0
## 6     0     0     0     0     0     0     0     0     1     5     0     0     0     0     0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     1     1     1     1     1     1     1     1     1     3     1     1    27     1     1
```

```
## 3      0     0     0     0     0     0     1     0     0     0     0     3     0     0     0
## 4      1     1     0     0     0     1     0     2     0     1     2     0     0     0     0
## 5      0     0     0     0     0     0     0     0     0     0     1     0     0     0     0
## 6      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2      2     1     1     2     2     2     3     1     1     1     1     2     1     1     1
## 3     13     0     0     2     2    10     1     5     2     0     0     3     6     0     0
## 4     25     0     0     4     2     3     1     0     0     0     5     7     4     0     0
## 5      5     0     0     3     5     3     2     0     0     0     1     5     1     0     0
## 6      1     0     0     0     0     3     1     0     0     0     0     0     1     0     0
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2      2     2    19     1     4     1     7     3     1     1     1     2     1     1     4
## 3      0     0    43     0     0     0     0     0     1     4     2     0     3     0     0
## 4      0     0     9     0     0     0     0     0     4     1     6     0     0     0     0
## 5      0     0    12     0     1     0     0     1     2     0     0     0     0     0     0
## 6      0     0     1     0     0     0     0     0     0     0     0     0     0     0     0
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2      1     1     1     1     1     3     2     2     1     1     1     2     0     0     0
## 3      0     0     0     0     0     8    25    21     1     0     1     0     1     1     1
## 4      1     0     0     0     0    24    30     3     0     2     0     0     1     0     0
## 5      0     0     0     0     0    12     9     0     0     0     0     0     0     0     0
## 6      0     0     0     0     0     7     5     0     0     0     0     0     0     0     0
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3      1     1     1     1     1     6     5     1     2     2     1     1    97     1     9
## 4      0     0     0     0     0     0     6     0     3     3     0     0   138     0     0
## 5      0     0     0     0     5     0     8     0     3     3     0     0   101     0     0
## 6      0     0     0     0     0     0     0     0     0     0     0     0    27     0     0
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     92    15    11     1     6     1     1    95    98    98     3     2    81     1     3
## 4     11     0    29     0    13     0     0   319   240     0    15     1    40     0     0
## 5      0     0    18    10     6     0     0    21    64     0     2     0     0     0     0
## 6      0     0     8     0     0     0     0     5    13     0     0     0     0     0     0
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3      3     2    37     4     2   126   140   121    91     7     1     1    19     2     7
## 4      2     0   159     0     0   251     0   215   224     0     0     4     0     0     0
## 5      6     0   107     0     0   190     0   104    93     0     0     0     7     0     0
## 6      0     0    23     0     0    33     0    23    35     0     0     0     5     0     0
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3      1     1     1     2     1     1     1     1     6     4     1     2     4     5    10
## 4      0     0     0     6     0     0     0     0     0     1     0     0     1     0    38
## 5      0     0     0     9     1     0     0     0     0     0     1     0     0     0    28
## 6      0     0     0     3     0     0     0     0     0     0     0     0     0     0     8
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
```

```
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3   50   17    1    1    1   64    6    1    1    1    1    1    1   13   92
## 4    0    0    3    3    0  204    4    0    0    1    1    0    0    0  238
## 5    0    0    2    2    0  178   10    0    0    4    0    0    0    0  151
## 6    0    0    1    0    0   48    7    0    0    2    0    0    0    0    7
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    1    3    2    2    1    7   29    7    8    1    1    1   41   20    1
## 4    0    5    2    4    0    4    6    0   23    0    0    0   91   75    0
## 5    0    0    4    1    0    0    0    0   11    0    0    0  111   64    0
## 6    0    0    0    0    0    0    0    0    1    0    0    0   25   16    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3   10    1    4    1    2    2    1    1    1    1   14    2    4   12   11
## 4   65    0   29    0    0    0    2    0    0    0    0    2   33   39    0
## 5    0    0    5    0    0    0    1    0    1    0    0    0   26   19    0
## 6    0    0    7    0    0    0    0    0    0    0    0    0    5    5    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    2    3    3    2    1    1   38   66   65   45   26   47   25   63    3
## 4    0   35    7    1    0    0    0    0   94  133   10  152    1  257    3
## 5    0    0    3    0    0    0    0    0    0  117    0   28    0  112    0
## 6    0    0    1    0    0    0    0    0    0   17    0    6    0   27    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    6   24    2    3    5    3    3    2    5    2    1    8    7    7    4
## 4   28   17    0    0    2    3    3    0    0    0   49    4    0    3    9
## 5   12    0    0    0    0    4    2    0    0    0    6    0    0    2    7
## 6    0    0    0    0    0    0    2    0    0    0   10    0    0    0    4
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    4   18    9    2    4    1    4    3    1    1    3   10   19    3    9
## 4    3  117   20    0   16    1   14    2    0    0    5    0    0    0   18
## 5    0   54   29    0   12    2    3    2    0    0    5    0    0    0    0
## 6    0   17    4    0    2    0    0    1    0    0    1    0    0    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    3   10    2    1    1   23    1    1    1    1    1    1    1    4   10
## 4    4    5    6    0    0   95    0    0    0    1    0    0    2   61   37
## 5    8    2    0    0    2   69    0    0    0    0    0    2    0    0   40
## 6    1    0    0    0    0    5    0    0    0    0    0    0    0    0   10
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    1    1    1    1    2   18   25   30   21    3    4    4   11   33    1
## 4    0    0    0    0   33    6  185  118   64    5   13  184  118  239    0
## 5    0    0    0    0   50    7  129   92    0    0    0  122   41  126    0
```

```
## 6    1    1    1    1   19    0   44   29    0    0    0   28   10   24    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    1    1    1    1    1    1    2    3    1    1    1    1    1    1    1
## 4    0    0   20    0    0    0    4    0    0   50    0    0    2    0    0
## 5    0    0    5    0    0    0    9    0    0    0    0    0    0    0    0
## 6    0    0    1    0    0    0    4    0    0    0    0    0    0    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    3    1    1    1    6    3    1    1    1    1    1    2    1    1    1
## 4   40    0    0    0   46    9    0    1    0    1    0    2    0    2    0
## 5    0    0    0    0    0    0    0    0    0    4    6    2    0    0    0
## 6    0    0    0    0    0    0    0    1    0    0    2    0    0    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    1    1    1    2    1    1    2    1    2    1    1    2    1    2    1
## 4    0    1    4    8    3    8   39   18    1    0    0    1    8   36    0
## 5    0    0    3    9    7   47    0   19    0    0    0    8    2    0    0
## 6    0    0    4    1    1   16    0    4    0    0    0    0    0    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    1   12   25    5    2    2    2    6    5    5    1    1    1    1    2
## 5    0   10   12    2    1    0    0    1    0    0    0    0    0    0    0
## 6    0    4    3    2    0    0    0    0    0    0    0    0    0    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    1    5    1    5    3    7    1  101   31   34   20  219    1    1    6
## 5    0    2    1    0    1   11    0  115    7   31   39    0    1    0    4
## 6    0    3    0    0    0    4    0   29    1    7   11    0    1    0    4
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    1    1   29   18    2    1    1    2  215    8  110    2    2    5  161
## 5    0    0   30   12    0    0    0    0   98    0   68    0    5    0   71
## 6    0    0   13    3    0    0    0    0   22    0    0    0    0    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4  116    3    2    3    5    1    1    2    9   60   61    6    3    3    3
## 5  105    0    0    0    2    0    0    5    0    0    0    6    0    1    0
## 6   26    0    0    0    3    0    0    1    0    0    0    0    0    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
## 4      8      9      6     10      1      1      1      1      1      8      1      2     22     14      1
## 5      0      5      4      7      0      0      0      0      0      0      0      0      9      0      0
## 6      0      0      0      1      0      0      0      0      0      0      0      0      0      4      0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 3      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 4     11      2      2      4      4     36      1      1      6      6      5      4     17      5      6
## 5      3      0      0      0      0     49      0      0     12      1     18      3      7      0      0
## 6      1      0      0      0      0     10      0      1      3      1      7      0      0      0      0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 3      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 4      2      3      2      1      4      2      1      1      7      6      1      3      6      9      9
## 5      0      0      0     12      0      0      0      0     12      0      2      0      7      7     12
## 6      0      0      0      3      0      0      0      0      3      0      0      0      2      1      3
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 3      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 4      7      3      5      1      1    170    159      6      1      1      1      2      1      1      1
## 5      1      2      2      0      1     94    142      0      0      0      0      0      0      0      0
## 6      0      0      0      0      0     35     33      0      0      0      0      0      0      0      0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 3      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 4      1      1      6      1      1      3      1      1      1      1      1      1      9      7      2
## 5      0      0     25      0      0      0      1      0      0      0      0      0      0      2      2
## 6      0      0      9      0      0      0      0      0      0      0      0      0      0      0      0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 3      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 4      1      9     23      5     97    105     31     13     47      1     15     16      1      1     48
## 5      0     11      9     10    104     36      0      8     42      0      3     11      0      0      2
## 6      0      3      0      3     37     15      0      4     11      0      0      1      0      0      0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 3      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 4    126     19     19      1     60     58     60      1      1      1      3     76      5      1      1
## 5    100      0      0      0     13     38     33      0      1      0      0     51      4      2      5
## 6     27      0      0      0      0     12     11      0      0      0      0     19      4      0      0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 3      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 4      1      3      6      3      1      4     19      2      2      1      1      4      2     20      8
## 5      4      0      8      8      0      0     54      0      0      0      0      0      7      3      0
## 6      0      0      0      1      0      0     11      0      0      0      0      0      3      2      0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
```

```
## 2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4      8     8     1     1     6     2     1     1     1     7     2     1     6     4    27
## 5      2     9     0     0     7     1     3     0     0     0     0     0     0     0     4
## 6      3     7     0     1     0     0     0     0     0     0     0     0     3     0     0
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4      5     6    16     1    57     1     2     2     3     2     3     1    19     1     1
## 5      6    23     0     2    95     0     0     0     2     0     0     1    19     0     0
## 6      2     1     0     2    14     0     0     0     1     0     0     0     6     0     0
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4      1     1     1     1     1     1     1     1     1     1     8    24    35    66     1
## 5      0     0     0     0     0     0     0     0     0     0     7     4    27   127     0
## 6      1     1     1     0     0     1     0     0     1     1     2     0     0    33     0
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4      2     1     5     1     5     5    38     1     1    27    10    51    66     8     7
## 5      0     0     4     0     4     0     0     0     4     0     0   120   101     0     6
## 6      0     0     0     0     0     0     0     0     0     0     0    36    22     0     0
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4      6     1    10     3     4     2     4     5     3     5     4     4     2     2     2
## 5      0     0     0     0     0     0     1     6    11     9     0     1     0     0     0
## 6      0     0     0     0     0     0     0     0    11     0     0     0     0     0     5
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4      1     1     1     1     3     1     1     1     1     1     1     1     6     2     3
## 5      0     0     0     0     1     8     0     9     0     0     0     1     8     3     1
## 6      0     1     0     0     1     0     0     4     0     0     0     0     3     1     0
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4      1     3     2     1     1     2     1     1    18     2     2     6     2     3     4
## 5      0     3     1     9     0     1     0     0   118     6     6     2     0     0    13
## 6      0     1     0     2     0     0     1     0    28     0     0     0     0     0     6
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4      1     4     4     1     1    11     1     3     2     3     6     5    11     5     1
## 5      0     1     0     6     2   104     0     4     1     1    15    19    65    32     0
## 6      0     7     0     0     2    34     0     1     0     0     3     4     6     5     0
```

```
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     1    1    1   10    1    1    1    1    1    1    1    1    5    1    1
## 5     3    5    0  107    1    0    2    0    1    1    1    4   82    0    0
## 6     0    0    0   37    1    0    0    0    0    0    0    2   25    0    1
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     1    3    1    1    1    1    1    1    2    1    1    1    1    1    1
## 5     2    4    0    1    2    0    1    0    0    0    0    0    0    1    0
## 6     0    0    0    1    0    0    0    0    0    0    0    0    0    2    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     1    1    1    0    0    0    0    0    0    0    0    0    0    0    0
## 5     7    0    0    2    3    3    2    1    1    1    1    1    9  122   47
## 6     0    0    0    0    0    0    0    0    0    0    0    0    0   35    4
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5     1    1    1    1   39  141  139   48   69   32  106   18    1    6    1
## 6     0    0    0    0    0   30   26   26   26    0   35    0    0    2    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5    14    1  119   60    3    6    3  135   41   44    2    8    2    6   10
## 6     1    0   45    0    0    1    0   38    7   11    0    0    0    0    1
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5     3    1    2    1    2   73    9    2   32    1    3    2    4    4    2
## 6     1    0    0    0    0    7    2    0    9    0    0    0    4    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5     2    2    1    1    1    2    1    2    3    2    1    1    4    6    1
## 6     1    0    0    0    0    0    0    0    3    0    0    0    1    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
## 5    2    1    2    6    2    1    3    1    1    1    1    1    1    4    1
## 6    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5    1    2    4    4    1    5    4    2    2    1    1    1    2    2    2
## 6    0    0    0    0    2    0    0    0    0    0    0    0    0    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5    3    2    1    5    2    4    2    1    1    1    3    1    6    2    2
## 6    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5    2    1    1    5    1    1    1    6    2   15    4    2    2    2    1
## 6    0    1    0    0    0    0    0    0    0    6    0    0    0    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5   60    1    2    1    2    1    1   21    6   56    5    1   65    1    5
## 6   30    0    1    0    0    0    0   17    0   12    6    0   35    0    2
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5   12    1    6    3    5    6    5   18    2    1   83    1    1    7    1
## 6    0    0    1    0    0    3    0    6    0    0   40    0    0    3    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5    1    1   43   11    6   11    2    5    2   76    1    8    6    2    2
## 6    0    0   16    5    0    9    2    3    0   29    0    6    1    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5    1    9    6    1    1   36    3    1   20    1    2    7    1    1    1
## 6    0    6    0    0    0   10    2    0   12    0    0    2    0    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
## 3      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 4      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 5      1      1      1      1      1      1     28      2     13      2      4      3      6      2      1
## 6      0      0      0      0      0      0     21      0      3      0      0      2      6      0      0
##      <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 3      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 4      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 5      3      1      1     86      1      1      1      3      1     19     77     71     35      3      1
## 6      1      0      0     47      0      0      0      4      0      0     27     35     29      0      0
##      <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 3      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 4      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 5      4      1      1     87      2     30      2      2      2      1     54      3     56      7      1
## 6      4      0      0     25      0     11      0      0      0      0     27      0     40      6      0
##      <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 3      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 4      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 5      3      3      1      1      1      1     12      2      3     17      1      1      1      1      1
## 6      4      0      0      0      0      0      2      1      1      0      0      0      0      0      0
##      <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 3      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 4      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 5      1      2      2      1     63      4      7      2      1      1      1      1      1      1      1
## 6      0      1      0      0     31      1      5      0      0      0      0      0      0      0      0
##      <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 3      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 4      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 5      7      1      1      2      2      2      1      1      1      3      1      2      1      1      1
## 6      4      0      0      0      0      1      0      0      0      0      0      0      0      0      0
##      <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 3      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 4      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 5      2      1      4      4      7      6      1      1      2      2      2      3      3      2     32
## 6      0      0      3      1      3      5      0      0      0      0      0      0      0      0      8
##      <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 3      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 4      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 5     45      7      7      1      1      3      1      1     20      6      3      1     33      5     25
## 6     41      0      1      0      0      0      0      0     23      0      1      2      0      0     17
##      <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
```

```
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 5     2     2     1     2     1     3     3     4     3     3     3     1     4     3     1
## 6     1     0     1     9     0    13     0     9     0    10     0     0     7     0     0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 5     1    27    11    32     8     1     3     3     6     1    36     6     1     1     8
## 6     1    23    17    29     0     0     6     3     0     0    28     5     0     0    16
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 5     5     2     8     1     1     1     1     1     6     1     2     7     1     2     1
## 6    12     0    11     0     0     0     0     0    22     0     0     6     0     3     0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 5     1     1     1     1     1     1     1     1     2     2     1     1     3     1     1
## 6     0     0     0     0     0     0     1     1     0     0     0     0     2     0     0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 5     1     1     9     1     1     1     1     1     2     1     1     1     1     1     1
## 6     0     0    27     0     0     0     0     0     2     0     0     0     0     0     0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 5     2     1     2     2     1     1     1     1     1     1     0     0     0     0     0
## 6     0     0     0     0     0     0     0     0    12     4    10     4     3     1     1
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 5     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 6     1     1     1     1     1     1     1     1     1     1     2     2     4     1     2
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 5     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
```

```
## 6      9      4      1      2      2      8     10     16     16      1      2      1      1      1      1
##    <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>
## 1      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 3      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 4      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 5      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 6      1      1      1      1      5     19     25      5      1      1      1      5      1      1      1
##    <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>
## 1      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 3      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 4      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 5      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 6      1      3      1      1      2      4      2      1      1      1      1     14      1      2      1
##    <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>
## 1      0      0      0      0      0      0      0
## 2      0      0      0      0      0      0      0
## 3      0      0      0      0      0      0      0
## 4      0      0      0      0      0      0      0
## 5      0      0      0      0      0      0      0
## 6      1      1      1      6      1      1      1
```

```r
# Transforming into binary matrices
p4y <- as.matrix(p4y); p4y[which(p4y>=1)] = 1; p4y[which(p4y<1)] = 0


# -------------------- 4 sets of 5 year increments---------------------------
# Make a list of 5 years per dataframe
sample_data$FiveYearIncrement <- cut(sample_data$Year, breaks = seq(min(sample_data$Year), max(sample_da
list_fiveyears <- split(sample_data, sample_data$FiveYearIncrement)
# Apply the count_instances function to each two years
instances_per_fiveyear <- lapply(list_fiveyears, count_instances)
# Convert the list of counts to a data frame
p5y <- do.call(rbind, instances_per_fiveyear)
p5y
```

```
##    FB41 FB05 FB36 FB38 FB55 FB96 FB98 F108 F153 FB15 FB23 FB78 FB93 F155 FB01
## 1    67  165  200  215  173   78   38   62   79  110   68  133  108  256  199
## 2     0  200  127   26  261   34    0   64   81  167    0  116  199  218  198
## 3     0   94  132    0  158    0    0   66   76  195    0  135  142  203    0
## 4     0    7   56    0  141    0    0   86   92  107    0  140   85  149    0
## 5     0    0    0    0   28    0    0   16   23   23    0   17    0   27    0
##    FB43 FB92 F118 F122 FB29 <NA> FB54 FB71 FB90 F100 F119 FB14 FB27 <NA> FB57
## 1    98  199  275  165  131    0  351   87  304  139  234  167  160    0  103
## 2   110  196  238    0    0    0  279    0  301  140  222  322  170    0    0
## 3   139  214  218    0    0    0  165    0  308   51   16   31  116    0    0
## 4    58  143   94    0    0    0  164    0  132    0    0    0  105    0    0
## 5     0   39    0    0    0    0   28    0   34    0    0    0   32    0    0
##    FB66 FB76 FB94 F112 FB12 FB03 <NA> F106 FB44 FB62 F175 FB10 FB46 FB75 FB79
## 1   148  142  203   55   66  165    0  205  143  115  230  204  186  132  190
## 2   281  268  332    0    0  236    0  204   52    0  291  200  172  199  177
## 3   134   56   11    0    0    0    0  186   63    0  243  134    0   63  250
## 4    72    0    0    0    0    0    0    0   78    0  204  105    0    0  172
```

