5. Worksheet: Alpha Diversity

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OVERVIEW

In this exercise, we will explore aspects of local or site-specific diversity, also known as alpha (α) diversity. First we will quantify two of the fundamental components of (α) diversity: **richness** and **evenness**. From there, we will then discuss ways to integrate richness and evenness, which will include univariate metrics of diversity along with an investigation of the **species abundance distribution (SAD)**.

Directions:

1. In the Markdown version of this document in your cloned repo, change "Student Name" on line 3 (above) to your name.
2. Complete as much of the worksheet as possible during class.
3. Use the handout as a guide; it contains a more complete description of data sets along with the proper scripting needed to carry out the exercise.
4. Answer questions in the worksheet. Space for your answer is provided in this document and indicated by the ">" character. If you need a second paragraph be sure to start the first line with ">". You should notice that the answer is highlighted in green by RStudio (color may vary if you changed the editor theme).
5. Before you leave the classroom, **push** this file to your GitHub repo.
6. For the assignment portion of the worksheet, follow the directions at the bottom of this file.
7. When you are done, **Knit** the text and code into a PDF file.
8. After Knitting, submit the completed exercise by creating a **pull request** via GitHub. Your pull request should include this file `AlphaDiversity_Worskheet.Rmd` and the PDF output of `Knitr` (`AlphaDiversity_Worskheet.pdf`).

1) R SETUP

In the R code chunk below, please provide the code to: 1) Clear your R environment, 2) Print your current working directory, 3) Set your working directory to your `Week-2/` folder folder, and 4) Load the `vegan` R package (be sure to install first if you have not already).

```r
rm(list = ls())
getwd()
```

```
## [1] "/cloud/project/QB2025_ALennon/Week2-Alpha"
```

```r
#cd ./cloud/project/QB2025_ALennon/Week2-Alpha
#install.packages("vegan")
library(vegan)
```

```
## Loading required package: permute
```

```
## Loading required package: lattice
```

```
## This is vegan 2.6-8
```