```
## 5      0      0      0      0      0      0      0      0     22      0     25     16      0      0     29
##      FB60  FB13  F138  FB63  FB07  FB11  F132  FB25  F102  F111  F130  F134  F136  F154  F160
## 1     32   146   191   186   255   306    15   187    20   174     8    37    32    93    39
## 2      0   195   152   108   263   301     7   157    17   101     2    17    14    12    24
## 3      0   107   197    82   211   279     2   136    34     0     0    25     8    39     8
## 4      0     9   181     0   149   157     0   136    38     0     0    10     0     7     0
## 5      0     0    34     0    35    27     0    34     5     0     0     0     0     8     0
##      F162  <NA>  FB20  FB65  HIQQ  POOF  FB28  <NA>  FB09  FB33  ATNA  CWM3  NKLN  WTMA  FB48
## 1     38     0   184   234    15    16    83     0   215   215     2    23     4    15    38
## 2     25     9   194   292    13     5   193     0   180   198     0    19     2     0    90
## 3     11     2   190   245    31     2    67     0   158   190     6    16    12     0    36
## 4     31     0   202   146    37     0    47     0    11   157     1    20     9     0     2
## 5      6     0    29    30     5     0    17     0     0    29     0     4     0     0     0
##      F105  1054  <NA>  FB32  49C3  49LA  <NA>  DRAC  <NA>  F161  F164  <NA>  KMSN  MIDF  5NK2
## 1      7     2     0   121     9    44     0     1     0     1    26     0     3     5     4
## 2      8     0     0   170     0    26     0     0     0     0    52     0     0     4     0
## 3      1     0     0     0     0     2     0     0     2     0   116     0     0     8     0
## 4      0     0     0     0     0     0     0     0     0     0   125     0     0     6     0
## 5      0     0     0     0     0     0     0     0     0     0    27     0     0     1     0
##      <NA>  <NA>  MBAB  <NA>  <NA>  WTAB  <NA>  BTTV  <NA>  F147  F210  F237  <NA>  <NA>  FB84
## 1      0     0     2     0     0     2     0    19     0    11     3    26     0     0   144
## 2      0     0     1     0     2     0     0     2     0     0    18    70     0     1   111
## 3      0     1     1     0     9     3     0     0     0     0    14   161     0     0     0
## 4      0     0     1     0     2     0     0     0     0     0     0    69     0     2     0
## 5      0     0     0     0     0     0     0     0     0     0     0    26     0     0     0
##      CRAG  HVMS  LCKL  RUFF  FB59  FB83  FB02  C834  BBMB  LDSL  LSMS  MCMA  PN06  F276  FB24
## 1      8     1    10     6   147    89   141    59     7     7     1    30     1    27   105
## 2      5     7     0     8   161   138   133   129     6     7     0    46     0   101     0
## 3      0    20     1     3     0    14   186   125     2     3     0     0     1   144     0
## 4      0    23     2     0     0     0   122   124     0     0     0     0     0   160     0
## 5      0     4     0     0     0     0    13    19     0     0     0     0     0    36     0
##      FB35  F182  DRSN  <NA>  F128  F131  DIPT  SLMS  2SDN  BBL2  BBLN  BTLN  CHK2  ETMA  <NA>
## 1     36   142    72     0   136   253    14     2     2     2     4     5     2     3     0
## 2     26   139    45     0   201   220     5     0     0     0     1     3     0    10     0
## 3     45   123    58     0   217   257     0     0     0     0     9     1     0     3     0
## 4     60   112    38     0   138   201     0     0     0     0     2     0     0     0     0
## 5      6    17     0     0    39    42     0     0     0     0     1     0     0     0     0
##      HNBT  <NA>  JAGG  JIG3  KMBT  LOBE  MLTS  <NA>  <NA>  <NA>  <NA>  <NA>  SHOT  SURR  TFMS
## 1      2     0     3     7     1     3     4     0     0     0     0     0     6     3     2
## 2      1     0     0     1     0     0     1     0     1     1     0     0     3     0     0
## 3      3     0     0     2     0     0     3     0     0     0     1     2     0     0     0
## 4      1     0     0     3     0     0     1     0     0     1     0     0     0     0     0
## 5      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
##      TSMV  <NA>  <NA>  FB17  F110  F191  FB73  <NA>  <NA>  PSD2  PSDZ  <NA>  HSNS  <NA>  BIDF
## 1      9     0     0    49    59    34    20     0     0     2     1     0     7     0     1
## 2     17     0     0    32    92    15    19     0     0     0     0     0     2     0     1
## 3     16     0     0    26    85     0     0     0     0     0     0     0     7     0     0
## 4     23     0     0     0    74     0     0     0     0     1     0     0    11     0     2
## 5      4     0     0     0    16     0     0     0     0     0     0     0     5     0     1
##      <NA>  ETSC  FNOT  <NA>  <NA>  LGSC  <NA>  <NA>  MTMN  NLPS  PLUG  <NA>  TOTW  F183  THUB
## 1      0     1     1     0     0     1     0     0    15     1     6     0     1    58     3
## 2      2     0     0     1     0     0     1     0     0     0     3     1     2    90     2
## 3      8     0     0     0     0     0     0     0     0     4    22     0     0    26     0
## 4      8     0     0     1     0     0     0     0     0     2     9     2     0     0     0
```

```
## 5      0      0      0      1      0      0      0      0      0      0      0      0      0      0      0
##      F114  C791  FB26  FB34  F180  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  PKUP  <NA>  <NA>  SCOR
## 1    143    11    46    37    64      0      0      0      0      0      0      1      0      0      1
## 2    129     0    80     0    17      0      1      1      0      0      2      1      0      1      0
## 3     72     0     0     0     8      1      1      1      0      0      1      0      0      0      0
## 4     27     0     0     0     4      0      0      1      0      0      0      0      0      0      0
## 5     18     0     0     0     1      0      0      0      0      0      0      0      0      0      0
##      SPIK  FJSL  F117  <NA>  <NA>  ELFF  PNO4  <NA>  TTM3  <NA>  LNST  <NA>  <NA>  <NA>  <NA>
## 1      5     1   140      0      0     22     7      0      2      0      2      0      0      0      0
## 2      0     0   198      0      0     11     0      0      8      0      1      0      0      0      0
## 3      0     3     0      0      0      1     0      0      2      0      2      0      0      0      0
## 4      0     0     0      0      0      0     0      0      4      0      3      0      0      0      0
## 5      0     0     0      0      0      0     0      0      0      0      0      0      0      0      0
##      FB39  CMRS  CONC  CONS  F163  F181  HAIR  HITS  MSQ2  RTMW  <NA>  SPGT  TABB  MDNK  KNOB
## 1     36     2     2     6   104    93    16     5     9    29      0     3    13     6    23
## 2      0    14     0     9   144   185    23     6     5    17      0     0     5     2     0
## 3      0    46     0     4     0   112    39    45     9    22      0     0     8    57     0
## 4      0    46     0     0     0     0    43    42     0    42      0     0     0     0     0
## 5      0    12     0     0     0     0     8    12     0     2      0     0     0     0     0
##      <NA>  <NA>  NIK2  <NA>  <NA>  BFWT  JAWS  <NA>  CHPC  <NA>  <NA>  ALHK  LHLV  <NA>  FB06
## 1      0     0     4      0      0     6     9      0     1      0      0     8     1      0   162
## 2      0     1     0      0      0     0     0      0     1      0      0     9     1      0   208
## 3      0     0     2      0      0     0     0      0     0      0      0    10     4      0    83
## 4      0     0     0      0      0     0     0      0     0      0      0     0     0      0     0
## 5      0     0     0      0      0     0     0      0     0      0      0     0     0      0     0
##      <NA>  <NA>  FB87  <NA>  CKB2  1832  SUMO  F157  <NA>  SOLB  TCTV  IKNO  F101  <NA>  <NA>
## 1      0     0    95      0     6    24     2    79      0    44    30    36   234      0     0
## 2      0     0    91      0     0     0    12   273      0    83    25    55   212      0     0
## 3      0     0    69      0     0     0    35   165      0    77    29     0    23      0     0
## 4      0     0    88      0     0     0     0    16      0    63    19     0     0      0     0
## 5      0     0    25      0     0     0     0     0      0    17     2     0     0      0     0
##      VRIP  HFLT  ZENN  <NA>  CLAW  AOTA  BKHO  <NA>  <NA>  <NA>  <NA>  F254  <NA>  MPTB  <NA>
## 1      2     7    13      0     1     2     2      0      0      0      0     5      0    11      0
## 2      1    13     0      0     0     5    10      0      0      0      0    10      0    80      0
## 3      2    20     0      0     0     0     6      0      0      0      0    60      0   103      0
## 4      3     0     0      0     0     0     9      0      0      0      0    76      0    77      0
## 5      0     0     0      0     0     0     6      0      0      0      0    23      0    14      0
##      SHTC  TRIF  <NA>  <NA>  PHNE  PN10  PNSN  FEAT  LUMP  BEGR  MOCH  F116  SLIF  OTH_604  THOR
## 1      4     4      0      0    11     5     3     4     6    95    16    17     1         1     8
## 2     96     1      0      0     0     4     1     2     0   117     0     0     0         0     0
## 3      7     3      0      0     0     0     0     9     0   134     0     0     0         0     0
## 4      0     4      0      0     0     0     0     2     0   313     0     0     0         0     0
## 5      0     0      0      0     0     0     0     0     0     0     0     0     0         0     0
##      F192  F194  MCM2  CATR  LFLA  OTH_199  TN3N  MTSS  SIMP  BRDO  RPPL  DTHB  GTFG  UPBK  MNIK
## 1     52    45     3     4     7        1     1    19     6    24     4     1     6     3     3
## 2     97   101     0     2     2        0     0    12     0    22     0     0     2     0    14
## 3      0    56     0     0     0        0     0     4    19     0     0     3     2     2     2
## 4      0    80     0     1     0        0     0     9    12     0     0     1     0     2     0
## 5      0     0     0     0     0        0     0     1     3     0     0     0     0     0     0
##      C652  THMN  RY34  TBTN  CCL4  F172  L106  C391  BTHV  NKNN  PNKD  C754  RTMC  WLDC  F149
## 1    217     4    15     3    14     7     2    35     3     4     4    13     4     2    74
## 2      0     0   108     1     0     0     3     0     0     2     2     0     0     4   105
## 3      0     0   103     0     0     0     4     0     0     0     0     0     0     1   134
## 4      0     0    80     0     0     0     0     0     0     0     1     0     0     6    53
```

```
## 5     0     0    10     0     0     0     0     0     0     0     0     0     0     2    14
##     C595 C091 LEMS C991 FB99 LBMA PNTH HNSC LIWB LCDB TTOO TWHN LWMN LFLG LDMA
## 1    81     1     1    18    21    48     1     2     1     4     6     1     4     2    11
## 2     0     0     0    25   108     0     0     0     0     0     0     2     7     3    13
## 3     0     0     0    94    10     0     0     0     0     0     0     5     0     1    35
## 4     0     0     0    45     0     0     0     0     0     0     0     2     0     0    17
## 5     0     0     0    15     0     0     0     0     0     0     0     0     0     0     0
##     LNPF WHIS F141 FANT LLIN FTMW GAFF HAGR PRFR F174 FB58 MIDM M145 MANT ONIP
## 1     7     1    23     1     1     1     1     1    16    55    62     1    25     8     1
## 2    12     1   176     0     0     2     0     0    10   104   135     1    11     8     1
## 3    33     1   125     0     0     0     0     0    20    21    10     1    47     7     0
## 4    39     0    39     0     0     0     1     0     8     0     0     3    28    11     0
## 5    11     0     5     0     0     0     0     0     3     0     0     0     5     1     0
##     STDO TLN2 PSDQ HBMB ALIN HIPC HIPM BARE BOXX CURD LET2 MOPS MTWN NEWT SBTT
## 1     1     1    17    11     1     1     8     4     1     1     1     1     1     1     1
## 2     0     0    16    25     0     0     3     3     0     0     0     0     0     4     0
## 3     0     0    25    36     0     0     2     1     0     0     0     0     1     0     0
## 4     0     0    22    24     0     0     0     4     0     0     0     0     1     7     0
## 5     0     0     4     7     0     0     0     0     0     0     0     0     1     1     0
##     TPLS PN05 BRCH LYLU TNSL TRNO SUFL CATW CLOX MM49 MSUM SCKB THNM LBLS LBSC
## 1     2     5     1     1     1     1     4     3     2     3     8     1     2     9     2
## 2     2     7     0     1     1     0     7     2     0     0     2     0     4     4     0
## 3     2     3     0     0     0     0     1    10     0     0     2     0     5     0     0
## 4     0     2     0     0     0     1     4     6     0     0     0     1     4     0     0
## 5     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
##     LBTY LTET HMLS MM62 GWEN KNNN OTH_596 OTH_610 Q5LA SPTL F219 1452 CPS2 BTHS
## 1     3     2     3     1     2     4       1       1    9   10   22    8    5    3
## 2     0     0     0     0     5     6       0       0    8    0   19    0    0    3
## 3     0     0     0     0     0     6       0       0    4    0   57    0    0    1
## 4     0     0     0     0     0     3       0       0    9    0   58    0    0    3
## 5     0     0     0     0     0     0       0       0    1    0    5    0    0    0
##     F107 ANGL GRIN HMLA PTHD RCLA SROM SUMM HNLN KLNN SKIT GRC1 GRC2 BTLE CWM4
## 1     3     2     1     2     2     1     1     1     1     1     3     1     1     4     3
## 2     0     0     1     0     0     0     0     1     3     3     1     0     0     0     0
## 3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4     0     3     3     4     3     0     6     0     1     0     0     0     0     0     0
## 5     0     1     0     1     0     0     0     0     0     0     0     0     0     0     0
##     MSUC USLN RUBB 1535 MLOB MLOC OTH_487 OTH_441 F178 BOXR OTH_422 OTH_373 THOC
## 1     7     1     1    43     2     2       1       1  134    8       2       1    5
## 2     3     0     0     4     6     0       0       0  246   46       0       0    0
## 3     2     0     0     0     0     0       0       0  264  126       0       0    0
## 4     0     0     0     0     0     0       0       0  142  111       0       0    0
## 5     0     0     0     0     0     0       0       0   35    9       0       0    0
##     OTH_601 F109 F127 MDLB LBT1 BZPN F231 F120 F124 LOTB PPSL LBHL OTH_456
## 1       1  129  109     2     1     2     1     7     9     1     1     2       1
## 2       0  261  202     1     0     0    14     5     0     9     0     4       0
## 3       0  264  186     1     0     0    29     9     0    10     0     2       0
## 4       0  166  116     0     0     0     7     0     0     9     4     4       0
## 5       0   44     0     0     0     0     0     0     0     0     0     0       0
##     OTH_707 BUZM JDLA MTHS OTH_591 CLIF MNCB TOT2 DEDO F144 MDPK NIPP IKNC WAVE
## 1       1     1     1     1       1     2     3     2     1    80   13     1     1     1
## 2       0     0     1     0       0     4     0     1     3     0     0     1     0     1
## 3       0     0     3     0       0     5     0     0     0     0     0     1     0     3
## 4       0     0     0     0       0     0     0     0     0     0     0     0     0     1
```

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```
## 5           0      0      0      0        0      0      0      0      0       0      0      0      0      0      0
##     EFHT MRMS CSTK LSPL SBPE C717 LAT2 TNFG DMDI F188 C073 TEEN F159 WAND F198
## 1      2    1    1    4    3   16    3    3    4  115   31   21  131    2   88
## 2      0    3    0    2    5    0    1    0    0  151    0    0   56   84  233
## 3      0    1    0    0    3    0    0    0    0  267    0    0  291   13  237
## 4      0    0    0    0    0    0    0    0    0  138    0    0  184    0  142
## 5      0    0    0    0    0    0    0    0    0   36    0    0   23    0    0
##     PSB2 PSBZ PHIN F148 C574 F184 JOSE F202 INHF KATT ROOS RP61 C755 F113 F190
## 1      1    1   16  172   23   48   43    6    1    3    1    1    1  132   57
## 2      0    0    0  189    0   38   85    1    0    1    6    2    0  271  171
## 3      0    0    0  264    0    0   25    1    0    1    0    1    0  274   85
## 4      0    0    0  161    0    0    0    0    0    0    0    4    0  150   38
## 5      0    0    0   41    0    0    0    0    0    0    0    0    0   21    7
##     XYLO C295 MSLB TDTL BTOK LPSK F152 GALO WORM F186 FLTP FB70 BTMV MTMS MOFG
## 1      2   13   40    3    1    4   85    2   10   61    1    1    1    1    1
## 2      0    0    0   16    0    1   10    7    1  103    0    0    0    0    0
## 3      1    0    0   22    0    0    0    2    0    0    0    0    0    0    0
## 4      0    0    0   30    0    0    0    3    0    0    0    0    0    0    1
## 5      0    0    0    4    0    0    0    0    0    0    0    0    0    0    0
##     F146 CTS2 MSQL PSC3 BTCH DIGT PORT LTS2 LTSM ALKC CHMA PN03 BRD2 C871 PROF
## 1    138    2    1    1    7    5    3    1    1    1    1    1   18   56    1
## 2    314    0    0    7    0    7    0    0    0    0    2    0    9   56    0
## 3    305    0    0    8    0    0    1    0    0    0    0    0    0    0    3
## 4    165    0    0   15    0    0    0    0    0    0    0    0    0    0    2
## 5     33    0    0    2    0    0    0    0    0    0    0    0    0    0    0
##     STMN VTHN SLLP INDT BTTN SOLS LACH OTH_164 OTH_208 RNMA F170 FNGD HTHR PRGO
## 1      1    1    2    1    1    1    4       1       1    3    1    1    1    1
## 2      0    0    0    0    0    2    2       0       0    1    1    0    0    0
## 3      1    1    0    0    0    3    0       0       0    4    0    0    0    0
## 4      0    0    0    0    0    3    0       0       0    0    1    0    0    0
## 5      0    0    0    0    0    0    0       0       0    0    0    0    0    0
##     WAAA WOTN CRUM MUCH NIPN BBUK LBLT LEMO LSPO PUMP SGLA TSMN TULP BOZO FLLN
## 1      1    3    1    3    2    2    2    1    1   30    8    1    1    1    1
## 2      0    9    2    1   10    0    0    0   12    1    2    1    0    0    0
## 3      0    0    0    9    4    1    0    0    0    0    2    0    0    0    0
## 4      0    0    8   16    2    0    0    0    0    0    7    0    0    0    0
## 5      0    0    0    5    0    0    0    0    0    0    0    0    0    0    0
##     MOML HSN2 SMUS BSLV UPBT HILB MORN C272 F142 JOSC HANG F126 STIP WHIT LBLK
## 1      1    1    1    1    1    1    1   43   36   22    5    1    1    1    1
## 2      0    0    1    0    3    2    6    0  108   87   11   18    0    3    5
## 3      0    0    0    0    0    1    4    0  144   51    2   41    0    0    0
## 4      0    0    1    0    0    3   10    0  150   62    0   36    0    0    0
## 5      0    0    0    0    0    0    0    0   33    0    0    7    0    0    0
##     IKN2 PRFC APEM HMTN SBDO RTM2 PLG2 MJMA MJMC OTH_228 RNMK DAND LNPC TWIG XNDU
## 1     21    4    1    3   12    4    1    2    2       1    1    2    4    1    1
## 2     94    0    1    1   98   18    0   13    0       0    0    4   12    0    0
## 3    120    0    1    1   36   49    0    0    0       0    0    0   39    0    0
## 4     77    0    0    1    0   21    0    0    0       0    9    0   39    0    0
## 5     17    0    0    0    0    2    0    0    0       0    3    0    6    0    0
##     PECS ULYS ZOEY IVTA NACK POET R27L TAL2 YAHO HBUT HOKA OTH_692 LIZD SCOB SKIL
## 1      4    1    1    1    1    1    1    1    1    3    1       1    3    1    1
## 2      6    9    2    1    6    4    8    1    1    5    0       0   41    0    5
## 3      0   40    1    0    2    3    4    6    1    0    5       0   15    0    1
## 4      0   38    3    0    3    3    8    2    1    0    5       0   16    0    2
```

```
## 5     0    10     2     0     0     0     1     0     0     0     0           0     3     0    1
##    PRTF TUNL GIDN OCTV BUMI ICEB KNIK KOKO ZRBA ALH2 MNC2 CURL F193 FHIS UDOG
## 1     2     1     1     1     1     1     1     1     8     1     1     1     1     1     1
## 2     3     2     4     4     0     0    10     2   103     0     0     0     0     1     0
## 3     0     2     0     1     0     0     0     2    20     0     0     0    42     0     0
## 4     0     0     0     4     0     0     0     9     0     0     0     0    56     0     0
## 5     0     0     0     1     0     0     0     2     0     0     0     0     5     0     0
##    MYST TKID CAES BIGB MUCC OTH_419 PIHI SCSM ANOK TPLO HSLR QCHE ZVGO F115
## 1     1     1     1     1     1       1     2     1     1     1     1     1     2    19
## 2     1     7     2     0     0       0     1     8     0     0     1     0     3     8
## 3     4    14     2     0     0       0     0    29     1     0     0     0     0     0
## 4     3    12     0     0     0       0     7    52     0     0     0     0     0     0
## 5     0     2     0     0     0       0     5    11     0     0     0     0     0     0
##    OTH_606 MVON OTH_402 SNSC F166 F196 F176 C931 WHOO WINN LDNK OTH_485 SEWF
## 1       1     3       1     1   17    25     6    10     6     2     1       1     1
## 2       0     7       1     0    0   218    94     0    47     6     0       0     3
## 3       0     0       0     0    0   288    95     0    16     2     0       0     2
## 4       0     0       0     0    0   171    70     0     8     0     0       0     0
## 5       0     0       0     0    0    35    20     0     0     0     0       0     0
##    UWHO BALE HLBP TDDP 2102 C296 F125 F216 ERKA MFLC MFLG F248 F123 C596 BIKO
## 1     1     1     1     1     2     2    20    15     1     1     1     1    13     9     1
## 2     0     0     0     0     0     0   211    86     1     1     0    45   165   111    21
## 3     1     0     0     0     0     0   195     0     0     5     0   131   202   160     4
## 4     0     0     0     0     0     0   160     0     0     9     1    80   155    12    14
## 5     1     0     0     0     0     0    39     0     0     2     0    13    37     0     1
##    AFLY BOOM FRST KEEB NARW 1833 C835 SET2 TNMI CHMP AAXE <NA> <NA> <NA> <NA>
## 1     1     1     1     1     1     4     3     1     1     1     3     0     0     0     0
## 2     1     0     0     0     0    75   121     2     0     0     2     2     1     2     3
## 3     0     0     0     0     0    35   111     0     0     0     2     1     0     0     0
## 4     0     0     0     0     0     0    89     0     0     0     3     0     0     0     0
## 5     0     0     0     0     0     0    13     0     0     0     0     0     0     0     0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     1     1    21     2     1    87     2     2    21   238   135    37     3   108   163
## 3     0     0     2     1     0     0     4     0    20   117     0     0     0     0   202
## 4     0     0     2     0     0     0     1     0    10     0     0     0     0     0    92
## 5     0     0     0     0     0     0     0     0     3     0     0     0     0     0    15
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2   280    10   286   152     1    17    59     6     1   179    24     1     1     1    39
## 3   253     0   365     0     0     0     8     6     0     0     6     0     0     0     0
## 4    98     0   159     0     0     0     0     8     0     0     5     0     0     0     0
## 5    37     0    40     0     0     0     0     0     0     0     0     0     0     0     0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2   237     1    61     8     1     3     3     1     5     1     3     1     3     5     4
## 3   253     0     0     0     0     0     0     0     3     0     2     0     1     1     0
## 4    64     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 5    11     0     0     0     0     0     0     0     0     0     0     0     0     0     0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     2     2     1     1     2     1     4     3     1     4     2     1     1     1    18
## 3     0     0     0     0     0     0    22     0     0     6     0     0     0     2    41
## 4     0     6     2     0     0     1    12     0     0    11     0     0     0     1    33
```

```
## 5      0      0      0      0      0      0      6      0      0      0      0      0      0      0      5
##    <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>
## 1      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2      2      1    100      6      1      1      1      1      1      2      4      1     93     96      3
## 3      4      7    180      0      0      0      0      0      0      3      0      0    184    230      1
## 4      0     16    126      3      0      0      0      0      0      0      0      0    196    167      0
## 5      0      1     14      1      0      0      0      0      0      0      0      0     28     34      0
##    <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>
## 1      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2      2      1      1      2      3      2      5     42      3     37     30      1      3      4      4
## 3      6      2      0      2      0      1      0      0      4     47    103      5      5      9      1
## 4      5      0      0      0      0      0      0      0      4     64     68      0      7      1      0
## 5      0      0      0      0      0      0      1      0      0     22     16      0      0      0      0
##    <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>
## 1      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2      2      9      1      2     91      1      1    156      1    229      5     14    167      1      1
## 3      0      6      0      6    248      0      0     13      0    192      0      0     41      0      1
## 4      0     12      0      0     35      0      0      0      0    105      0      0      0      0      0
## 5      0      0      0      0      0      0      0      0      0     25      0      0      0      0      0
##    <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>
## 1      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2      1      1    228     14     20     20      2      1     20      1      1      2     12      6    150
## 3      0      3    216      2      4     25      0      1     31      0      0      1     52      0    238
## 4      4      1    171      0      0     12      0      0      0      0      0      1     16      0     91
## 5      1      1     31      0      0     13      0      0      0      0      0      0      5      0     16
##    <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>
## 1      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2     83     49     18     18     16     11      7      6      1      4      1      5      1      4      6
## 3     77      0     63     60      0      0     41     57      1      5      0      5      1      0      0
## 4    114      0     13      8      0      0      9     41      0      1      0      8      0      0      0
## 5     29      0      9      0      0      0      0     11      0      0      0      0      0      0      0
##    <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>
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## 2      1      2      1      1      1      1      2      3      1      3      1      2      4      1     45
## 3      0      3      0      0      0      1      1      0      1      3      0      2      0      1     10
## 4      0      0      0      0      0      0      1      0      0      0      0      1      0      1      8
## 5      0      0      0      0      0      0      0      0      0      0      0      0      0      1      0
##    <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>
## 1      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2      2      2      2      1      1      1      1      1      1      1      1      1      1      2      3
## 3      1      0      1      0      0      0      0      0      0      0      0      0      0      0      0
## 4      1      0      0      0      0      0      0      0      0      0      0      1      0      0      0
## 5      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
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## 2      1      1      1      1      1      1      1      1      1      3      1      1      4      2      2
## 3      0      1      0      1      0      0      0      0      0      0      0      0     18      1      0
## 4      0      0      0      0      0      0      0      0      0      0      0      3     22      0      0
## 5      0      0      0      0      0      0      0      0      0      0      0      1      5      0      0
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## 1      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2      1      1      1      1      1      1      1      1      1      2      1      1      3      1      4
## 3      0      0      1      0      1      0      0      0      1      0      1      0      0      0      0
## 4      0      0      0      1      0      0      0      0      0      0      1      0      1      3      0
```

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## 2	27	1	1	11	1	1	4	4	11	4	6	3	1	1	4
## 3	0	0	0	27	0	0	4	2	3	0	0	0	0	4	5
## 4	0	0	0	7	0	0	3	5	4	3	0	0	0	2	8
## 5	0	0	0	1	0	0	0	0	3	1	0	0	0	0	0

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## 2	2	1	1	2	2	44	1	4	1	7	3	2	2	2	2
## 3	8	0	0	0	0	24	0	0	0	0	0	4	4	7	0
## 4	2	0	0	0	0	15	0	1	0	0	1	2	0	0	0
## 5	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0

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## 2	2	1	4	1	1	1	1	1	8	16	19	2	1	2	2
## 3	2	0	0	1	0	0	0	0	23	41	7	0	2	0	0
## 4	0	0	0	0	0	0	0	0	16	9	0	0	0	0	0
## 5	0	0	0	0	0	0	0	0	7	5	0	0	0	0	0

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## 2	1	1	1	1	1	1	1	1	6	5	1	2	2	1	1
## 3	1	0	0	0	0	0	0	0	0	6	0	3	3	0	0
## 4	0	0	0	0	0	0	0	5	0	8	0	3	3	0	0
## 5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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## 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
## 2	58	1	9	42	15	2	1	1	1	1	43	38	55	3	2
## 3	159	0	0	61	0	33	0	14	0	0	336	276	43	9	1
## 4	119	0	0	0	0	23	10	10	0	0	56	88	0	8	0
## 5	27	0	0	0	0	8	0	0	0	0	5	13	0	0	0

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## 2	40	1	2	2	1	18	4	2	54	62	53	30	6	1	1
## 3	81	0	1	2	1	155	0	0	275	78	254	248	1	0	4
## 4	0	0	0	7	0	130	0	0	238	0	133	130	0	0	0
## 5	0	0	0	0	0	23	0	0	33	0	23	35	0	0	0

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## 2	11	2	3	1	1	1	1	1	1	1	1	5	1	1	1
## 3	8	0	4	0	0	0	6	0	0	0	0	1	3	0	1
## 4	7	0	0	0	0	0	10	1	0	0	0	0	1	1	0
## 5	5	0	0	0	0	0	3	0	0	0	0	0	0	0	0

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## 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
## 2	3	2	2	7	14	1	1	1	19	2	1	1	1	1	1
## 3	2	3	42	43	3	0	2	0	205	8	0	0	0	0	0
## 4	0	0	32	0	0	5	3	0	222	10	0	0	5	1	0
## 5	0	0	8	0	0	1	0	0	48	7	0	0	2	0	0

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## 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
## 2	1	7	22	1	2	1	1	1	3	2	2	2	1	1	1
## 3	0	6	277	0	6	2	5	0	8	33	5	27	0	0	0
## 4	0	0	182	0	0	5	1	0	0	0	0	13	0	0	0

```
## 5     0     0     7     0     0     0     0     0     0     0     0     1     0     0     0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
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## 2     2     3     1     2     1     2     1     2     1     1     1     0     0     0     0
## 3   114    83     0    73     0    28     0     0     1     2     0     1     1    14     4
## 4   127    73     0     0     0     8     0     0     0     1     0     1     0     0     0
## 5    25    16     0     0     0     7     0     0     0     0     0     0     0     0     0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
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## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3    31    46    11     2    38     6     3     1     1    38    66   159   147    36   168
## 4    32    24     0     0     0     7     0     0     0     0     0     0   148     0    59
## 5     5     5     0     0     0     1     0     0     0     0     0     0    17     0     6
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## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3    26   290     6    29    41     2     3     7     6     6     2     5     2    44    12
## 4     0   142     0    17     0     0     0     0     4     2     0     0     0    12     0
## 5     0    27     0     0     0     0     0     0     0     2     0     0     0    10     0
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## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     7    10    10     7   118    19     2    15     1    18     5     1     1     8    10
## 4     0     2    10     0    71    39     0    17     3     3     2     0     0     5     0
## 5     0     0     4     0    17     4     0     2     0     0     1     0     0     1     0
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## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3    19     3    27     6    15     8     1     1   104     1     1     1     2     1     1
## 4     0     0     0     9     2     0     0     2    83     0     0     0     0     0     2
## 5     0     0     0     1     0     0     0     0     5     0     0     0     0     0     0
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## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     3    65    47     1     1     1     1    26    21   187   129    84     8    17   135
## 4     0     0    40     0     0     0     0    59    10   152   111     1     0     0   175
## 5     0     0    10     1     1     1     1    19     0    44    29     0     0     0    28
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## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3   113   230     1     1     1    16     1     1     1     5     3     1    51     1     1
## 4    57   168     0     0     0    10     0     0     0    10     0     0     0     0     0
## 5    10    24     0     0     0     1     0     0     0     4     0     0     0     0     0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
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## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     3     1     1    39     1     1     1    52    12     1     2     1     1     1     4
## 4     0     0     0     4     0     0     0     0     0     0     0     0     5     6     2
## 5     0     0     0     0     0     0     0     0     0     0     1     0     0     2     0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
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## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     1     3     1     1     2     5     9     4     8    41    18     3     1     1     3
## 4     0     0     0     0     0     3    10     7    48     0    20     0     0     0     8
```

```
## 5     0     0     0     0     0     4     1     1    16     0     4     0     0     0     0
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## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     6    33     1     2     9    22     5     2     2     2     6     5     5     1     1
## 4     5     5     0     0    13    15     2     1     0     0     1     0     0     0     0
## 5     0     0     0     0     4     3     2     0     0     0     0     0     0     0     0
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## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     1     1     2     1     5     1     5     3     4     1    73    27    25    16   195
## 4     0     0     0     0     2     1     0     1    14     0   143    11    40    43    24
## 5     0     0     0     0     3     0     0     0     4     0    29     1     7    11     0
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## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     1     1     6     1     1    21    18     1     1     1     1   176     8    94     2
## 4     1     0     4     0     0    38    12     1     0     0     1   137     0    84     0
## 5     1     0     4     0     0    13     3     0     0     0     0    22     0     0     0
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## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     2     3   146    95     3     2     3     4     1     1     2     4    60    56     3
## 4     5     2    86   126     0     0     0     3     0     0     5     5     0     5     9
## 5     0     0     0    26     0     0     0     3     0     0     1     0     0     0     0
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## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     3     3     3     8     9     5     7     1     1     1     1     1     8     1     2
## 4     0     1     0     0     5     5    10     0     0     0     0     0     0     0     0
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## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3    19    10     1    10     2     2     3     3    28     1     1     5     5     3     3
## 4    12     4     0     4     0     0     1     1    57     0     0    13     2    20     4
## 5     0     4     0     1     0     0     0     0    10     0     1     3     1     7     0
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## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3    14     5     6     2     3     2     1     4     2     1     1     3     6     1     3
## 4    10     0     0     0     0     0    12     0     0     0     0    16     0     2     0
## 5     0     0     0     0     0     0     3     0     0     0     0     3     0     0     0
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## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     6     7     5     6     3     5     1     1   137   126     6     1     1     1     2
## 4     7     9    16     2     2     2     0     1   127   175     0     0     0     0     0
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## 3     1     1     1     1     1     2     1     1     3     1     1     1     1     1     1
## 4     0     0     0     0     0    29     0     0     0     1     0     0     0     0     0
```

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## 5      0      0      0      0      0      9      0      0      0      0      0      0      0      0      0
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## 2      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 3      4      6      1      1      6     22      4     68     85     31     10     34      1     10     12
## 4      5      3      3      0     14     10     11    133     56      0     11     55      0      8     15
## 5      0      0      0      0      3      0      3     37     15      0      4     11      0      0      1
##     <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>
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## 2      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 3      1      1     41     93     19     19      1     49     46     49      1      1      1      3     64
## 4      0      0      9    133      0      0      0     24     50     44      0      1      0      0     63
## 5      0      0      0     27      0      0      0      0     12     11      0      0      0      0     19
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## 2      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 3      5      1      1      1      3      3      3      1      4     13      2      1      1      1      4
## 4      4      2      5      4      0     11      8      0      0     60      0      1      0      0      0
## 5      4      0      0      0      0      0      1      0      0     11      0      0      0      0      0
##     <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>
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## 3      2     19      5      5      6      1      1      4      1      1      1      1      5      2      1
## 4      7      4      3      5     11      0      0      9      2      3      0      0      2      0      0
## 5      3      2      0      3      7      0      1      0      0      0      0      0      0      0      0
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## 3      2      4     17      5      6     16      1     30      1      2      2      3      2      2      1
## 4      4      0     14      6     23      0      2    122      0      0      0      2      0      1      1
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## 3     10      1      1      1      1      1      1      1      1      1      1      1      1      4     22
## 4     28      0      0      0      0      0      0      0      0      0      0      0      0     11      6
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## 3     13     32      1      2      1      1      1      1      5     38      1      1     26     10     24
## 4     49    161      0      0      0      8      0      8      0      0      0      4      1      0    147
## 5      0     33      0      0      0      0      0      0      0      0      0      0      0      0     36
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## 3     22      3      7      6      1     10      3      1      1      4      2      1      2      4      4
## 4    145      5      6      0      0      0      0      3      1      1      9     13     12      0      1
## 5     22      0      0      0      0      0      0      0      0      0      0     11      0      0      0
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## 3      2      2      2      1      1      1      1      2      1      1      1      1      1      1      1
## 4      0      0      0      0      0      0      0      2      8      0      9      0      0      0      1
```

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## 5      0      0      5      0      1      0      0      1      0      0      4      0      0      0      0
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## 3      2      1      2      1      0      0      0      0      0      0      0      0      0      0      0
## 4     12      4      2      0      6      3     10      1      3      1      1    136      8      8      8
## 5      3      1      0      0      1      0      2      0      0      1      0     28      0      0      0
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## 2      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 3      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 4      2      3     17      1      5      4      7      3    115      1      7      3      4     21     24
## 5      0      0      6      0      7      0      0      2     34      0      1      0      0      3      4
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## 2      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 3      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 4     76     37      1      4      6      1    117      2      1      3      1      2      2      2      5
## 5      6      5      0      0      0      0     37      1      0      0      0      0      0      0      2
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## 3      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 4     87      1      1      3      7      1      2      3      1      2      1      2      1      1      1
## 5     25      0      1      0      0      0      1      0      0      0      0      0      0      0      0
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## 3      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 4      1      2      1      8      1      1      2      3      3      2      1      1      1      1      1
## 5      0      2      0      0      0      0      0      0      0      0      0      0      0      0      0
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## 3      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 4      9    122     47      1      1      1      1     39    141    139     48     69     32    106     18
## 5      0     35      4      0      0      0      0      0     30     26     26     26      0     35      0
##     <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>   <NA>
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## 2      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 3      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 4      1      6      1     14      1    119     60      3      6      3    135     41     44      2      8
## 5      0      2      0      1      0     45      0      0      1      0     38      7     11      0      0
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## 3      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 4      2      6     10      3      1      2      1      2     73      9      2     32      1      3      2
## 5      0      0      1      1      0      0      0      0      7      2      0      9      0      0      0
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## 1      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 2      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 3      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## 4      4      4      2      2      2      1      1      1      2      1      2      3      2      1      1
```

```
## 5     4    0    0    1    0    0    0    0    0    0    0    3    0    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     4    6    1    2    1    2    6    2    1    3    1    1    1    1    1
## 5     1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     1    4    1    1    2    4    4    1    5    4    2    2    1    1    1
## 5     0    0    0    0    0    0    0    2    0    0    0    0    0    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     2    2    2    3    2    1    5    2    4    2    1    1    1    3    1
## 5     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     6    2    2    2    1    1    5    1    1    1    6    2   15    4    2
## 5     0    0    0    0    1    0    0    0    0    0    0    0    6    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     2    2    1   60    1    2    1    2    1    1   21    6   56    5    1
## 5     0    0    0   30    0    1    0    0    0    0   17    0   12    6    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    65    1    5   12    1    6    3    5    6    5   18    2    1   83    1
## 5    35    0    2    0    0    1    0    0    3    0    6    0    0   40    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     1    7    1    1    1   43   11    6   11    2    5    2   76    1    8
## 5     0    3    0    0    0   16    5    0    9    2    3    0   29    0    6
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     6    2    2    1    9    6    1    1   36    3    1   20    1    2    7
## 5     1    0    0    0    6    0    0    0   10    2    0   12    0    0    2
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     1    1    1    1    1    1    1    1    1   28    2   13    2    4    3
```

```
## 5     0     0     0     0     0     0     0     0     0    21     0     3     0     0     2
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4     6     2     1     3     1     1    86     1     1     1     3     1    19    77    71
## 5     6     0     0     1     0     0    47     0     0     0     4     0     0    27    35
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4    35     3     1     4     1     1    87     2    30     2     2     2     1    54     3
## 5    29     0     0     4     0     0    25     0    11     0     0     0     0    27     0
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4    56     7     1     3     3     1     1     1     1    12     2     3    17     1     1
## 5    40     6     0     4     0     0     0     0     0     2     1     1     0     0     0
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4     1     1     1     1     2     2     1    63     4     7     2     1     1     1     1
## 5     0     0     0     0     1     0     0    31     1     5     0     0     0     0     0
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4     1     1     1     7     1     1     2     2     2     1     1     1     3     1     2
## 5     0     0     0     4     0     0     0     0     1     0     0     0     0     0     0
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4     1     1     1     2     1     4     4     7     6     1     1     2     2     2     3
## 5     0     0     0     0     0     3     1     3     5     0     0     0     0     0     0
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4     3     2    32    45     7     7     1     1     3     1     1    20     6     3     1
## 5     0     0     8    41     0     1     0     0     0     0     0    23     0     1     2
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4    33     5    25     2     2     1     2     1     3     3     4     3     3     3     1
## 5     0     0    17     1     0     1     9     0    13     0     9     0    10     0     0
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 4     4     3     1     1    27    11    32     8     1     3     3     6     1    36     6
```

```
## 5    7    0    0    1   23   17   29    0    0    6    3    0    0   28    5
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    1    1    8    5    2    8    1    1    1    1    1    6    1    2    7
## 5    0    0   16   12    0   11    0    0    0    0    0   22    0    0    6
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    1    2    1    1    1    1    1    1    1    1    1    2    2    1    1
## 5    0    3    0    0    0    0    0    0    0    1    1    0    0    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    3    1    1    1    1    9    1    1    1    1    1    2    1    1    1
## 5    2    0    0    0    0   27    0    0    0    0    0    2    0    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    1    1    1    2    1    2    2    1    1    1    1    1    1    0    0
## 5    0    0    0    0    0    0    0    0    0    0    0   12    4   10    4
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5    3    1    1    1    1    1    1    1    1    1    1    1    1    2    2
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5    4    1    2    9    4    1    2    2    8   10   16   16    1    2    1
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5    1    1    1    1    1    1    1    5   19   25    5    1    1    1    5
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 5    1    1    1    1    3    1    1    2    4    2    1    1    1    1   14
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0
## 4    0    0    0    0    0    0    0    0    0    0
```

```
## 5    1    2    1    1    1    1    6    1    1    1
```

```r
# Transforming into binary matrices
p5y <- as.matrix(p5y); p5y[which(p5y>=1)] = 1; p5y[which(p5y<1)] = 0


# -------------------- 4 sets of 6 year increments---------------------------
# Make a list of 6 years per dataframe
sample_data$SixYearIncrement <- cut(sample_data$Year, breaks = seq(min(sample_data$Year), max(sample_da
list_sixyears <- split(sample_data, sample_data$SixYearIncrement)
# Apply the count_instances function to each two years
instances_per_sixyear <- lapply(list_sixyears, count_instances)
# Convert the list of counts to a data frame
p6y <- do.call(rbind, instances_per_sixyear)
p6y
```

```
##    FB41 FB05 FB36 FB38 FB55 FB96 FB98 F108 F153 FB15 FB23 FB78 FB93 F155 FB01
## 1   67  189  228  241  205   88   38   73  100  145   68  151  138  283  225
## 2    0  221  157    0  284   24    0   77   80  189    0  143  202  237  172
## 3    0   56  130    0  165    0    0  107  104  196    0  177  166  232    0
## 4    0    0    0    0  107    0    0   37   67   72    0   70   28  101    0
##    FB43 FB92 F118 F122 FB29 <NA> FB54 FB71 FB90 F100 F119 FB14 FB27 <NA> FB57
## 1  112  219  309  165  131    0  369   87  335  154  277  195  178    0  103
## 2  122  235  280    0    0    0  321    0  347  172  195  311  198    0    0
## 3  164  242  233    0    0    0  185    0  309    4    0   14  123    0    0
## 4    7   95    3    0    0    0  112    0   88    0    0    0   84    0    0
##    FB66 FB76 FB94 F112 FB12 FB03 <NA> F106 FB44 FB62 F175 FB10 FB46 FB75 FB79
## 1  186  179  233   55   66  191    0  233  153  115  268  228  206  157  230
## 2  306  287  313    0    0  210    0  224   69    0  329  226  152  234  215
## 3  110    0    0    0    0    0    0  138   81    0  271  143    0    3  292
## 4   33    0    0    0    0    0    0    0   55    0  125   62    0    0   81
##    FB60 FB13 F138 FB63 FB07 FB11 F132 FB25 F102 F111 F130 F134 F136 F154 F160
## 1   32  189  203  196  288  336   15  218   22  193    8   40   36   93   45
## 2    0  187  198  142  288  353    7  177   21   82    2   22   18   24   23
## 3    0   81  235   38  237  285    2  167   50    0    0   27    0   29    3
## 4    0    0  119    0  100   96    0   88   21    0    0    0    0   13    0
##    F162 <NA> FB20 FB65 HIQQ POOF FB28 <NA> FB09 FB33 ATNA CWM3 NKLN WTMA FB48
## 1   46    0  204  268   16   16  108    0  230  240    2   31    4   15   47
## 2   20   11  233  329   17    5  186    0  224  240    0   13    3    0   93
## 3   25    0  241  259   47    2   76    0  110  198    6   27   20    0   26
## 4   20    0  121   91   21    0   37    0    0  111    1   11    0    0    0
##    F105 1054 <NA> FB32 49C3 49LA <NA> DRAC <NA> F161 F164 <NA> KMSN MIDF 5NK2
## 1   11    2    0  143    9   48    0    1    0    1   27    0    3    5    4
## 2    5    0    0  148    0   24    0    0    0    0   98    0    0    4    0
## 3    0    0    0    0    0    0    0    0    2    0  126    0    0   12    0
## 4    0    0    0    0    0    0    0    0    0    0   95    0    0    3    0
##    <NA> <NA> MBAB <NA> <NA> WTAB <NA> BTTV <NA> F147 F210 F237 <NA> <NA> FB84
## 1    0    0    2    0    0    2    0   21    0   11    4   31    0    0  164
## 2    0    0    1    0    3    1    0    0    0    0   21   95    0    1   91
## 3    0    1    2    0   10    2    0    0    0    0   10  170    0    1    0
## 4    0    0    0    0    0    0    0    0    0    0    0   56    0    1    0
##    CRAG HVMS LCKL RUFF FB59 FB83 FB02 C834 BBMB LDSL LSMS MCMA PN06 F276 FB24
## 1   10    3   10    8  166  120  155   82    8    8    1   37    1   42  105
## 2    3    7    0    9  142  121  174  132    7    8    0   39    0  112    0
```

```
## 3     0    33    2    0    0    0  196  163    0    1    0    0    1  195    0
## 4     0    12    1    0    0    0   70   79    0    0    0    0    0  119    0
##    FB35 F182 DRSN <NA> F128 F131 DIPT SLMS 2SDN BBL2 BBLN BTLN CHK2 ETMA <NA>
## 1    42  166   91    0  167  282   14    2    2    2    4    5    2    9    0
## 2    28  152   48    0  222  258    5    0    0    0    2    4    0    5    0
## 3    73  147   74    0  244  298    0    0    0    0    9    0    0    2    0
## 4    30   68    0    0   98  135    0    0    0    0    2    0    0    0    0
##    HNBT <NA> JAGG JIG3 KMBT LOBE MLTS <NA> <NA> <NA> <NA> <NA> SHOT SURR TFMS
## 1     3    0    3    7    1    3    4    0    0    0    0    0    6    3    2
## 2     0    0    0    2    0    0    2    0    1    1    0    0    4    0    0
## 3     4    0    0    3    0    0    3    0    0    1    0    1    1    0    0
## 4     0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
##    TSMV <NA> <NA> FB17 F110 F191 FB73 <NA> <NA> PSD2 PSDZ <NA> HSNS <NA> BIDF
## 1    12    0    0   53   73   38   21    0    0    2    1    0    7    0    1
## 2    15    0    0   49  100   11   18    0    0    0    0    0    3    0    1
## 3    35    0    0    5  106    0    0    0    0    0    0    0    9    0    1
## 4     7    0    0    0   47    0    0    0    0    1    0    0   13    0    2
##    <NA> ETSC FNOT GFSD <NA> LGSC MOL2 <NA> MTMN NLPS PLUG <NA> TOTW F183 THUB
## 1     0    1    1    1    0    1    1    0   15    1    6    0    1   79    3
## 2     3    0    0    0    0    0    0    0    0    1    3    1    2   94    2
## 3    15    0    0    0    0    0    0    0    0    4   29    1    0    1    0
## 4     0    0    0    2    0    0    0    0    0    1    2    1    0    0    0
##    F114 C791 FB26 FB34 F180 <NA> <NA> <NA> <NA> <NA> <NA> PKUP <NA> <NA> SCOR
## 1   162   11   54   37   66    0    0    0    0    0    0    1    0    0    1
## 2   129    0   72    0   15    0    1    1    0    0    2    1    0    1    0
## 3    69    0    0    0   10    1    1    2    0    0    1    0    0    0    0
## 4    29    0    0    0    3    0    0    0    0    0    0    0    0    0    0
##    SPIK FJSL F117 <NA> <NA> ELFF PN04 <NA> TTM3 <NA> LNST <NA> <NA> <NA> <NA>
## 1     5    1  184    0    0   23    7    0    4    0    2    0    0    0    0
## 2     0    2  154    0    0   10    0    0    7    0    2    0    0    0    0
## 3     0    1    0    0    0    1    0    0    5    0    3    0    0    0    0
## 4     0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
##    FB39 CMRS CONC CONS F163 F181 HAIR HITS MSQ2 RTMW <NA> SPGT TABB MDNK KNOB
## 1    36    2    2    7  124  112   16    5    9   30    0    3   14    6   23
## 2     0   36    0   12  124  208   34   26   11   27    0    0    6   12    0
## 3     0   52    0    0    0   70   52   52    3   35    0    0    6   47    0
## 4     0   30    0    0    0    0   27   27    0   20    0    0    0    0    0
##    <NA> <NA> NIK2 <NA> <NA> BFWT JAWS <NA> CHPC <NA> <NA> ALHK LHLV <NA> FB06
## 1     0    0    4    0    0    6    9    0    2    0    0    8    1    0  190
## 2     0    1    1    0    0    0    0    0    0    0    0   12    1    0  249
## 3     0    0    1    0    0    0    0    0    0    0    0    7    4    0   14
## 4     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##    <NA> <NA> FB87 <NA> CKB2 1832 SUMO F157 <NA> SOLB TCTV IKNO F101 <NA> <NA>
## 1     0    0  116    0    6   24    3   98    0   55   34   63  279    0    0
## 2     0    0   82    0    0    0   25  315    0   93   28   28  190    0    0
## 3     0    0  106    0    0    0   21  120    0   93   33    0    0    0    0
## 4     0    0   64    0    0    0    0    0    0   43   10    0    0    0    0
##    VRIP HFLT ZENN <NA> CLAW AOTA BKHO <NA> <NA> <NA> <NA> F254 <NA> MPTB <NA>
## 1     2   10   13    0    1    3    4    0    0    0    0    7    0   13    0
## 2     2   17    0    0    0    4   10    0    0    0    0   33    0  106    0
## 3     3   13    0    0    0    0    7    0    0    0    0   78    0  121    0
## 4     1    0    0    0    0    0   12    0    0    0    0   56    0   45    0
##    SHTC TRIF <NA> <NA> PHNE PN10 PNSN FEAT LUMP BEGR MOCH F116 SLIF OTH_604 THOR
## 1    15    4    0    0   11    7    4    4    6  103   16   17    1       1    8
```