2) LOADING DATA

In the R code chunk below, do the following: 1) Load the BCI dataset, and 2) Display the structure of the dataset (if the structure is long, use the `max.level = 0` argument to show the basic information).

```
data(BCI)
str(BCI) #str(BCI, max.level = 0)
```

```
## 'data.frame':    50 obs. of  225 variables:
##  $ Abarema.macradenia        : int  0 0 0 0 0 0 0 0 0 1 ...
##  $ Vachellia.melanoceras     : int  0 0 0 0 0 0 0 0 0 0 ...
##  $ Acalypha.diversifolia     : int  0 0 0 0 0 0 0 0 0 0 ...
##  $ Acalypha.macrostachya     : int  0 0 0 0 0 0 0 0 0 0 ...
##  $ Adelia.triloba            : int  0 0 0 3 1 0 0 0 5 0 ...
##  $ Aegiphila.panamensis      : int  0 0 0 0 1 0 1 0 0 1 ...
##  $ Alchornea.costaricensis   : int  2 1 2 18 3 2 0 2 2 2 ...
##  $ Alchornea.latifolia       : int  0 0 0 0 0 1 0 0 0 0 ...
##  $ Alibertia.edulis          : int  0 0 0 0 0 0 0 0 0 0 ...
##  $ Allophylus.psilospermus   : int  0 0 0 0 1 0 0 0 0 0 ...
##  $ Alseis.blackiana          : int  25 26 18 23 16 14 18 14 16 14 ...
##  $ Amaioua.corymbosa         : int  0 0 0 0 0 0 0 0 0 0 ...
##  $ Anacardium.excelsum       : int  0 0 0 0 0 0 0 1 0 0 ...
##  $ Andira.inermis            : int  0 0 0 0 1 1 0 0 1 0 ...
##  $ Annona.spraguei           : int  1 0 1 0 0 0 0 1 1 0 ...
##  $ Apeiba.glabra             : int  13 12 6 3 4 10 5 4 5 5 ...
##  $ Apeiba.tibourbou          : int  2 0 1 1 0 0 0 1 0 0 ...
##  $ Aspidosperma.desmanthum   : int  0 0 0 1 1 1 0 0 0 1 ...
##  $ Astrocaryum.standleyanum  : int  0 2 1 5 6 2 2 0 2 1 ...
##  $ Astronium.graveolens      : int  6 0 1 3 0 1 2 2 0 0 ...
##  $ Attalea.butyracea         : int  0 1 0 0 0 1 1 0 0 0 ...
##  $ Banara.guianensis         : int  0 0 0 0 0 0 0 0 0 0 ...
##  $ Beilschmiedia.pendula     : int  4 5 7 5 8 6 5 9 11 14 ...
##  $ Brosimum.alicastrum       : int  5 2 4 3 2 2 6 4 3 6 ...
##  $ Brosimum.guianense        : int  0 0 0 0 0 0 0 0 0 0 ...
##  $ Calophyllum.longifolium   : int  0 2 0 2 1 2 2 2 2 0 ...
##  $ Casearia.aculeata         : int  0 0 0 0 0 0 0 1 0 0 ...
##  $ Casearia.arborea          : int  1 1 3 2 4 1 2 3 9 7 ...
##  $ Casearia.commersoniana    : int  0 0 1 0 1 0 0 0 1 0 ...
##  $ Casearia.guianensis       : int  0 0 0 0 0 0 0 0 0 0 ...
##  $ Casearia.sylvestris       : int  2 1 0 0 0 3 1 0 1 1 ...
##  $ Cassipourea.guianensis    : int  2 0 1 1 3 4 4 0 2 1 ...
##  $ Cavanillesia.platanifolia : int  0 0 0 0 0 0 0 0 0 0 ...
##  $ Cecropia.insignis         : int  12 5 7 17 21 4 0 7 2 16 ...
##  $ Cecropia.obtusifolia      : int  0 0 0 0 1 0 0 2 0 2 ...
##  $ Cedrela.odorata           : int  0 0 0 0 0 0 0 0 0 0 ...
##  $ Ceiba.pentandra           : int  0 1 1 0 1 0 0 1 0 1 ...
##  $ Celtis.schippii           : int  0 0 0 2 2 0 1 0 0 0 ...
##  $ Cespedesia.spathulata     : int  0 0 0 0 0 0 0 0 0 0 ...
##  $ Chamguava.schippii        : int  0 0 0 0 0 0 0 0 0 0 ...
##  $ Chimarrhis.parviflora     : int  0 0 0 0 0 0 0 0 0 0 ...
##  $ Maclura.tinctoria         : int  0 0 0 0 0 0 0 0 0 0 ...
##  $ Chrysochlamys.eclipes     : int  0 0 0 0 0 0 0 0 0 0 ...
##  $ Chrysophyllum.argenteum   : int  4 1 2 2 6 2 3 2 4 2 ...
##  $ Chrysophyllum.cainito     : int  0 0 0 0 0 0 1 0 0 0 ...
##  $ Coccoloba.coronata        : int  0 0 0 1 2 0 0 1 2 1 ...
```

```