##														
## 2	92	2	0	0	0	2	0	3	0	144	0	0	0	0	0
## 3	0	3	0	0	0	0	0	10	0	382	0	0	0	0	0
## 4	0	3	0	0	0	0	0	0	0	30	0	0	0	0	0

##	F192	F194	MCM2	CATR	LFLA	OTH_199	TN3N	MTSS	SIMP	BRDO	RPPL	DTHB	GTFG	UPBK	MNIK
## 1	78	67	3	5	7	1	1	21	6	24	4	1	6	3	9
## 2	71	96	0	1	2	0	0	10	6	22	0	0	3	0	10
## 3	0	102	0	1	0	0	0	9	22	0	0	3	1	3	0
## 4	0	17	0	0	0	0	0	5	6	0	0	1	0	1	0

##	C652	THMN	RY34	TBTN	CCL4	F172	L106	C391	BTHV	NKNN	PNKD	C754	RTMC	WLDC	F149
## 1	217	4	20	4	14	7	3	35	3	4	4	13	4	2	82
## 2	0	0	128	0	0	0	3	0	0	2	2	0	0	4	127
## 3	0	0	123	0	0	0	3	0	0	0	1	0	0	5	142
## 4	0	0	45	0	0	0	0	0	0	0	0	0	0	4	29

##	C595	C091	LEMS	C991	FB99	LBMA	PNTH	HNSC	LIWB	LCDB	TTOO	TWHN	LWMN	LFLG	LDMA
## 1	81	1	1	20	23	48	1	2	1	4	6	1	5	3	11
## 2	0	0	0	61	116	0	0	0	0	0	0	3	6	3	24
## 3	0	0	0	83	0	0	0	0	0	0	0	5	0	0	41
## 4	0	0	0	33	0	0	0	0	0	0	0	1	0	0	0

##	LNPF	WHIS	F141	FANT	LLIN	FTMW	GAFF	HAGR	PRFR	F174	FB58	MIDM	M145	MANT	ONIP
## 1	9	2	29	1	1	1	1	1	20	68	78	1	27	11	2
## 2	17	1	202	0	0	2	0	0	7	111	129	1	18	6	0
## 3	48	0	119	0	0	0	0	0	26	1	0	1	56	13	0
## 4	28	0	18	0	0	0	1	0	4	0	0	3	15	5	0

##	STDO	TLN2	PSDQ	HBMB	ALIN	HIPC	HIPM	BARE	BOXX	CURD	LET2	MOPS	MTWN	NEWT	SBTT
## 1	1	1	22	14	1	1	9	5	1	1	1	1	1	3	1
## 2	0	0	13	25	0	0	2	3	0	0	0	0	1	2	0
## 3	0	0	39	49	0	0	2	2	0	0	0	0	1	4	0
## 4	0	0	10	15	0	0	0	2	0	0	0	0	1	4	0

##	TPLS	PN05	BRCH	LYLU	TNSL	TRNO	SUFL	CATW	CLOX	MM49	MSUM	SCKB	THNM	LBLS	LBSC
## 1	3	7	1	1	1	1	7	3	2	3	9	1	4	10	2
## 2	2	5	0	1	1	0	5	4	0	0	2	0	3	3	0
## 3	1	5	0	0	0	1	3	12	0	0	1	1	7	0	0
## 4	0	0	0	0	0	0	1	2	0	0	0	0	1	0	0

##	LBTY	LTET	HMLS	MM62	GWEN	KNNN	OTH_596	OTH_610	Q5LA	SPTL	F219	1452	CPS2	BTHS
## 1	3	2	3	1	7	6	1	1	12	10	22	8	5	3
## 2	0	0	0	0	0	5	0	0	5	0	33	0	0	4
## 3	0	0	0	0	0	7	0	0	9	0	71	0	0	1
## 4	0	0	0	0	0	1	0	0	5	0	35	0	0	2

##	F107	ANGL	GRIN	HMLA	PTHD	RCLA	SROM	SUMM	HNLN	KLNN	SKIT	GRC1	GRC2	BTLE	CWM4
## 1	3	2	1	2	2	1	1	1	1	1	4	1	1	4	3
## 2	0	0	1	0	0	0	0	1	3	3	0	0	0	0	0
## 3	0	2	3	3	3	0	6	0	0	0	0	0	0	0	0
## 4	0	2	0	2	0	0	0	0	1	0	0	0	0	0	0

##	MSUC	USLN	RUBB	1535	MLOB	MLOC	OTH_487	OTH_441	F178	BOXR	OTH_422	OTH_373	THOC
## 1	9	1	1	47	2	2	1	1	159	11	2	1	5
## 2	1	0	0	0	6	0	0	0	296	70	0	0	0
## 3	2	0	0	0	0	0	0	0	270	169	0	0	0
## 4	0	0	0	0	0	0	0	0	96	50	0	0	0

##	OTH_601	F109	F127	MDLB	LBT1	BZPN	F231	F120	F124	LOTB	PPSL	LBHL	OTH_456
## 1	1	167	152	3	1	2	2	7	9	1	1	2	1
## 2	0	278	191	0	0	0	20	14	0	14	0	5	0
## 3	0	292	252	1	0	0	28	0	0	12	3	4	0
## 4	0	127	18	0	0	0	1	0	0	2	1	1	0

##	OTH_707	BUZM	JDLA	MTHS	OTH_591	CLIF	MNCB	TOT2	DEDO	F144	MDPK	NIPP	IKNC	WAVE

```
## 1         1    1    1    1         1    2    3    2    1   80   13    1    1    2
## 2         0    0    2    0         0    5    0    1    3    0    0    1    0    1
## 3         0    0    2    0         0    4    0    0    0    0    0    1    0    3
## 4         0    0    0    0         0    0    0    0    0    0    0    0    0    0
##    EFHT MRMS CSTK LSPL SBPE C717 LAT2 TNFG DMDI F188 C073 TEEN F159 WAND F198
## 1     2    1    1    4    4   16    3    3    4  137   31   21  136    4  110
## 2     0    4    0    2    4    0    1    0    0  205    0    0  137   95  272
## 3     0    0    0    0    3    0    0    0    0  269    0    0  288    0  270
## 4     0    0    0    0    0    0    0    0    0   96    0    0  124    0   48
##    PSB2 PSBZ PHIN F148 C574 F184 JOSE F202 INHF KATT ROOS RP61 C755 F113 F190
## 1     1    1   16  191   23   56   61    6    1    3    1    1    1  155   76
## 2     0    0    0  232    0   30   91    2    0    2    6    3    0  324  182
## 3     0    0    0  284    0    0    1    0    0    0    0    1    0  267   80
## 4     0    0    0  120    0    0    0    0    0    0    0    3    0  102   20
##    XYLO C295 MSLB TDTL BTOK LPSK F152 GALO WORM F186 FLTP FB70 BTMV MTMS MOFG
## 1     2   13   40    6    1    4   95    5   11   81    1    1    1    1    1
## 2     0    0    0   17    0    1    0    6    0   83    0    0    0    0    0
## 3     1    0    0   34    0    0    0    2    0    0    0    0    0    0    1
## 4     0    0    0   18    0    0    0    1    0    0    0    0    0    0    0
##    F146 CTS2 MSQL PSC3 BTCH DIGT PORT LTS2 LTSM ALKC CHMA PN03 BRD2 C871 PROF
## 1   168    2    1    3    7    5    3    1    1    1    1    1   20   72    1
## 2   381    0    0    5    0    7    1    0    0    0    2    0    7   40    2
## 3   292    0    0   19    0    0    0    0    0    0    0    0    0    0    1
## 4   114    0    0    6    0    0    0    0    0    0    0    0    0    0    2
##    STMN VTHN SLLP INDT BTTN SOLS LACH OTH_164 OTH_208 RNMA F170 FNGD HTHR PRGO
## 1     1    1    2    1    1    1    4       1       1    3    1    1    1    1
## 2     0    0    0    0    0    2    2       0       0    4    1    0    0    0
## 3     1    1    0    0    0    6    0       0       0    1    1    0    0    0
## 4     0    0    0    0    0    0    0       0       0    0    0    0    0    0
##    WAAA WOTN CRUM MUCH NIPN BBUK LBLT LEMO LSPO PUMP SGLA TSMN TULP BOZO FLLN
## 1     1    6    1    4    4    2    2    1   12   31    8    1    1    1    1
## 2     0    6    2    2    9    0    0    0    1    0    3    1    0    0    0
## 3     0    0    5   14    5    1    0    0    0    0    7    0    0    0    0
## 4     0    0    3   14    0    0    0    0    0    0    1    0    0    0    0
##    MOML HSN2 SMUS BSLV UPBT HILB MORN C272 F142 JOSC HANG F126 STIP WHIT LBLK
## 1     1    1    2    1    3    1    5   43   58   38    7    2    1    1    1
## 2     0    0    0    0    1    2    3    0  120   93   11   33    0    3    5
## 3     0    0    0    0    0    3    9    0  177   70    0   47    0    0    0
## 4     0    0    1    0    0    1    4    0  116   21    0   21    0    0    0
##    IKN2 PRFC APEM HMTN SBDO RTM2 PLG2 MJMA MJMC OTH_228 RNMK DAND LNPC TWIG XNDU
## 1    45    4    1    3   30    4    1    5    2       1    1    4    6    1    1
## 2   105    0    1    1  116   29    0   10    0       0    0    2   20    0    0
## 3   135    0    1    2    0   53    0    0    0       0    6    0   57    0    0
## 4    44    0    0    0    0    8    0    0    0       0    6    0   17    0    0
##    PECS ULYS ZOEY IVTA NACK POET R27L TAL2 YAHO HBUT HOKA OTH_692 LIZD SCOB SKIL
## 1     4    2    1    2    1    2    1    1    2    3    1       1   15    1    4
## 2     6   23    2    0    7    3    9    3    0    5    0       0   37    0    2
## 3     0   48    3    0    3    5    7    6    1    0    9       0   16    0    2
## 4     0   25    3    0    1    1    5    0    1    0    1       0   10    0    2
##    PRTF TUNL GIDN OCTV BUMI ICEB KNIK KOKO ZRBA ALH2 MNC2 CURL F193 FHIS UDOG
## 1     2    1    2    2    1    1   11    2   26    1    1    1    1    1    1
## 2     3    2    3    3    0    0    0    3  102    0    0    0    7    1    0
## 3     0    2    0    3    0    0    0    8    3    0    0    0   78    0    0
## 4     0    0    0    3    0    0    0    3    0    0    0    0   18    0    0
```

```
##    MYST TKID CAES BIGB MUCC OTH_419 PIHI SCSM ANOK TPLO HSLR QCHE ZVGO F115
## 1     2    2    1    1    1       1    2    4    1    1    2    1    3   22
## 2     2    9    2    0    0       0    1   10    0    0    0    0    2    5
## 3     5   17    2    0    0       0    4   54    1    0    0    0    0    0
## 4     0    8    0    0    0       0    8   33    0    0    0    0    0    0
##    OTH_606 MVON OTH_402 SNSC F166 F196 F176 C931 WHOO WINN LDNK OTH_485 SEWF
## 1        1    5       1    1   17   68   10   10   13    3    1       1    1
## 2        0    5       1    0    0  242  123    0   45    5    0       0    4
## 3        0    0       0    0    0  313   97    0   19    2    0       0    1
## 4        0    0       0    0    0  114   55    0    0    0    0       0    0
##    UWHO BALE HLBP TDDP 2102 C296 F125 F216 ERKA MFLC MFLG F248 F123 C596 BIKO
## 1     1    1    1    1    2    2   64   34    1    1    1    4   47   23    2
## 2     0    0    0    0    0    0  215   67    1    2    0   82  188  152   20
## 3     1    0    0    0    0    0  237    0    0    9    1  141  213  117   12
## 4     1    0    0    0    0    0  109    0    0    6    0   43  124    0    7
##    AFLY BOOM FRST KEEB NARW 1833 C835 SET2 TNMI CHMP AAXE TNBS OTH_597 CHOF ZPHR
## 1     1    1    1    1    1   24   30    3    1    1    4    1       1    1    3
## 2     1    0    0    0    0   90  121    0    0    0    3    1       0    1    0
## 3     0    0    0    0    0    0  140    0    0    0    0    1       0    0    0
## 4     0    0    0    0    0    0   46    0    0    0    3    0       0    0    0
##    OTH_435 YOGI DRMS BLIK BKBS CCL6 HUCK OTH_430 ZELD F218 F214 MCM3 OTH_378
## 1        1    1   13    1    1   17    1       1    2   25   11    2       3
## 2        0    0    9    2    0   70    1       1   21  252  124   35       0
## 3        0    0    3    0    0    0    4       0   23   78    0    0       0
## 4        0    0    0    0    0    0    1       0    8    0    0    0       0
##    C273 F165 F228 C254 F133 1312 FNMA C793 ZRBC TTA2 CDS2 F212 VANB SLOT UHAL
## 1    16   18   27   10   21   21    1   17    5    1    1   21    3    1    1
## 2    92  198  325    0  336  131    0    0   62    5    0  158   21    0    0
## 3     0  197  236    0  386    0    0    0    0   12    0    0   11    0    0
## 4     0   59   80    0  107    0    0    0    0    2    0    0    0    0    0
##    VANG HAWC F220 BTTC 1536 1551 CTS3 PSC4 NIPC OTH_697 FB68 OTH_660 MUBT
## 1     1    3   20    1   13    8    1    3    2       1    1       1    1
## 2     0   36  289    0   48    0    0    0    1       0    5       0    2
## 3     0    0  221    0    0    0    0    0    0       0    2       0    2
## 4     0    0   35    0    0    0    0    0    0       0    0       0    0
##    OTH_634 VIVA WEBS WILL OTH_376 LHEL VGRL OTH_268 BTST FB89 HMLT OINK OTH_602
## 1        1    1    1    1       2    1    1       1    2    1    1    1       1
## 2        0    2    4    3       0    1    0       0    0    0    3    2       0
## 3        0    1    1    0       0    5    2       0    0    1   30    0       0
## 4        0    0    0    0       0    1    0       0    0    0   10    0       0
##    MJM2 SBAN WVLT FTLB SBHN YANK HMMM NIGT F236 LONE OTH_297 BEAT MDEW OTH_397
## 1     1    1    1    1    1    1    1    1    1    2       1    1    1       1
## 2     3    1    0    0    2   32    5    0  159    4       0    0    0       0
## 3    11    0    0    0    1   49    0   17  187    2       0    0    0       0
## 4     6    0    0    0    0   15    0    7   73    2       0    0    0       0
##    OTH_577 THSM ZODI OTH_150 F258 F268 <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1        1    1    1       1    1    1    0    0    0    0    0    0    0    0
## 2        0    2    3       0  147  144    4    5    1    1    2    3    2    5
## 3        0    2    0       0  235  270    0    8    2    0    2    0    1    0
## 4        0    0    0       0  118  112    0    0    0    0    0    0    0    1
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    42    4   49   54    1    4    4    5    2   11    1    4  125    1    1
## 3     0    4   68  120    5    8   10    0    0   15    0    4  249    0    0
```

```
## 4     0     3    53    43     0     3     0     0     0     1     0     0     0     0     0
##     <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2   169     1   294     5    14   208     1     1     1     3   290    16    24    26     2
## 3     0     0   178     0     0     0     0     1     4     2   237     0     0    26     0
## 4     0     0    79     0     0     0     0     0     1     1   119     0     0    18     0
##     <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     2    22     1     1     2    24     6   214    91    49    20    20    16    11     7
## 3     0    29     0     0     1    50     0   226   120     0    68    63     0     0    50
## 4     0     0     0     0     1    11     0    55    92     0    15     3     0     0     0
##     <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2    11     1     7     1     6     1     4     6     1     3     1     1     1     2     2
## 3    63     1     3     0    10     1     0     0     0     2     0     0     0     0     1
## 4    41     0     0     0     2     0     0     0     0     0     0     0     0     0     1
##     <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     3     1     3     1     2     4     1    46     2     2     2     1     1     1     1
## 3     0     1     3     0     2     0     2    17     2     0     1     0     0     0     0
## 4     0     0     0     0     1     0     1     0     0     0     0     0     0     0     0
##     <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     1     1     1     1     1     1     2     3     1     2     1     2     1     1     1
## 3     0     0     0     0     1     0     0     0     0     0     0     0     0     0     0
## 4     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
##     <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     1     1     3     1     1     5     2     2     1     1     1     1     1     1     1
## 3     0     0     0     0     1    32     1     0     0     0     1     1     1     0     0
## 4     0     0     0     0     3    12     0     0     0     0     0     0     0     0     0
##     <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     1     1     2     1     1     3     1     4    27     1     1    15     1     1     4
## 3     0     1     0     2     0     1     3     0     0     0     0    28     0     0     7
## 4     0     0     0     0     0     0     0     0     0     0     0     3     0     0     0
##     <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     4    12     4     6     3     1     1     5     7     1     1     2     2    62     1
## 3     5     6     2     0     0     0     5     9     4     0     0     0     0    15     0
## 4     2     3     2     0     0     0     1     3     2     0     0     0     0     7     0
##     <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     4     1     7     3     2     5     3     2     4     1     4     1     1     1     1
## 3     0     0     0     0     5     1     6     0     0     0     0     1     0     0     0
## 4     1     0     0     1     1     0     0     0     0     0     0     0     0     0     0
##     <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     1    11    27    23     2     1     2     2     1     1     1     1     1     1     1
## 3     0    30    33     3     0     2     0     0     1     0     0     0     0     0     0
## 4     0    13    11     0     0     0     0     0     0     0     0     0     0     0     0
##     <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     1     6     5     1     2     2     1     1    97     1     9    92    15    11     1
```

```
## 3     5     0    12     0     5     5     0     0   186     0     0    11     0    40     1
## 4     0     0     2     0     1     1     0     0    80     0     0     0     0    15     9
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     6     1     1    95    98    98     3     2    81     1     3     3     2    37     4
## 3    17     0     0   332   263     0    17     1    40     0     0     4     0   203     0
## 4     2     0     0    13    54     0     0     0     0     0     0     4     0    86     0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     2   126   140   121    91     7     1     1    19     2     7     1     1     1     2
## 3     0   327     0   263   252     0     0     4     0     0     0     0     0     0    12
## 4     0   147     0    79   100     0     0     0    12     0     0     0     0     0     6
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     1     1     1     1     6     4     1     2     4     5    10    50    17     1     1
## 3     1     0     0     0     0     1     0     0     1     0    55     0     0     4     4
## 4     0     0     0     0     0     0     1     0     0     0    19     0     0     2     1
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     1    64     6     1     1     1     1     1     1    13    92     1     3     2     2
## 3     0   282     6     0     0     3     1     0     0     0   301     0     5     5     4
## 4     0   148    15     0     0     4     0     0     0     0    95     0     0     1     1
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     1     7    29     7     8     1     1     1    41    20     1    10     1     4     1
## 3     0     4     6     0    29     0     0     0   131   107     0    65     0    31     0
## 4     0     0     0     0     6     0     0     0    96    48     0     0     0    10     0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     2     2     1     1     1     1    14     2     4    12    11     2     3     3     2
## 3     0     0     2     0     1     0     0     2    48    43     0     0    35     9     1
## 4     0     0     1     0     0     0     0     0    16    20     0     0     0     2     0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     1     1    38    66    65    45    26    47    25    63     3     6    24     2     3
## 3     0     0     0     0    94   185    10   175     1   311     3    33    17     0     0
## 4     0     0     0     0     0    82     0    11     0    85     0     7     0     0     0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     5     3     3     2     5     2     1     8     7     7     4     4    18     9     2
## 3     2     6     5     0     0     0    49     4     0     5    10     3   138    31     0
## 4     0     1     2     0     0     0    16     0     0     0    10     0    50    22     0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     4     1     4     3     1     1     3    10    19     3     9     3    10     2     1
## 3    22     2    16     4     0     0     9     0     0     0    18     7     7     6     0
## 4     8     1     1     1     0     0     2     0     0     0     0     6     0     0     0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     1    23     1     1     1     1     1     1     1     4    10     1     1     1     1
## 3     1   130     0     0     0     1     0     1     2    61    52     0     0     0     0
## 4     1    39     0     0     0     0     0     1     0     0    35     1     1     1     1
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
```

```
## 2    2   18   25   30   21    3    4    4   11   33    1    1    1    1    1
## 3   48   10  249  161   64    5   13  246  141  299    0    0    0   22    0
## 4   54    3  109   78    0    0    0   88   28   90    0    0    0    4    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    1    1    2    3    1    1    1    1    1    1    1    3    1    1    1
## 3    0    0    9    0    0   50    0    0    2    0    0   40    0    0    0
## 4    0    0    8    0    0    0    0    0    0    0    0    0    0    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    6    3    1    1    1    1    1    2    1    1    1    1    1    1    2
## 3   46    9    0    1    0    4    2    2    0    2    0    0    1    5   14
## 4    0    0    0    1    0    1    6    2    0    0    0    0    0    6    4
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    1    1    2    1    2    1    1    2    1    2    1    1    0    0    0
## 3    4   23   39   28    1    0    0    5   10   36    0    1   16   31    7
## 4    7   48    0   13    0    0    0    4    0    0    0    0   10    9    2
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    3    2    2    6    5    5    1    1    1    1    2    1    6    2    5
## 4    0    0    0    1    0    0    0    0    0    0    0    0    4    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    4    9    1  165   33   45   35  219    1    1    7    1    1   41   25
## 4    0   13    0   80    6   27   35    0    2    0    7    0    0   31    8
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    2    1    1    2  262    8  163    2    4    5  204  163    3    2    3
## 4    0    0    0    0   73    0   15    0    3    0   28   84    0    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    7    1    1    4    9   60   61    9    3    3    3    8   14    7   14
## 4    3    0    0    4    0    0    0    3    0    1    0    0    0    3    4
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    1    1    1    1    1    8    1    2   24   14    1   13    2    2    4
## 4    0    0    0    0    0    0    0    0    7    4    0    2    0    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    4   49    1    1   13    7   11    4   24    5    6    2    3    2    5
## 4    0   46    0    1    8    1   19    3    0    0    0    0    0    0   11
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    4    2    1    1   10    6    2    3    7   13   17    8    5    6    1
## 4    0    0    0    0   12    0    1    0    8    4    7    0    0    1    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
```

```
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     2   209   233     6     1     1     1     2     1     1     1     1     1    20     1
## 4     0    90   101     0     0     0     0     0     0     0     0     0     0    20     0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     1     3     2     1     1     1     1     1     9     9     2     1    15    28     7
## 4     0     0     0     0     0     0     0     0     0     0     2     0     8     4    11
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3   127   113    31    15    64     1    17    19     1     1    50   179    19    19     1
## 4   111    43     0    10    36     0     1     9     0     0     0    74     0     0     0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3    73    76    77     1     2     1     3    97     6     2     4     4     3    12     5
## 4     0    32    27     0     0     0     0    49     7     1     2     1     0     2     7
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     1     4    43     2     2     1     1     4     5    21     8     8    11     1     1
## 4     0     0    41     0     0     0     0     0     7     4     0     5    13     0     1
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3    13     3     2     1     1     7     2     1     6     4    31     7    17    16     3
## 4     0     0     2     0     0     0     0     0     3     0     0     6    13     0     2
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3   110     1     2     2     4     2     3     2    32     1     1     1     1     1     1
## 4    56     0     0     0     2     0     0     0    12     0     0     1     1     1     0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     1     1     1     1     1     1    12    28    62   136     1     2     1     5     1
## 4     0     1     0     0     1     1     5     0     0    90     0     0     0     4     0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     5     5    38     1     4    27    10    99   121     8     8     6     1    10     3
## 4     4     0     0     0     1     0     0   108    68     0     5     0     0     0     0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     4     2     5    11    10    10     4     5     2     2     2     1     1     1     1
## 4     0     0     0     0    15     4     0     0     0     0     5     0     1     0     0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     4     9     1     6     1     1     1     1    11     5     3     1     4     3     4
## 4     1     0     0     8     0     0     0     1     6     1     1     0     3     0     8
```

```
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    1    2    1    1   68    6    6    8    2    3   12    1    4    4    7
## 4    0    1    1    0   96    2    2    0    0    0   11    0    8    0    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    1   60    1    5    3    4   15   12   37   16    1    4    4    1   65
## 4    4   89    0    3    0    0    9   16   45   26    0    0    2    0   89
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    2    1    1    1    2    2    2    3   47    1    1    2    6    1    1
## 4    1    0    2    0    0    0    0    4   65    0    1    1    1    0    2
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    3    1    2    1    2    1    1    1    1    1    1    2    1    1    2
## 4    0    0    0    0    0    0    0    0    0    3    0    6    0    0    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    2    1    1    1    1    1    1    1    9   57   15    1    1    1    1
## 4    1    2    1    0    0    0    0    0    0  100   36    0    0    0    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3   39   51   61   18   30   19   33   18    1    5    1    6    1   42   60
## 4    0  120  104   56   65   13  108    0    0    3    0    9    0  122    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    3    4    2   47   16   13    2    4    1    6    5    3    1    2    1
## 4    0    3    1  126   32   42    0    4    1    0    6    1    0    0    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    2   29    3    2   12    1    1    2    2    4    2    2    2    1    1
## 4    0   51    8    0   29    0    2    0    6    0    0    1    0    0    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    1    2    1    2    1    1    1    1    4    6    1    2    1    1    6
## 4    0    0    0    0    5    1    0    0    1    0    0    0    0    1    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    1    1    1    1    1    1    1    1    1    3    1    1    2    2    2
## 4    1    0    2    0    0    0    0    0    0    1    0    0    0    2    2
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    1    4    3    1    1    1    1    1    2    2    2    2    2    1    3
```

```
## 4     2    1    1    1    1    0    0    0    0    0    0    1    0    0    2
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     1    1    1    1    1    1    3    1    2    1    2    2    1    1    3
## 4     1    3    1    0    0    0    0    0    4    1    0    0    1    0    2
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     1    1    1    6    2    4    2    2    2    2    1    8    1    1    1
## 4     0    0    0    0    0   17    2    0    0    0    0   82    0    2    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     1    1    1    4    6   13    1    1   10    1    1    4    1    2    2
## 4     1    0    0   34    0   55   10    0   90    0    6    8    0    5    1
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     2    3    2    3    1    1   12    1    1    1    1    1    1    3    1
## 4     3    6    3   21    1    0  111    0    0    9    0    0    0   56   15
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     4    2    1    1    1   16    1    3    1    1    1    1    2    1    1
## 4     2   18    3    7    1   89    0   11    6    1    1    0   13    5    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     1    2    1    1    2    1    2    1    0    0    0    0    0    0    0
## 4     0   44    4    0   30    0    0    8    1    1    1    1    1    1    1
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     1    1   49    2   16    2    4    5   12    2    1    4    1    1  133
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     1    1    1    7    1   19  104  106   64    3    1    8    1    1  112
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     2   41    2    2    2    1   81    3   96   13    1    7    3    1    1
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4     1    1   14    3    4   17    1    1    1    1    1    1    3    2    1
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4   94    5   12    2    1    1    1    1    1    1    1   11    1    1    2
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    2    3    1    1    1    3    1    2    1    1    1    2    1    7    5
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4   10   11    1    1    2    2    2    3    3    2   40   86    7    8    1
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    1    3    1    1   43    6    4    3   33    5   42    3    2    2   11
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    1   16    3   13    3   13    3    1   11    3    1    2   50   28   61
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    8    1    9    6    6    1   64   11    1    1   24   17    2   19    1
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    1    1    1    1   28    1    2   13    1    5    1    1    1    1    1
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    1    1    2    2    2    2    1    1    5    1    1    1    1   36    1
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    1    1    1    1    4    1    1    1    1    1    1    2    1    2    2
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    1    1    1    1   13    5   10    4    3    1    1    1    1    1    1
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    1    1    1    1    1    1    2    2    4    1    2    9    4    1    2
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    2    8   10   16   16    1    2    1    1    1    1    1    1    1    1
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    5   19   25    5    1    1    1    5    1    1    1    1    3    1    1
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 4    2    4    2    1    1    1    1   14    1    2    1    1    1    1    6
##    <NA> <NA> <NA>
## 1    0    0    0
## 2    0    0    0
## 3    0    0    0
## 4    1    1    1
```

```r
# Transforming into binary matrices
p6y <- as.matrix(p6y); p6y[which(p6y>=1)] = 1; p6y[which(p6y<1)] = 0


# -------------------- 3 sets of 7 year increments----------------------------
# Make a list of 7 years per dataframe
sample_data$SevenYearIncrement <- cut(sample_data$Year, breaks = seq(min(sample_data$Year), max(sample_
list_sevenyears <- split(sample_data, sample_data$SevenYearIncrement)
# Apply the count_instances function to each two years
instances_per_sevenyear <- lapply(list_sevenyears, count_instances)
# Convert the list of counts to a data frame
p7y <- do.call(rbind, instances_per_sevenyear)
p7y
```

```
##    FB41 FB05 FB36 FB38 FB55 FB96 FB98 F108 F153 FB15 FB23 FB78 FB93 F155 FB01
## 1    67  254  269  241  287  104   38   87  123  187   68  178  207  344  296
## 2     0  199  167    0  256    8    0   92   84  229    0  171  207  292  101
## 3     0   13   79    0  218    0    0  115  144  186    0  192  120  217    0
##    FB43 FB92 F118 F122 FB29 <NA> FB54 FB71 FB90 F100 F119 FB14 FB27 <NA> FB57
## 1   134  273  370  165  131    0  442   87  411  203  326  365  225    0  103
## 2   169  273  300    0    0    0  314    0  411  127  146  155  189    0    0
## 3   102  245  155    0    0    0  231    0  257    0    0    0  169    0    0
##    FB66 FB76 FB94 F112 FB12 FB03 <NA> F106 FB44 FB62 F175 FB10 FB46 FB75 FB79
## 1   274  270  382   55   66  257    0  280  169  115  334  277  256  219  270
## 2   265  196  164    0    0  144    0  315   73    0  379  235  102  175  270
## 3    96    0    0    0    0    0    0    0  116    0  280  147    0    0  278
##    FB60 FB13 F138 FB63 FB07 FB11 F132 FB25 F102 F111 F130 F134 F136 F154 F160
## 1    32  235  233  210  362  438   17  271   28  216    8   44   38   95   47
## 2     0  179  256  159  315  388    6  176   34   59    2   26   16   44   24
## 3     0   43  266    7  236  244    1  203   52    0    0   19    0   20    0
##    F162 F200 FB20 FB65 HIQQ POOF FB28 <NA> FB09 FB33 ATNA CWM3 NKLN WTMA FB48
## 1    50    6  259  348   20   18  192    0  284  280    2   34    5   15  104
## 2    21    5  259  340   31    4  128    0  241  280    6   19   12    0   51
## 3    40    0  281  259   50    1   87    0   39  229    1   29   10    0   11
##    F105 1054 <NA> FB32 49C3 49LA <NA> DRAC <NA> F161 F164 <NA> KMSN MIDF 5NK2
```

```
## 1     14     2     0   231     9    56     0     1     0     1    38     0     3     5     4
## 2      2     0     0    60     0    16     0     0     2     0   122     0     0     8     0
## 3      0     0     0     0     0     0     0     0     0     0   186     0     0    11     0
##    <NA>  <NA>  MBAB  <NA>  SCTN  WTAB  <NA>  BTTV  <NA>  F147  F210  F237  <NA>  GRIM  FB84
## 1      0     0     3     0     2     2     0    21     0    11     6    53     0     1   193
## 2      0     1     1     0     6     2     0     0     0     0    28   159     0     0    62
## 3      0     0     1     0     5     1     0     0     0     0     1   140     0     2     0
##    CRAG  HVMS  LCKL  RUFF  FB59  FB83  FB02  C834  BBMB  LDSL  LSMS  MCMA  PN06  F276  FB24
## 1     12     4    10    10   203   163   201   108    10    10     1    62     1    76   105
## 2      1    16     0     7   105    78   207   162     5     7     0    14     1   143     0
## 3      0    35     3     0     0     0   187   186     0     0     0     0     0   249     0
##    FB35  F182  DRSN  <NA>  F128  F131  DIPT  SLMS  2SDN  BBL2  BBLN  BTLN  CHK2  ETMA  <NA>
## 1     47   204    98     0   206   333    19     2     2     2     4     5     2     9     0
## 2     46   161    62     0   277   329     0     0     0     0     7     4     0     7     0
## 3     80   168    53     0   248   311     0     0     0     0     6     0     0     0     0
##    HNBT  <NA>  JAGG  JIG3  KMBT  LOBE  MLTS  <NA>  <NA>  MTLR  <NA>  <NA>  SHOT  SURR  TFMS
## 1      3     0     3     8     1     3     5     0     0     1     0     0     6     3     2
## 2      0     0     0     1     0     0     1     0     1     0     0     1     5     0     0
## 3      4     0     0     4     0     0     3     0     0     1     0     0     0     0     0
##    TSMV  <NA>  <NA>  FB17  F110  F191  FB73  <NA>  <NA>  PSD2  PSDZ  <NA>  HSNS  <NA>  BIDF
## 1     18     0     0    60    90    49    27     0     0     2     1     0     7     0     1
## 2     14     0     0    47   123     0    12     0     0     0     0     0     4     0     1
## 3     37     0     0     0   113     0     0     0     0     1     0     0    21     0     3
##    <NA>  ETSC  FNOT  GFSD  <NA>  LGSC  MOL2  <NA>  MTMN  NLPS  PLUG  <NA>  TOTW  F183  THUB
## 1      0     1     1     1     0     1     1     0    15     1     6     0     1    99     4
## 2     10     0     0     0     0     0     0     0     0     3     8     1     2    75     1
## 3      8     0     0     2     0     0     0     0     0     3    26     2     0     0     0
##    F114  C791  FB26  FB34  F180  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  PKUP  <NA>  <NA>  SCOR
## 1    193    11   118    37    70     0     0     0     0     0     0     1     0     0     1
## 2    125     0     8     0    14     1     2     2     0     0     2     1     0     1     0
## 3     71     0     0     0    10     0     0     1     0     0     1     0     0     0     0
##    SPIK  FJSL  F117  <NA>  <NA>  ELFF  PN04  <NA>  TTM3  <NA>  LNST  <NA>  <NA>  <NA>  <NA>
## 1      5     1   262     0     0    24     7     0     4     0     2     0     0     0     0
## 2      0     2    76     0     0    10     0     0     8     0     3     0     0     0     0
## 3      0     1     0     0     0     0     0     0     4     0     3     0     0     0     0
##    FB39  CMRS  CONC  CONS  F163  F181  HAIR  HITS  MSQ2  RTMW  <NA>  SPGT  TABB  MDNK  KNOB
## 1     36     8     2    11   187   214    28     8    12    37     0     3    16     6    23
## 2      0    49     0     8    61   159    41    43    11    25     0     0     7    55     0
## 3      0    63     0     0     0    17    60    59     0    50     0     0     3     4     0
##    <NA>  <NA>  NIK2  <NA>  <NA>  BFWT  JAWS  <NA>  CHPC  <NA>  <NA>  ALHK  LHLV  <NA>  FB06
## 1      0     0     4     0     0     6     9     0     2     0     0    10     1     0   256
## 2      0     1     1     0     0     0     0     0     0     0     0    13     4     0   197
## 3      0     0     1     0     0     0     0     0     0     0     0     4     1     0     0
##    <NA>  <NA>  FB87  <NA>  CKB2  1832  SUMO  F157  <NA>  SOLB  TCTV  IKNO  F101  <NA>  <NA>
## 1      0     0   147     0     6    24     7   179     0    74    35    85   338     0     0
## 2      0     0    85     0     0     0    42   297     0   105    42     6   131     0     0
## 3      0     0   136     0     0     0     0    57     0   105    28     0     0     0     0
##    VRIP  HFLT  ZENN  <NA>  CLAW  AOTA  BKHO  <NA>  <NA>  <NA>  <NA>  F254  <NA>  MPTB  <NA>
## 1      2    11    13     0     1     3     9     0     0     0     0     7     0    23     0
## 2      3    29     0     0     0     4     5     0     0     0     0    53     0   143     0
## 3      3     0     0     0     0     0    19     0     0     0     0   114     0   119     0
##    SHTC  TRIF  <NA>  <NA>  PHNE  PN10  PNSN  FEAT  LUMP  BEGR  MOCH  F116  SLIF  OTH_604  THOR
## 1     43     4     0     0    11     9     4     5     6   116    16    17     1        1     8
## 2     64     4     0     0     0     0     0     9     0   187     0     0     0        0     0
```

```
## 3      0      4      0      0      0      0      0      3      0    356      0      0      0             0      0
##    F192 F194 MCM2 CATR LFLA OTH_199 TN3N MTSS SIMP BRDO RPPL DTHB GTFG UPBK MNIK
## 1   99   86    3    5    7       1    1   23    6   30    4    1    7    3   10
## 2   50  100    0    1    2       0    0   11   13   16    0    3    2    2    9
## 3    0   96    0    1    0       0    0   11   21    0    0    1    1    2    0
##    C652 THMN RY34 TBTN CCL4 F172 L106 C391 BTHV NKNN PNKD C754 RTMC WLDC F149
## 1  217    4   40    4   14    7    3   35    3    6    4   13    4    6   99
## 2    0    0  154    0    0    0    6    0    0    0    2    0    0    1  184
## 3    0    0  122    0    0    0    0    0    0    0    1    0    0    8   97
##    C595 C091 LEMS C991 FB99 LBMA PNTH HNSC LIWB LCDB TTOO TWHN LWMN LFLG LDMA
## 1   81    1    1   29   76   48    1    2    1    4    6    2    5    4   18
## 2    0    0    0   88   63    0    0    0    0    0    0    3    6    2   29
## 3    0    0    0   80    0    0    0    0    0    0    0    5    0    0   29
##    LNPF WHIS F141 FANT LLIN FTMW GAFF HAGR PRFR F174 FB58 MIDM M145 MANT ONIP
## 1   15    2   70    1    1    1    1    1   24  101  122    2   27   13    2
## 2   25    1  208    0    0    2    0    0   16   79   85    1   35    7    0
## 3   62    0   90    0    0    0    1    0   17    0    0    3   54   15    0
##    STDO TLN2 PSDQ HBMB ALIN HIPC HIPM BARE BOXX CURD LET2 MOPS MTWN NEWT SBTT
## 1    1    1   27   15    1    1    9    6    1    1    1    1    1    3    1
## 2    0    0   22   43    0    0    4    2    0    0    0    0    1    2    0
## 3    0    0   35   45    0    0    0    4    0    0    0    0    2    8    0
##    TPLS PN05 BRCH LYLU TNSL TRNO SUFL CATW CLOX MM49 MSUM SCKB THNM LBLS LBSC
## 1    3    7    1    1    1    1    8    3    2    3    9    1    4   13    2
## 2    3    7    0    1    1    0    4   10    0    0    3    0    6    0    0
## 3    0    3    0    0    0    1    4    8    0    0    0    1    5    0    0
##    LBTY LTET HMLS MM62 GWEN KNNN OTH_596 OTH_610 Q5LA SPTL F219 1452 CPS2 BTHS
## 1    3    2    3    1    7    8       1       1   14   10   30    8    5    3
## 2    0    0    0    0    0    6       0       0    5    0   53    0    0    4
## 3    0    0    0    0    0    5       0       0   12    0   78    0    0    3
##    F107 ANGL GRIN HMLA PTHD RCLA SROM SUMM HNLN KLNN SKIT GRC1 GRC2 BTLE CWM4
## 1    3    2    1    2    2    1    1    1    2    1    4    1    1    4    3
## 2    0    0    1    0    0    0    0    1    2    3    0    0    0    0    0
## 3    0    4    3    5    3    0    6    0    1    0    0    0    0    0    0
##    MSUC USLN RUBB 1535 MLOB MLOC OTH_487 OTH_441 F178 BOXR OTH_422 OTH_373 THOC
## 1    9    1    1   47    5    2       1       1  230   33       2       1    5
## 2    3    0    0    0    3    0       0       0  350  102       0       0    0
## 3    0    0    0    0    0    0       0       0  241  165       0       0    0
##    OTH_601 F109 F127 MDLB LBT1 BZPN F231 F120 F124 LOTB PPSL LBHL OTH_456
## 1       1  236  201    3    1    2    4    8    9    2    1    3       1
## 2       0  356  246    1    0    0   19   13    0   17    0    5       0
## 3       0  272  166    0    0    0   28    0    0   10    4    4       0
##    OTH_707 BUZM JDLA MTHS OTH_591 CLIF MNCB TOT2 DEDO F144 MDPK NIPP IKNC WAVE
## 1       1    1    1    1       1    5    3    3    4   80   13    1    1    2
## 2       0    0    4    0       0    4    0    0    0    0    0    2    0    3
## 3       0    0    0    0       0    2    0    0    0    0    0    0    0    1
##    EFHT MRMS CSTK LSPL SBPE C717 LAT2 TNFG DMDI F188 C073 TEEN F159 WAND F198
## 1    2    3    1    4    5   16    3    3    4  177   31   21  136   14  150
## 2    0    2    0    2    5    0    1    0    0  283    0    0  272   85  334
## 3    0    0    0    0    1    0    0    0    0  247    0    0  277    0  216
##    PSB2 PSBZ PHIN F148 C574 F184 JOSE F202 INHF KATT ROOS RP61 C755 F113 F190
## 1    1    1   16  238   23   67   80    6    1    3    4    2    1  216  137
## 2    0    0    0  313    0   19   73    2    0    2    3    2    0  376  154
## 3    0    0    0  276    0    0    0    0    0    0    0    4    0  256   67
##    XYLO C295 MSLB TDTL BTOK LPSK F152 GALO WORM F186 FLTP FB70 BTMV MTMS MOFG
```