##  $ Coccoloba.manzinellensis    : int  0 0 0 0 0 0 0 2 0 0 ...
##  $ Colubrina.glandulosa        : int  0 0 0 0 0 0 0 0 0 0 ...
##  $ Cordia.alliodora            : int  2 3 3 7 1 1 2 0 0 2 ...
##  $ Cordia.bicolor              : int  12 14 35 23 13 7 5 10 7 13 ...
##  $ Cordia.lasiocalyx           : int  8 6 6 11 7 6 6 3 0 4 ...
##  $ Coussarea.curvigemma        : int  0 0 0 1 0 2 1 0 1 1 ...
##  $ Croton.billbergianus        : int  2 2 0 11 6 0 0 4 2 0 ...
##  $ Cupania.cinerea             : int  0 0 0 0 0 0 0 0 0 0 ...
##  $ Cupania.latifolia           : int  0 0 0 1 0 0 0 0 0 0 ...
##  $ Cupania.rufescens           : int  0 0 0 0 0 0 0 0 0 0 ...
##  $ Cupania.seemannii           : int  2 2 1 0 3 0 1 2 2 0 ...
##  $ Dendropanax.arboreus        : int  0 3 6 0 5 2 1 6 1 3 ...
##  $ Desmopsis.panamensis        : int  0 0 4 0 0 0 0 0 0 1 ...
##  $ Diospyros.artanthifolia     : int  1 1 1 1 0 0 0 0 0 1 ...
##  $ Dipteryx.oleifera           : int  1 1 3 0 0 0 0 2 1 2 ...
##  $ Drypetes.standleyi          : int  2 1 2 0 0 0 0 0 0 0 ...
##  $ Elaeis.oleifera             : int  0 0 0 0 0 0 0 0 0 0 ...
##  $ Enterolobium.schomburgkii   : int  0 0 0 0 0 0 0 0 0 0 ...
##  $ Erythrina.costaricensis     : int  0 0 0 0 0 3 0 0 1 0 ...
##  $ Erythroxylum.macrophyllum   : int  0 1 0 0 0 0 0 1 1 1 ...
##  $ Eugenia.florida             : int  0 1 0 7 2 0 0 1 1 3 ...
##  $ Eugenia.galalonensis        : int  0 0 0 0 0 0 0 1 0 0 ...
##  $ Eugenia.nesiotica           : int  0 0 1 0 0 0 5 4 3 0 ...
##  $ Eugenia.oerstediana         : int  3 2 5 1 5 2 2 3 3 3 ...
##  $ Faramea.occidentalis        : int  14 36 39 39 22 16 38 41 33 42 ...
##  $ Ficus.colubrinae            : int  0 1 0 0 0 0 0 0 0 0 ...
##  $ Ficus.costaricana           : int  0 0 0 0 0 0 0 0 0 0 ...
##  $ Ficus.insipida              : int  0 0 0 0 0 0 0 0 0 0 ...
##  $ Ficus.maxima                : int  1 0 0 0 0 0 0 0 0 0 ...
##  $ Ficus.obtusifolia           : int  0 0 0 0 0 0 0 0 0 0 ...
##  $ Ficus.popenoei              : int  0 0 0 0 0 0 1 0 0 0 ...
##  $ Ficus.tonduzii              : int  0 0 1 2 1 0 0 0 0 0 ...
##  $ Ficus.trigonata             : int  0 0 0 0 0 0 0 0 0 0 ...
##  $ Ficus.yoponensis            : int  1 0 0 0 0 1 1 0 0 0 ...
##  $ Garcinia.intermedia         : int  0 1 1 3 2 1 2 2 1 0 ...
##  $ Garcinia.madruno            : int  4 0 0 0 1 0 0 0 0 1 ...
##  $ Genipa.americana            : int  0 0 1 0 0 0 1 0 1 1 ...
##  $ Guapira.myrtiflora          : int  3 1 0 1 1 7 3 1 1 1 ...
##  $ Guarea.fuzzy                : int  1 1 0 1 3 0 0 2 0 3 ...
##  $ Guarea.grandifolia          : int  0 0 0 0 0 0 0 1 0 0 ...
##  $ Guarea.guidonia             : int  2 6 2 5 3 4 4 0 1 5 ...
##  $ Guatteria.dumetorum         : int  6 16 6 3 9 7 8 6 2 2 ...
##  $ Guazuma.ulmifolia           : int  0 0 0 1 0 0 0 0 0 0 ...
##  $ Guettarda.foliacea          : int  1 5 1 2 1 0 0 4 1 3 ...
##  $ Gustavia.superba            : int  10 5 0 1 3 1 8 4 4 4 ...
##  $ Hampea.appendiculata        : int  0 0 1 0 0 0 0 0 2 1 ...
##  $ Hasseltia.floribunda        : int  5 9 4 11 9 2 7 6 3 4 ...
##  $ Heisteria.acuminata         : int  0 0 0 0 1 1 0 0 0 0 ...
##  $ Heisteria.concinna          : int  4 5 4 6 4 8 2 5 1 5 ...
##  $ Hirtella.americana          : int  0 0 0 0 0 0 0 0 0 0 ...
##  $ Hirtella.triandra           : int  21 14 5 4 6 6 7 14 8 7 ...
##  $ Hura.crepitans              : int  0 0 0 0 0 2 1 1 0 0 ...
##  $ Hieronyma.alchorneoides     : int  0 2 0 0 0 0 0 0 1 0 ...
##   [list output truncated]
```