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## 1     2    13    40    11     1     5    95     6    11   143     1     1     1     1     1
## 2     0     0     0    24     0     0     0     5     0    21     0     0     0     0     0
## 3     1     0     0    40     0     0     0     3     0     0     0     0     0     0     1
##    F146 CTS2 MSQL PSC3 BTCH DIGT PORT LTS2 LTSM ALKC CHMA PN03 BRD2 C871 PROF
## 1  268    2    1    4    7    7    3    1    1    1    1    1   27   97    1
## 2  397    0    0    8    0    5    1    0    0    0    2    0    0   15    3
## 3  290    0    0   21    0    0    0    0    0    0    0    0    0    0    2
##    STMN VTHN SLLP INDT BTTN SOLS LACH OTH_164 OTH_208 RNMA F170 FNGD HTHR PRGO
## 1    1    1    2    1    1    1    4       1       1    3    2    1    1    1
## 2    1    1    0    0    0    3    2       0       0    5    0    0    0    0
## 3    0    0    0    0    0    5    0       0       0    0    1    0    0    0
##    WAAA WOTN CRUM MUCH NIPN BBUK LBLT LEMO LSPO PUMP SGLA TSMN TULP BOZO FLLN
## 1    1    9    2    4    6    2    2    1   13   31    8    1    1    1    1
## 2    0    3    1    8   10    1    0    0    0    0    4    1    0    0    0
## 3    0    0    8   22    2    0    0    0    0    0    7    0    0    0    0
##    MOML HSN2 SMUS BSLV UPBT HILB MORN C272 F142 JOSC HANG F126 STIP WHIT LBLK
## 1    1    1    2    1    4    1    5   43   90   57    8    5    1    2    5
## 2    0    0    0    0    0    3    5    0  144   92   10   46    0    2    1
## 3    0    0    1    0    0    3   11    0  237   73    0   52    0    0    0
##    IKN2 PRFC APEM HMTN SBDO RTM2 PLG2 MJMA MJMC OTH_228 RNMK DAND LNPC TWIG XNDU
## 1   67    4    1    3   57    8    1    8    2       1    1    6   12    1    1
## 2  142    0    1    1   89   52    0    7    0       0    0    0   31    0    0
## 3  120    0    1    2    0   34    0    0    0       0   12    0   57    0    0
##    PECS ULYS ZOEY IVTA NACK POET R27L TAL2 YAHO HBUT HOKA OTH_692 LIZD SCOB SKIL
## 1    8    6    3    2    2    3    3    1    2    7    1       1   35    1    4
## 2    2   39    1    0    7    3    9    5    0    1    3       0   22    0    3
## 3    0   53    5    0    3    5   10    4    2    0    7       0   21    0    3
##    PRTF TUNL GIDN OCTV BUMI ICEB KNIK KOKO ZRBA ALH2 MNC2 CURL F193 FHIS UDOG
## 1    2    1    2    3    1    1   11    2   57    1    1    1    1    1    1
## 2    3    2    3    2    0    0    0    3   74    0    0    0   32    1    0
## 3    0    2    0    6    0    0    0   11    0    0    0    0   71    0    0
##    MYST TKID CAES BIGB MUCC OTH_419 PIHI SCSM ANOK TPLO HSLR QCHE ZVGO F115
## 1    2    2    1    1    1       1    2    5    1    1    2    1    5   27
## 2    4   16    4    0    0       0    1   25    1    0    0    0    0    0
## 3    3   18    0    0    0       0   12   71    0    0    0    0    0    0
##    OTH_606 MVON OTH_402 SNSC F166 F196 F176 C931 WHOO WINN LDNK OTH_485 SEWF
## 1       1    7       2    1   17  125   38   10   25    4    1       1    1
## 2       0    3       0    0    0  327  129    0   42    4    0       0    5
## 3       0    0       0    0    0  285  118    0   10    2    0       0    0
##    UWHO BALE HLBP TDDP 2102 C296 F125 F216 ERKA MFLC MFLG F248 F123 C596 BIKO
## 1    1    1    1    1    2    2  116   90    1    1    1   18   89   56   21
## 2    0    0    0    0    0    0  246   11    1    5    0  136  240  199    3
## 3    2    0    0    0    0    0  263    0    0   12    1  116  243   37   17
##    AFLY BOOM FRST KEEB NARW 1833 C835 SET2 TNMI CHMP AAXE TNBS OTH_597 CHOF ZPHR
## 1    1    1    1    1    1   39   69    3    1    1    4    1       1    2    3
## 2    1    0    0    0    0   75  134    0    0    0    3    1       0    0    0
## 3    0    0    0    0    0    0  134    0    0    0    3    1       0    0    0
##    OTH_435 YOGI DRMS BLIK BKBS CCL6 HUCK OTH_430 ZELD F218 F214 MCM3 OTH_378
## 1       1    1   21    1    1   40    1       2   11  106   65   22       3
## 2       0    0    2    2    0   47    5       0   29  249   70   15       0
## 3       0    0    2    0    0    0    1       0   14    0    0    0       0
##    C273 F165 F228 C254 F133 1312 FNMA C793 ZRBC TTA2 CDS2 F212 VANB SLOT UHAL
## 1   59   79  100   10   92   70    1   17   23    1    1   85   14    1    1
## 2   49  222  372    0  437   82    0    0   44    7    0   94   13    0    0
```

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```
## 3     0 171 196   0 321   0   0   0   0   12    0    0    8    0    0
##   VANG HAWC F220 BTTC 1536 1551 CTS3 PSC4 NIPC OTH_697 FB68 OTH_660 MUBT
## 1    1   14   92    1   35    8    1    3    3       1    1       1    1
## 2    0   25  343    0   26    0    0    0    0       0    6       0    3
## 3    0    0  130    0    0    0    0    0    0       0    1       0    1
##   OTH_634 VIVA WEBS WILL OTH_376 LHEL VGRL OTH_268 BTST FB89 HMLT OINK OTH_602
## 1       1    1    2    2       2    2    1       1    2    1    2    2       1
## 2       0    3    4    2       0    0    0       0    0    0   12    1       0
## 3       0    0    0    0       0    6    2       0    0    1   30    0       0
##   MJM2 SBAN WVLT FTLB SBHN YANK HMMM NIGT F236 LONE OTH_297 BEAT MDEW OTH_397
## 1    2    1    1    1    1    5    1    1   30    3       1    1    1       1
## 2    7    1    0    0    2   48    5    3  203    3       0    0    0       0
## 3   12    0    0    0    1   44    0   21  187    4       0    0    0       0
##   OTH_577 THSM ZODI OTH_150 F258 F268 PNBS SCBT BGSQ OTH_616 RUF2 SPEC OPTP
## 1       1    1    1       1   21   26    1    1    1       1    2    1    2
## 2       0    4    3       0  204  226    3    4    1       0    1    2    1
## 3       0    0    0       0  276  275    0    8    1       0    1    0    0
##   TROY WAN1 JBAK F167 F171 TMKB NKAL SBUK TBEL OTH_503 SNOT WHAT DUDE F203 C335
## 1    3    8    3   14   10    1    2    2    1       2    1    1    1   12    1
## 2    2   34    3   45   87    2    4    7    4       0   13    0    7  233    0
## 3    1    0    5  111  120    3    9    5    0       0   13    0    0  129    0
##   CHTO C932 BTCP F137 MNIC ZEL1 F139 FELX IKBD UNBT TAZD F135 VRLA LBMN BOOT
## 1    1   60    1   63    1    5   45    1    1    1    1   48    4   10   14
## 2    0  109    0  297    4    9  163    0    1    0    3  334   12   14   23
## 3    0    0    0  191    0    0    0    0    0    5    2  264    0    0   33
##   LOCM PEEL SLLA SXNK WHPH MRAZ HLPC VOLD F151 F215 CSH3 PNBT VSTH WALT WHYY
## 1    1    1   12    1    1    1    7    2   31   31   13   14   14   15   11
## 2    1    1   11    0    0    2   48    4  293   99   36   54   51    1    0
## 3    0    0   28    0    0    1   30    0  171  173    0   35   21    0    0
##   B226 FRNG BUZL FNIS HIBU MORB SBPN PN01 SBOK OTH_506 MHBT OTH_609 OTH_715
## 1    5    3    1    2    1    3    1    2    3       1    1       1       1
## 2   32   35    1    6    0    3    1    2    3       0    4       0       0
## 3   20   77    0    2    0   12    0    0    0       0    0       0       0
##   OTH_231 BTM2 HVAS MARX NIKE TAL3 ZACK P3SP LOT1 SPAC PITA <NA> <NA> <NA> <NA>
## 1       1    1    1    1    1    1    1    2    1    1    1    0    0    0    0
## 2       0    1    1    2    0    2    0    1    3    1   51    2    2    2    1
## 3       0    0    2    0    1    3    0    2    0    2   11    2    0    1    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    1    1    1    1    1    1    1    1    1    2    3    1    2    1    2
## 3    0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    1    1    1    1    1    3    1    1   15    3    2    1    1    2    1
## 3    0    0    0    0    0    0    0    4   34    0    0    0    0    0    1
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    2    1    1    1    2    2    2    1    3    1    4   27    1    1   33
## 3    0    0    0    0    0    0    1    0    1    3    0    0    0    0   13
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    1    1    8    6   14    4    6    3    1    3    5    9    1    1    2
## 3    0    0    3    5    7    4    0    0    0    4   12    4    0    0    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
```

```
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    2   65    1    4    1    7    3    2    6    6    2    4    1    4    2
## 3    0   19    0    1    0    0    1    6    0    3    0    0    0    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    1    1    1    1   29   50   26    2    3    2    2    1    1    1    1
## 3    0    0    0    0   25   21    0    0    0    0    0    1    0    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    1    1    1    1    6    8    1    4    3    1    1  181    1    9  103
## 3    0    0    0    5    0   11    0    4    5    0    0  182    0    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2   15   23    1   10    1    1  233  243   98    5    3  121    1    3    3
## 3    0   43   10   15    0    0  207  172    0   15    0    0    0    0    8
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    2  135    4    2  246  140  252  229    7    1    5   19    2    7    1
## 3    0  191    0    0  354    0  211  214    0    0    0   12    0    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    1    1    4    1    1    1    1    6    4    1    2    5    5   30   50
## 3    0    0   16    1    0    0    0    0    1    1    0    0    0   54    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2   17    1    2    1  166    8    1    1    1    1    1    1   13  224    1
## 3    0    6    4    0  328   19    0    0    7    1    0    0    0  264    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    8    2    4    1   11   35    7   25    1    1    1   80   65    1   67
## 3    0    6    3    0    0    0    0   18    0    0    0  188  110    0    8
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    1   24    1    2    2    1    1    1    1   14    4   17   41   11    2
## 3    0   21    0    0    0    3    0    1    0    0    0   51   34    0    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    8    6    3    1    1   38   66  159  111   36  107   26  201    6   21
## 3   30    8    0    0    0    0    0    0  201    0  126    0  258    0   25
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2   41    2    3    7    6    6    2    5    2   34   12    7    8    8    7
## 3    0    0    0    0    4    4    0    0    0   32    0    0    4   16    0
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2   74   14    2    8    1   14    5    1    1    5   10   19    3   27    5
## 3  132   48    0   26    3    7    3    0    0    9    0    0    0    0   11
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2   13    8    1    1   73    1    1    1    2    1    1    3   62   37    1
## 3    4    0    0    2  119    0    0    0    0    0    2    0    3   60    1
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    1    1    1   19   20  140  101   58    7   15   99   84  169    1    1
```

```
## 3    1    1    1   85   11  243  168   27    1    2  239   96  253    0    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    1    9    1    1    1    3    3    1   26    1    1    1    1    1   14
## 3    0   18    0    0    0   16    0    0   25    0    0    2    0    0   29
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    1    1    1   52   12    1    2    1    1    1    4    1    3    1    1
## 3    0    0    0    0    0    0    1    0    5    8    2    0    0    0    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    2    5    5    3    8   41   18    3    1    1    3    3   19    1    2
## 3    0    7   15    9   64    0   24    0    0    0    8    8   19    0    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    7   10    3    2    2    2    5    3    3    1    1    1    1    2    1
## 3   19   30    6    1    0    0    2    2    2    0    0    0    0    0    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    3    1    1    1    3    1   43   15   14   11  133    1    1    3    1
## 3    7    1    4    3   19    0  202   24   58   59   86    2    0   11    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    1   16   18    1    1    1    1  111    5   47    2    2    2  108   60
## 3    0   56   15    1    0    0    1  224    3  131    0    5    3  124  187
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    1    2    2    3    1    1    1    1   47   43    3    1    2    2    8
## 3    2    0    1    7    0    0    7    8   13   18    9    2    2    1    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    9    5    5    1    1    1    1    1    5    1    1   11    2    1    4
## 3    5    5   13    0    0    0    0    0    3    0    1   20   16    0   11
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    2    2    3    3   18    1    1    3    4    3    1    9    5    6    2
## 3    0    0    1    1   77    0    1   18    4   27    6   15    0    0    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    3    2    1    2    2    1    1    2    3    1    3    4    5    3    3
## 3    0    0   15    2    0    0    0   20    3    2    0   11   12   21    5
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    1    2    1    1   53   50    1    1    1    1    2    1    1    1    1
## 3    4    5    0    1  246  284    5    0    0    0    0    0    0    0    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    1    2    1    1    1    1    1    1    1    1    1    2    4    1    1
## 3    0   38    0    0    2    1    0    0    0    0    0    7    5    3    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    4    5    1   20   41   31    5   14    1    6    5    1    1   30   28
## 3   19   27   17  218  115    0   20   86    0   12   23    0    0   20  225
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
```

```
## 1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     19    19     1    14    16    14     1     1     1     3    23     4     1     1     1
## 3      0     0     0    59    92    90     0     1     0     0   123     9     2     5     4
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2      2     2     1     1     3     5     2     1     1     1     4     1     6     2     2
## 3      1    12    11     0     1    79     0     1     0     0     0    11    19     6    11
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2      1     1     1     0     0     0     0     0     0     0     0     0     0     0     0
## 3     23     0     1    13     3     4     1     1     7     2     1     9     4    31    13
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     30    16     5   166     1     2     2     6     2     3     2    44     1     1     2
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3      2     2     1     1     2     1     1     2     2    17    28    62   226     1     2
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3      1     9     1     9     5    38     1     5    27    10   207   189     8    13     6
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3      1    10     3     4     2     5    11    25    14     4     5     2     2     7     1
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3      2     1     1     5     9     1    14     1     1     1     2    17     6     4     1
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3      7     3    12     1     3     2     1   164     8     8     8     2     3    23     1
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     12     4     7     5   149     1     8     3     4    24    28    82    42     1     4
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3      6     1   154     3     1     3     1     2     2     2     7   112     1     2     3
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3      7     1     3     3     1     2     1     2     1     1     1     1     4     1     8
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3      1     1     2     3     3     2     1     1     1     1     1     9   157    51     1
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
```

```
## 3     1     1     1    39   171   165    74    95    32   141    18     1     8     1    15
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     1   164    60     3     7     3   173    48    55     2     8     2     6    11     4
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     1     2     1     2    80    11     2    41     1     3     2     8     4     2     3
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     2     1     1     1     2     1     2     6     2     1     1     5     6     1     2
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     1     2     6     2     1     3     1     1     1     1     1     1     4     1     1
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     2     4     4     3     5     4     2     2     1     1     1     2     2     2     3
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     2     1     5     2     4     2     1     1     1     3     1     6     2     2     2
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     2     1     5     1     1     1     6     2    21     4     2     2     2     1    90
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     1     3     1     2     1     1    38     6    68    11     1   100     1     7    12
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     1     7     3     5     9     5    24     2     1   123     1     1    10     1     1
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     1    59    16     6    20     4     8     2   105     1    14     7     2     2     1
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3    15     6     1     1    46     5     1    32     1     2     9     1     1     1     1
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     1     1     1     1     1    49     2    16     2     4     5    12     2     1     4
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
## 1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## 3     1     1   133     1     1     1     7     1    19   104   106    64     3     1     8
##    <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>  <NA>
```

```
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    1    1  112    2   41    2    2    2    1   81    3   96   13    1    7
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    3    1    1    1    1   14    3    4   17    1    1    1    1    1    1
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    3    2    1   94    5   12    2    1    1    1    1    1    1    1   11
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    1    1    2    2    3    1    1    1    3    1    2    1    1    1    2
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    1    7    5   10   11    1    1    2    2    2    3    3    2   40   86
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    7    8    1    1    3    1    1   43    6    4    3   33    5   42    3
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    2    2   11    1   16    3   13    3   13    3    1   11    3    1    2
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3   50   28   61    8    1    9    6    6    1   64   11    1    1   24   17
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    2   19    1    1    1    1    1   28    1    2   13    1    5    1    1
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    1    1    1    1    1    2    2    2    2    1    1    5    1    1    1
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    1   36    1    1    1    1    1    4    1    1    1    1    1    1    2
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    1    2    2    1    1    1    1   13    5   10    4    3    1    1    1
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    1    1    1    1    1    1    1    1    1    2    2    4    1    2    9
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
## 3    4    1    2    2    8   10   16   16    1    2    1    1    1    1    1
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    1    1    1    5   19   25    5    1    1    1    5    1    1    1    1
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    3    1    1    2    4    2    1    1    1    1   14    1    2    1    1
##    <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0
## 2    0    0    0    0    0    0
## 3    1    1    6    1    1    1
```

```r
# Transforming into binary matrices
p7y <- as.matrix(p7y); p7y[which(p7y>=1)] = 1; p7y[which(p7y<1)] = 0


# -------------------- 3 sets of 8 year increments----------------------------
# Make a list of 8 years per dataframe
sample_data$EightYearIncrement <- cut(sample_data$Year, breaks = seq(min(sample_data$Year), max(sample_
list_eightyears <- split(sample_data, sample_data$EightYearIncrement)
# Apply the count_instances function to each two years
instances_per_eightyear <- lapply(list_eightyears, count_instances)
# Convert the list of counts to a data frame
p8y <- do.call(rbind, instances_per_eightyear)
p8y
```

```
##    FB41 FB05 FB36 FB38 FB55 FB96 FB98 F108 F153 FB15 FB23 FB78 FB93 F155 FB01
## 1    67  307  298  241  358  112   38  103  132  224   68  222  247  401  360
## 2     0  159  192    0  264    0    0  109  120  273    0  195  218  296   37
## 3     0    0   25    0  139    0    0   82   99  105    0  124   69  156    0
##    FB43 FB92 F118 F122 FB29 <NA> FB54 FB71 FB90 F100 F119 FB14 FB27 <NA> FB57
## 1   167  333  436  165  131    0  514   87  483  237  379  440  262    0  103
## 2   197  308  330    0    0    0  308    0  458   93   93   80  208    0    0
## 3    41  150   59    0    0    0  165    0  138    0    0    0  113    0    0
##    FB66 FB76 FB94 F112 FB12 FB03 <NA> F106 FB44 FB62 F175 FB10 FB46 FB75 FB79
## 1   344  335  466   55   66  339    0  355  182  115  417  338  315  264  316
## 2   232  131   80    0    0   62    0  240   95    0  381  228   43  130  334
## 3    59    0    0    0    0    0    0    0   81    0  195   93    0    0  168
##    FB60 FB13 F138 FB63 FB07 FB11 F132 FB25 F102 F111 F130 F134 F136 F154 F160
## 1    32  288  277  244  430  517   20  290   34  256   10   52   45   99   56
## 2     0  169  297  132  321  402    4  222   47   19    0   34    9   46   15
## 3     0    0  181    0  162  151    0  138   33    0    0    3    0   14    0
##    F162 F200 FB20 FB65 HIQQ POOF FB28 <NA> FB09 FB33 ATNA CWM3 NKLN WTMA FB48
## 1    58    7  300  411   28   20  234    0  325  338    2   35    5   15  113
## 2    23    4  304  394   41    3  118    0  239  292    6   26   16    0   53
## 3    30    0  195  142   32    0   55    0    0  159    1   21    6    0    0
##    F105 1054 <NA> FB32 49C3 49LA <NA> DRAC <NA> F161 F164 <NA> KMSN MIDF 5NK2
## 1    15    2    0  271    9   60    0    1    0    1   54    0    3    5    4
## 2     1    0    0   20    0   12    0    0    2    0  156    0    0   12    0
## 3     0    0    0    0    0    0    0    0    0    0  136    0    0    7    0
##    <NA> <NA> MBAB <NA> SCTN WTAB <NA> BTTV <NA> F147 F210 F237 <NA> GRIM FB84
## 1     0    0    3    0    2    2    0   21    0   11   17   70    0    1  231
```

```
## 2    0    1    2    0   10    3    0    0    0    0   18  200    0    0   24
## 3    0    0    0    0    1    0    0    0    0    0    0   82    0    2    0
##    CRAG HVMS LCKL RUFF FB59 FB83 FB02 C834 BBMB LDSL LSMS MCMA PN06 F276 FB24
## 1   13    6   10   11  264  189  224  148   11   11    1   76    1  107  105
## 2    0   27    2    6   44   52  258  186    4    6    0    0    1  189    0
## 3    0   22    1    0    0    0  113  122    0    0    0    0    0  172    0
##    FB35 F182 DRSN <NA> F128 F131 DIPT SLMS 2SDN BBL2 BBLN BTLN CHK2 ETMA <NA>
## 1   53  242  102    0  271  409   19    2    2    2    5    6    2   10    0
## 2   65  182   89    0  315  359    0    0    0    0   10    3    0    6    0
## 3   55  109   22    0  145  205    0    0    0    0    2    0    0    0    0
##    HNBT <NA> JAGG JIG3 KMBT LOBE MLTS <NA> <NA> MTLR <NA> <NA> SHOT SURR TFMS
## 1    3    0    3    8    1    3    5    0    0    1    0    0    8    3    2
## 2    3    0    0    4    0    0    3    0    1    1    0    1    3    0    0
## 3    1    0    0    1    0    0    1    0    0    0    0    0    0    0    0
##    TSMV <NA> <NA> FB17 F110 F191 FB73 <NA> <NA> PSD2 PSDZ <NA> HSNS <NA> BIDF
## 1   20    0    0   67  110   49   34    0    0    2    1    0    7    0    1
## 2   31    0    0   40  144    0    5    0    0    0    0    0   10    0    1
## 3   18    0    0    0   72    0    0    0    0    1    0    0   15    0    3
##    <NA> ETSC FNOT GFSD <NA> LGSC MOL2 <NA> MTMN NLPS PLUG <NA> TOTW F183 THUB
## 1    0    1    1    1    0    1    1    0   15    1    6    0    1  124    5
## 2   11    0    0    0    0    0    0    0    0    4   27    1    2   50    0
## 3    7    0    0    2    0    0    0    0    0    2    7    2    0    0    0
##    F114 C791 FB26 FB34 F180 <NA> BKTL FLCR <NA> <NA> MSR2 PKUP <NA> WHMR SCOR
## 1  228   11  126   37   73    0    1    1    0    0    1    1    0    1    1
## 2  122    0    0    0   16    1    1    2    0    0    2    1    0    0    0
## 3   39    0    0    0    5    0    0    0    0    0    0    0    0    0    0
##    SPIK FJSL F117 <NA> <NA> ELFF PN04 <NA> TTM3 <NA> LNST <NA> <NA> <NA> <NA>
## 1    5    1  323    0    0   28    7    0    5    0    2    0    0    0    0
## 2    0    3   15    0    0    6    0    0   10    0    4    0    0    0    0
## 3    0    0    0    0    0    0    0    0    1    0    2    0    0    0    0
##    FB39 CMRS CONC CONS F163 F181 HAIR HITS MSQ2 RTMW <NA> SPGT TABB MDNK KNOB
## 1   36   12    2   12  230  225   30   10   14   40    0    3   17    6   23
## 2    0   60    0    7   18  165   58   56    9   40    0    0    9   59    0
## 3    0   48    0    0    0    0   41   44    0   32    0    0    0    0    0
##    <NA> <NA> NIK2 <NA> <NA> BFWT JAWS <NA> CHPC <NA> <NA> ALHK LHLV <NA> FB06
## 1    0    0    4    0    0    6    9    0    2    0    0   11    2    0  313
## 2    0    1    2    0    0    0    0    0    0    0    0   16    4    0  140
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##    <NA> <NA> FB87 <NA> CKB2 1832 SUMO F157 <NA> SOLB TCTV IKNO F101 <NA> <NA>
## 1    0    0  159    0    6   24    9  239    0   91   36   91  395    0    0
## 2    0    0  114    0    0    0   40  288    0  124   48    0   74    0    0
## 3    0    0   95    0    0    0    0    6    0   69   21    0    0    0    0
##    VRIP HFLT ZENN <NA> CLAW AOTA BKHO <NA> <NA> <NA> <NA> F254 <NA> MPTB <NA>
## 1    2   12   13    0    1    4    9    0    0    0    0    8    0   58    0
## 2    4   28    0    0    0    3   10    0    0    0    0   86    0  153    0
## 3    2    0    0    0    0    0   14    0    0    0    0   80    0   74    0
##    SHTC TRIF <NA> <NA> PHNE PN10 PNSN FEAT LUMP BEGR MOCH F116 SLIF OTH_604 THOR
## 1   82    5    0    0   11    9    4    6    6  180   16   17    1       1    8
## 2   25    3    0    0    0    0    0   10    0  194    0    0    0       0    0
## 3    0    4    0    0    0    0    0    1    0  285    0    0    0       0    0
##    F192 F194 MCM2 CATR LFLA OTH_199 TN3N MTSS SIMP BRDO RPPL DTHB GTFG UPBK MNIK
## 1  140  128    3    6    9       1    1   24    6   41    4    1    8    3   12
## 2    9   90    0    1    0       0    0   11   25    5    0    3    2    3    7
## 3    0   64    0    0    0       0    0   10    9    0    0    1    0    1    0
```

```
##   C652 THMN RY34 TBTN CCL4 F172 L106 C391 BTHV NKNN PNKD C754 RTMC WLDC F149
## 1  217    4   82    4   14    7    3   35    3    6    5   13    4    6  128
## 2    0    0  163    0    0    0    6    0    0    0    2    0    0    3  201
## 3    0    0   71    0    0    0    0    0    0    0    0    0    0    6   51
##   C595 C091 LEMS C991 FB99 LBMA PNTH HNSC LIWB LCDB TTOO TWHN LWMN LFLG LDMA
## 1   81    1    1   34  127   48    1    2    1    4    6    2    8    4   20
## 2    0    0    0  116   12    0    0    0    0    0    0    7    3    2   44
## 3    0    0    0   47    0    0    0    0    0    0    0    1    0    0   12
##   LNPF WHIS F141 FANT LLIN FTMW GAFF HAGR PRFR F174 FB58 MIDM M145 MANT ONIP
## 1   16    2  108    1    1    2    1    1   24  139  168    2   28   13    2
## 2   48    1  238    0    0    1    0    0   26   41   39    1   65   14    0
## 3   38    0   22    0    0    0    1    0    7    0    0    3   23    8    0
##   STDO TLN2 PSDQ HBMB ALIN HIPC HIPM BARE BOXX CURD LET2 MOPS MTWN NEWT SBTT
## 1    1    1   29   21    1    1    9    7    1    1    1    1    1    4    1
## 2    0    0   36   58    0    0    4    2    0    0    0    0    2    4    0
## 3    0    0   19   24    0    0    0    3    0    0    0    0    1    5    0
##   TPLS PN05 BRCH LYLU TNSL TRNO SUFL CATW CLOX MM49 MSUM SCKB THNM LBLS LBSC
## 1    4    8    1    2    2    1    8    3    2    3    9    1    4   13    2
## 2    2    9    0    0    0    0    5   14    0    0    3    0    9    0    0
## 3    0    0    0    0    0    1    3    4    0    0    0    1    2    0    0
##   LBTY LTET HMLS MM62 GWEN KNNN OTH_596 OTH_610 Q5LA SPTL F219 1452 CPS2 BTHS
## 1    3    2    3    1    7    9       1       1   14   10   34    8    5    4
## 2    0    0    0    0    0    9       0       0    7    0   76    0    0    3
## 3    0    0    0    0    0    1       0       0   10    0   51    0    0    3
##   F107 ANGL GRIN HMLA PTHD RCLA SROM SUMM HNLN KLNN SKIT GRC1 GRC2 BTLE CWM4
## 1    3    2    1    2    2    1    1    1    4    3    4    1    1    4    3
## 2    0    0    1    1    0    0    2    1    0    1    0    0    0    0    0
## 3    0    4    3    4    3    0    4    0    1    0    0    0    0    0    0
##   MSUC USLN RUBB 1535 MLOB MLOC OTH_487 OTH_441 F178 BOXR OTH_422 OTH_373 THOC
## 1   10    1    1   47    6    2       1       1  302   48       2       1    5
## 2    2    0    0    0    2    0       0       0  360  150       0       0    0
## 3    0    0    0    0    0    0       0       0  159  102       0       0    0
##   OTH_601 F109 F127 MDLB LBT1 BZPN F231 F120 F124 LOTB PPSL LBHL OTH_456
## 1       1  307  258    3    1    2    4   10    9    8    1    4       1
## 2       0  383  284    1    0    0   42   11    0   13    0    6       0
## 3       0  174   71    0    0    0    5    0    0    8    4    2       0
##   OTH_707 BUZM JDLA MTHS OTH_591 CLIF MNCB TOT2 DEDO F144 MDPK NIPP IKNC WAVE
## 1       1    1    2    1       1    5    3    3    4   80   13    1    1    2
## 2       0    0    3    0       0    6    0    0    0    0    0    2    0    3
## 3       0    0    0    0       0    0    0    0    0    0    0    0    0    1
##   EFHT MRMS CSTK LSPL SBPE C717 LAT2 TNFG DMDI F188 C073 TEEN F159 WAND F198
## 1    2    3    1    6    8   16    3    3    4  212   31   21  136   52  238
## 2    0    2    0    0    3    0    1    0    0  339    0    0  364   47  348
## 3    0    0    0    0    0    0    0    0    0  156    0    0  185    0  114
##   PSB2 PSBZ PHIN F148 C574 F184 JOSE F202 INHF KATT ROOS RP61 C755 F113 F190
## 1    1    1   16  291   23   86  102    6    1    3    7    2    1  282  168
## 2    0    0    0  370    0    0   51    2    0    2    0    2    0  421  158
## 3    0    0    0  166    0    0    0    0    0    0    0    4    0  145   32
##   XYLO C295 MSLB TDTL BTOK LPSK F152 GALO WORM F186 FLTP FB70 BTMV MTMS MOFG
## 1    2   13   40   16    1    5   95    6   11  164    1    1    1    1    1
## 2    1    0    0   29    0    0    0    6    0    0    0    0    0    0    0
## 3    0    0    0   30    0    0    0    2    0    0    0    0    0    0    1
##   F146 CTS2 MSQL PSC3 BTCH DIGT PORT LTS2 LTSM ALKC CHMA PN03 BRD2 C871 PROF
## 1  365    2    1    5    7    8    3    1    1    1    1    1   27  103    1
```
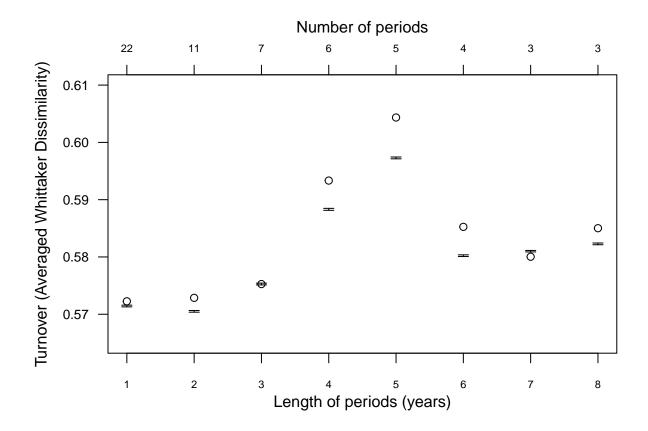
```
## 2   416     0     0    14     0     4     1       0       0     0     2     0     0     9     3
## 3   174     0     0    14     0     0     0       0       0     0     0     0     0     0     2
##    STMN  VTHN  SLLP  INDT  BTTN  SOLS  LACH OTH_164 OTH_208  RNMA  F170  FNGD  HTHR  PRGO
## 1     1     1     2     1     1     1     6       1       1     3     2     1     1     1
## 2     1     1     0     0     0     8     0       0       0     5     1     0     0     0
## 3     0     0     0     0     0     0     0       0       0     0     0     0     0     0
##    WAAA  WOTN  CRUM  MUCH  NIPN  BBUK  LBLT  LEMO  LSPO  PUMP  SGLA  TSMN  TULP  BOZO  FLLN
## 1     1    12     3     4     6     2     2     1    13    31     9     1     1     1     1
## 2     0     0     1    10    12     1     0     0     0     0     3     1     0     0     0
## 3     0     0     7    20     0     0     0     0     0     0     7     0     0     0     0
##    MOML  HSN2  SMUS  BSLV  UPBT  HILB  MORN  C272  F142  JOSC  HANG  F126  STIP  WHIT  LBLK
## 1     1     1     2     1     4     3     6    43   120    80     9     8     1     4     6
## 2     0     0     0     0     0     1     8     0   186    93     9    60     0     0     0
## 3     0     0     1     0     0     3     7     0   165    49     0    35     0     0     0
##    IKN2  PRFC  APEM  HMTN  SBDO  RTM2  PLG2  MJMA  MJMC OTH_228  RNMK  DAND  LNPC  TWIG  XNDU
## 1    92     4     2     4    82    10     1    10     2       1     1     6    13     1     1
## 2   156     0     1     1    64    68     0     5     0       0     2     0    57     0     0
## 3    81     0     0     1     0    16     0     0     0       0    10     0    30     0     0
##    PECS  ULYS  ZOEY  IVTA  NACK  POET  R27L  TAL2  YAHO  HBUT  HOKA OTH_692  LIZD  SCOB  SKIL
## 1    10     7     3     2     6     5     7     1     2     8     1       1    35     1     6
## 2     0    58     1     0     5     3     8     7     1     0     6       0    26     0     2
## 3     0    33     5     0     1     3     7     2     1     0     4       0    17     0     2
##    PRTF  TUNL  GIDN  OCTV  BUMI  ICEB  KNIK  KOKO  ZRBA  ALH2  MNC2  CURL  F193  FHIS  UDOG
## 1     5     3     5     4     1     1    11     3    80     1     1     1     1     1     1
## 2     0     2     0     3     0     0     0     7    51     0     0     0    51     1     0
## 3     0     0     0     4     0     0     0     6     0     0     0     0    52     0     0
##    MYST  TKID  CAES  BIGB  MUCC OTH_419  PIHI  SCSM  ANOK  TPLO  HSLR  QCHE  ZVGO  F115
## 1     2     3     1     1     1       1     2     5     1     1     2     1     5    27
## 2     4    21     4     0     0       0     2    40     1     0     0     0     0     0
## 3     3    12     0     0     0       0    11    56     0     0     0     0     0     0
##    OTH_606  MVON OTH_402  SNSC  F166  F196  F176  C931  WHOO  WINN  LDNK OTH_485  SEWF
## 1        1     8       2     1    17   183    69    10    31     8     1       1     3
## 2        0     2       0     0     0   376   138     0    42     2     0       0     3
## 3        0     0       0     0     0   178    78     0     4     0     0       0     0
##    UWHO  BALE  HLBP  TDDP  2102  C296  F125  F216  ERKA  MFLC  MFLG  F248  F123  C596  BIKO
## 1     1     1     1     1     2     2   169   101     1     1     1    27   125   108    21
## 2     1     0     0     0     0     0   289     0     1     6     0   165   280   181    10
## 3     1     0     0     0     0     0   167     0     0    11     1    78   167     3    10
##    AFLY  BOOM  FRST  KEEB  NARW  1833  C835  SET2  TNMI  CHMP  AAXE  TNBS OTH_597  CHOF  ZPHR
## 1     1     1     1     1     1    56    93     3     1     1     4     2       1     2     3
## 2     1     0     0     0     0    58   161     0     0     0     3     1       0     0     0
## 3     0     0     0     0     0     0    83     0     0     0     3     0       0     0     0
##    OTH_435  YOGI  DRMS  BLIK  BKBS  CCL6  HUCK OTH_430  ZELD  F218  F214  MCM3 OTH_378
## 1        1     1    21     1     1    72     2       2    20   175   105    36       3
## 2        0     0     3     2     0    15     4       0    22   180    30     1       0
## 3        0     0     1     0     0     0     1       0    12     0     0     0       0
##    C273  F165  F228  C254  F133  1312  FNMA  C793  ZRBC  TTA2  CDS2  F212  VANB  SLOT  UHAL
## 1    93   121   167    10   167   140     1    17    38     1     1   167    18     1     1
## 2    15   267   387     0   510    12     0     0    29    11     0    12    13     0     0
## 3     0    84   114     0   173     0     0     0     0     8     0     0     4     0     0
##    VANG  HAWC  F220  BTTC  1536  1551  CTS3  PSC4  NIPC OTH_697  FB68 OTH_660  MUBT
## 1     1    27   158     1    44     8     1     3     3       1     4       1     3
## 2     0    12   352     0    17     0     0     0     0       0     4       0     2
## 3     0     0    55     0     0     0     0     0     0       0     0       0     0
```

```
##    OTH_634 VIVA WEBS WILL OTH_376 LHEL VGRL OTH_268 BTST FB89 HMLT OINK OTH_602
## 1        1    3    5    4       2    2    2       1    1    2    1    2       1
## 2        0    1    1    0       0    1    2       0    0    0   28    1       0
## 3        0    0    0    0       0    5    0       0    0    1   14    0       0
##    MJM2 SBAN WVLT FTLB SBHN YANK HMMM NIGT F236 LONE OTH_297 BEAT MDEW OTH_397
## 1     4    1    1    1    1    8    1    1   57    4       1    1    1       1
## 2     8    1    0    0    2   63    5    9  244    3       0    0    0       0
## 3     9    0    0    0    1   26    0   15  119    3       0    0    0       0
##    OTH_577 THSM ZODI OTH_150 F258 F268 PNBS SCBT BGSQ OTH_616 RUF2 SPEC OPTP
## 1        1    2    4       1   51   53    2    1    1       1    2    3    2
## 2        0    3    0       0  260  299    2    9    2       0    2    0    1
## 3        0    0    0       0  190  175    0    3    0       0    0    0    0
##    TROY WAN1 JBAK F167 F171 TMKB NKAL SBUK TBEL OTH_503 SNOT WHAT DUDE F203 C335
## 1     3   36    3   16   11    1    2    3    2       2    4    1    1   41    1
## 2     2    6    4   82  139    5    8   10    3       0   17    0    7  310    0
## 3     1    0    4   72   67    0    5    1    0       0    6    0    0   23    0
##    CHTO C932 BTCP F137 MNIC ZEL1 F139 FELX IKBD UNBT TAZD F135 VRLA LBMN BOOT
## 1     1   98    1  116    2   13  104    1    1    1    1  118    5   15   17
## 2     0   71    0  321    3    1  104    0    1    3    3  355   11    9   35
## 3     0    0    0  114    0    0    0    0    0    2    2  173    0    0   18
##    LOCM PEEL SLLA SXNK WHPH MRAZ HLPC VOLD F151 F215 CSH3 PNBT VSTH WALT WHYY
## 1     1    1   20    1    1    2    7    5   64   81   37   15   18   16   11
## 2     1    1   31    0    0    1   63    1  353  104   12   73   65    0    0
## 3     0    0    0    0    0    1   15    0   78  118    0   15    3    0    0
##    B226 FRNG BUZL FNIS HIBU MORB SBPN PN01 SBOK OTH_506 MHBT OTH_609 OTH_715
## 1     7    6    1    2    1    4    1    4    5       1    1       1       1
## 2    48   58    1    8    0    9    1    0    1       0    4       0       0
## 3     2   51    0    0    0    5    0    0    0       0    0       0       0
##    OTH_231 BTM2 HVAS MARX NIKE TAL3 ZACK P3SP LOT1 SPAC PITA BLUG MYLV DALS FOFN
## 1        1    1    2    1    1    1    1    2    3    1   26    2    2    2    1
## 2        0    1    1    2    1    5    0    2    1    2   30    1    0    1    0
## 3        0    0    1    0    0    0    0    1    0    1    7    1    0    0    0
##    NOLA R61M TPBT TTM2 BABX BTAS SNDL SPLT TWSO YODA ZULU SOL2 WOOF ETFR GRSH
## 1     1    1    1    1    1    1    1    1    1    2    3    1    1    1    1
## 2     0    0    0    0    0    0    0    0    0    0    0    0    1    0    1
## 3     0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
##    OTH_181 OTH_215 OTH_220 OTH_281 OTH_293 YIKE BLOO SETE LLLN AARD APLO BBMM
## 1        1       1       1       1       1    1    1    1    2    1    1    1
## 2        0       0       0       0       0    2    0    0   25    2    1    0
## 3        0       0       0       0       0    0    0    4   22    0    0    0
##    BKTS BNSE EQDT FTHS OTH_230 OTH_561 PMID SLIT WHTS WINE LA55 SOGG YNOT NKLD
## 1     1    1    1    1       1       1    1    1    1    1    1    3    1    1
## 2     0    1    1    1       0       0    0    1    1    2    0    1    2    3
## 3     0    0    0    0       0       0    0    0    0    0    0    0    1    0
##    C794 HOOV OTH_183 QECD SOFA ACDI CSTY FFCH LBSL WINS HUEY HBM1 OTH_644 VAIL
## 1    27    1       1    2    1    1    2    2    2    3    1    1       1    1
## 2     0    0       0   38    0    0    6    4   13    2    5    2       0    5
## 3     0    0       0    6    0    0    3    5    6    3    0    0       0    1
##    SQBT ARRR HALF MGUC KNSY OTH_607 DAFT OTH_1080 MTHR OTH_590 C336 SKYE ZIPP
## 1     2    1    1    1    2       2   19        1    4       1    7    3    1
## 2    10   10    0    0    0       0   52        0    0       0    0    0    5
## 3     5    2    0    0    0       0   13        0    1       0    0    1    2
##    HAMM BMRD GALT ZOOK B033 FAST SWPT NKJG KITT OTH_295 OTH_169 BRD3 F185 PILA
## 1     1    1    2    1    1    4    1    1    1       1       1    3    2    2
```

```
## 2    5    8    0       3    0    0    1    0    0         0         0   32   55   24
## 3    0    0    0       0    0    0    0    0    0         0         0   19   14    0
##    GRPS CYRN NIBD OTH_519 <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    1    1    1       2    0    0    0    0    0    0    0    0    0    0    0    0
## 2    1    2    1       0    2    1    1    1    1    1    1    1    6   11    1
## 3    0    0    0       0    0    0    0    0    0    0    0    5    0    8    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    5    5    1    1  235    1    9  103   15   40    1   19    1    1  414
## 3    3    3    0    0  128    0    0    0    0   26   10    6    0    0   26
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2  338   98   18    3  121    1    3    5    2  196    4    2  377  140  336
## 3   77    0    2    0    0    0    0    6    0  130    0    0  223    0  127
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2  315    7    1    5   19    2    7    1    1    1    8    1    1    1    1
## 3  128    0    0    0   12    0    0    0    0    0   12    1    0    0    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    6    5    1    2    5    5   48   50   17    4    4    1  268   10    1
## 3    0    0    1    0    0    0   36    0    0    3    2    0  226   17    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    1    2    2    1    1   13  330    1    8    4    6    1   11   35    7
## 3    0    6    0    0    0    0  158    0    0    4    1    0    0    0    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2   31    1    1    1  132   95    1   75    1   33    1    2    2    3    1
## 3   12    0    0    0  136   80    0    0    0   12    0    0    0    1    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    1    1   14    4   37   51   11    2   38   10    3    1    1   38   66
## 3    1    0    0    0   31   24    0    0    0    4    0    0    0    0    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2  159  178   36  199   26  320    6   34   41    2    3    7    6    6    2
## 3    0  134    0   34    0  139    0   12    0    0    0    0    4    4    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    5    2   50   12    7   10   13    7  135   29    2   20    2   18    5
## 3    0    0   16    0    0    2   11    0   71   33    0   14    2    3    3
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    1    1    8   10   19    3   27    7   15    8    1    1  118    1    1
## 3    0    0    6    0    0    0    0    9    2    0    0    2   74    0    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    1    2    1    1    3   65   47    1    1    1    1   35   24  210  148
## 3    0    0    0    2    0    0   50    1    1    1    1   69    7  173  121
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2   85    8   17  188  129  272    1    1    1   21    1    1    1    6    3
## 3    0    0    0  150   51  150    0    0    0    6    0    0    0   13    0
```

```
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    1   51    1    1    3    1    1   43    1    1    1   52   12    1    2
## 3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    1    2    1    4    1    3    1    1    2    5   10    4    9   41   19
## 3    0    4    8    2    0    0    0    0    0    7   10    8   63    0   23
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    3    1    1    3    9   38    1    2   12   25    5    2    2    2    6
## 3    0    0    0    8    2    0    0    0   14   15    4    1    0    0    1
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    5    5    1    1    1    1    2    1    5    1    5    3    7    1  101
## 3    0    0    0    0    0    0    0    0    5    1    0    1   15    0  144
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2   31   34   20  219    1    1    6    1    1   29   18    2    1    1    2
## 3    8   38   50    0    2    0    8    0    0   43   15    0    0    0    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2  215    8  110    2    2    5  161  116    3    2    3    5    1    1    2
## 3  120    0   68    0    5    0   71  131    0    0    0    5    0    0    6
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    9   60   61    6    3    3    3    8    9    6   10    1    1    1    1
## 3    0    0    0    6    0    1    0    0    5    4    8    0    0    0    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    1    8    1    2   22   14    1   11    2    2    4    4   36    1    1
## 3    0    0    0    0    9    4    0    4    0    0    0    0   59    0    1
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## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    6    6    5    4   17    5    6    2    3    2    1    4    2    1    1
## 3   15    2   25    3    7    0    0    0    0    0   15    0    0    0    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    7    6    1    3    6    9    9    7    3    5    1    1  170  159    6
## 3   15    0    2    0    9    8   15    1    2    2    0    1  129  175    0
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## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    1    1    1    2    1    1    1    1    1    6    1    1    3    1    1
## 3    0    0    0    0    0    0    0    0    0   34    0    0    0    1    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    1    1    1    1    9    7    2    1    9   23    5   97  105   31   13
## 3    0    0    0    0    0    2    2    0   14    9   13  141   51    0   12
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2   47    1   15   16    1    1   48  126   19   19    1   60   58   60    1
## 3   53    0    3   12    0    0    2  127    0    0    0   13   50   44    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
## 2    1    1    3   76    5    1    1    1    3    6    3    1    4   19    2
## 3    1    0    0   70    8    2    5    4    0    8    9    0    0   65    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    2    1    1    4    2   20    8    8    8    1    1    6    2    1    1
## 3    0    0    0    0   10    5    0    5   16    0    1    7    1    3    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    1    7    2    1    6    4   27    5    6   16    1   57    1    2    2
## 3    0    0    0    0    3    0    4    8   24    0    4  109    0    0    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    3    2    3    1   19    1    1    1    1    1    1    1    1    1    1
## 3    3    0    0    1   25    0    0    1    1    1    0    0    1    0    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    1    1    8   24   35   66    1    2    1    5    1    5    5   38    1
## 3    1    1    9    4   27  160    0    0    0    4    0    4    0    0    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    1   27   10   51   66    8    7    6    1   10    3    4    2    4    5
## 3    4    0    0  156  123    0    6    0    0    0    0    0    0    1    6
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    3    5    4    4    2    2    2    1    1    1    1    3    1    1    1
## 3   22    9    0    1    0    0    5    0    1    0    0    2    8    0   13
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    1    1    1    1    6    2    3    1    3    2    1    1    2    1    1
## 3    0    0    0    1   11    4    1    0    4    1   11    0    1    1    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2   18    2    2    6    2    3    4    1    4    4    1    1   11    1    3
## 3  146    6    6    2    0    0   19    0    8    0    6    4  138    0    5
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    2    3    6    5   11    5    1    1    1    1   10    1    1    1    1
## 3    1    1   18   23   71   37    0    3    5    0  144    2    0    2    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    1    1    1    1    5    1    1    1    3    1    1    1    1    1    1
## 3    1    1    1    6  107    0    1    2    4    0    2    2    0    1    0
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    2    1    1    1    1    1    1    1    1    1    0    0    0    0    0
## 3    0    0    0    0    0    3    0    7    0    0    2    3    3    2    1
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    1    1    1    1    9  157   51    1    1    1    1   39  171  165   74
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3   95   32  141   18    1    8    1   15    1  164   60    3    7    3  173
```

```
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## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3   48   55    2    8    2    6   11    4    1    2    1    2   80   11    2
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3   41    1    3    2    8    4    2    3    2    1    1    1    2    1    2
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    6    2    1    1    5    6    1    2    1    2    6    2    1    3    1
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    1    1    1    1    1    4    1    1    2    4    4    3    5    4    2
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    2    1    1    1    2    2    2    3    2    1    5    2    4    2    1
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    1    1    3    1    6    2    2    2    2    1    5    1    1    1    6
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    2   21    4    2    2    2    1   90    1    3    1    2    1    1   38
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    6   68   11    1  100    1    7   12    1    7    3    5    9    5   24
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    2    1  123    1    1   10    1    1    1   59   16    6   20    4    8
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    2  105    1   14    7    2    2    1   15    6    1    1   46    5    1
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3   32    1    2    9    1    1    1    1    1    1    1    1    1   49    2
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3   16    2    4    5   12    2    1    4    1    1  133    1    1    1    7
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    1   19  104  106   64    3    1    8    1    1  112    2   41    2    2
##   <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    2    1   81    3   96   13    1    7    3    1    1    1    1   14    3
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    4   17    1    1    1    1    1    1    3    2    1   94    5   12    2
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    1    1    1    1    1    1    1   11    1    1    2    2    3    1    1
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    1    3    1    2    1    1    1    2    1    7    5   10   11    1    1
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    2    2    2    3    3    2   40   86    7    8    1    1    3    1    1
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3   43    6    4    3   33    5   42    3    2    2   11    1   16    3   13
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    3   13    3    1   11    3    1    2   50   28   61    8    1    9    6
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    6    1   64   11    1    1   24   17    2   19    1    1    1    1    1
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3   28    1    2   13    1    5    1    1    1    1    1    1    1    2    2
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    2    2    1    1    5    1    1    1    1   36    1    1    1    1    1
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    4    1    1    1    1    1    1    2    1    2    2    1    1    1    1
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3   13    5   10    4    3    1    1    1    1    1    1    1    1    1    1
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3    1    1    2    2    4    1    2    9    4    1    2    2    8   10   16
##    <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3   16    1    2    1    1    1    1    1    1    1    1    5   19   25    5
```

```
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3      1    1    1    5    1    1    1    1    3    1    1    2    4    2    1
##      <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA> <NA>
## 1      0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 2      0    0    0    0    0    0    0    0    0    0    0    0    0    0
## 3      1    1    1   14    1    2    1    1    1    1    6    1    1    1
```

```r
# Transforming into binary matrices
p8y <- as.matrix(p8y); p8y[which(p8y>=1)] = 1; p8y[which(p8y<1)] = 0
```

Calculate Null and Emperical Whittaker Dissimilarity Index between Time Period Lengths

```r
source("../code/functions.R") # WDI & WDI permutation

# Turn over results
t1 = turnover_w(data = p1y, iter = 1000, subseq=F, plot=FALSE)
t2 = turnover_w(data = p2y, iter = 1000, subseq=F, plot=FALSE)
t3 = turnover_w(data = p3y, iter = 1000, subseq=F, plot=FALSE)
t4 = turnover_w(data = p4y, iter = 1000, subseq=F, plot=FALSE)
t5 = turnover_w(data = p5y, iter = 1000, subseq=F, plot=FALSE)
t6 = turnover_w(data = p6y, iter = 1000, subseq=F, plot=FALSE)
t7 = turnover_w(data = p7y, iter = 1000, subseq=F, plot=FALSE)
t8 = turnover_w(data = p8y, iter = 1000, subseq=F, plot=FALSE)

all = rbind(t1, t2, t3, t4, t5, t6, t7, t8)
all = cbind(c(1, 2, 3, 4, 5, 6, 7, 8), all)

par(mar=c(4,5,4,1))
# Plot the final results. Whisker represent 95%CI generated by the null model. X-axis represent the num
errbar(x=c(1, 2, 3, 4, 5, 6, 7, 8), y=all[,2], all[,4], all[,5], ylab="Turnover (Averaged Whittaker Diss
       pch=1, cap=0.02, xaxt='n', xlab="", las=1, cex=1.0, ylim=c(0.565,0.61), xlim=c(1,8), cex.axis=0.8
axis(1, at=c(1, 2, 3, 4, 5, 6, 7, 8),las=1, cex.axis=0.7)
mtext(side = 1, "Length of periods (years)", line = 2, font = 1)
axis(3, at=c(1, 2, 3, 4, 5, 6, 7, 8),las=1, labels=c(22, 11, 7, 6, 5, 4, 3, 3), cex.axis=0.7)
mtext(side = 3, "Number of periods", line = 2, font = 1)
```

```
# Print final results
all
```

```
##            Empirical        SD     2.5%CI    97.5%CI
## Turnover 1 0.5722610 0.1412982 0.5712877 0.5715862
## Turnover 2 0.5728612 0.1346759 0.5703594 0.5706545
## Turnover 3 0.5752652 0.1295006 0.5751164 0.5754296
## Turnover 4 0.5933349 0.1256835 0.5881425 0.5884857
## Turnover 5 0.6043450 0.1244430 0.5971328 0.5974489
## Turnover 6 0.5852543 0.1230493 0.5800727 0.5803674
## Turnover 7 0.5800392 0.1086852 0.5808786 0.5811367
## Turnover 8 0.5850189 0.1171334 0.5821342 0.5824361
```