3

```
##  - attr(*, "original.names")= chr [1:225] "Abarema.macradenium" "Acacia.melanoceras" "Acalypha.divers
```

3) SPECIES RICHNESS

Species richness (S) refers to the number of species in a system or the number of species observed in a sample.

Observed richness

In the R code chunk below, do the following:

1. Write a function called `S.obs` to calculate observed richness

2. Use your function to determine the number of species in `site1` of the BCI data set, and

3. Compare the output of your function to the output of the `specnumber()` function in `vegan`.

```r
S.obs <- function(x = ""){
   rowSums(x > 0) *1
   }
print(S.obs)
```

```
## function (x = "")
## {
##     rowSums(x > 0) * 1
## }
```

```r
print(BCI)
```

```
##     Abarema.macradenia Vachellia.melanoceras Acalypha.diversifolia
## 1                    0                     0                     0
## 2                    0                     0                     0
## 3                    0                     0                     0
## 4                    0                     0                     0
## 5                    0                     0                     0
## 6                    0                     0                     0
## 7                    0                     0                     0
## 8                    0                     0                     0
## 9                    0                     0                     0
## 10                   1                     0                     0
## 11                   0                     0                     0
## 12                   0                     0                     0
## 13                   0                     0                     0
## 14                   0                     0                     0
## 15                   0                     0                     0
## 16                   0                     0                     0
## 17                   0                     0                     0
## 18                   0                     0                     0
## 19                   0                     0                     0
## 20                   0                     0                     0
## 21                   0                     0                     0
## 22                   0                     0                     0
## 23                   0                     0                     0
## 24                   0                     0                     0
## 25                   0                     0                     0
## 26                   0                     0                     0
## 27                   0                     0                     0
```

```
## 28                             0                      2                       0
## 29                             0                      0                       0
## 30                             0                      0                       0
## 31                             0                      0                       0
## 32                             0                      1                       0
## 33                             0                      0                       0
## 34                             0                      0                       1
## 35                             0                      0                       0
## 36                             0                      0                       0
## 37                             0                      0                       0
## 38                             0                      0                       0
## 39                             0                      0                       0
## 40                             0                      0                       1
## 41                             0                      0                       0
## 42                             0                      0                       0
## 43                             0                      0                       0
## 44                             0                      0                       0
## 45                             0                      0                       0
## 46                             0                      0                       0
## 47                             0                      0                       0
## 48                             0                      0                       0
## 49                             0                      0                       0
## 50                             0                      0                       0
##     Acalypha.macrostachya Adelia.triloba Aegiphila.panamensis
## 1                       0              0                    0
## 2                       0              0                    0
## 3                       0              0                    0
## 4                       0              3                    0
## 5                       0              1                    1
## 6                       0              0                    0
## 7                       0              0                    1
## 8                       0              0                    0
## 9                       0              5                    0
## 10                      0              0                    1
## 11                      0              0                    0
## 12                      0              1                    1
## 13                      0              1                    1
## 14                      0              0                    0
## 15                      0              2                    0
## 16                      0              2                    0
## 17                      0              0                    1
## 18                      0              1                    1
## 19                      0              0                    1
## 20                      0              0                    2
## 21                      0              0                    1
## 22                      0              1                    0
## 23                      0              0                    0
## 24                      0              2                    1
## 25                      0              0                    1
## 26                      0              0                    0
## 27                      0              1                    4
## 28                      1              0                    1
## 29                      0              1                    0
## 30                      0             14                    2
```

```
## 31                 0                5                0
## 32                 0                7                0
## 33                 0                3                1
## 34                 0                3                0
## 35                 0                6                0
## 36                 0                1                0
## 37                 0                2                0
## 38                 0                6                0
## 39                 0                9                0
## 40                 0                7                0
## 41                 0                0                1
## 42                 0                0                0
## 43                 0                0                1
## 44                 0                4                0
## 45                 0                0                0
## 46                 0                0                0
## 47                 0                2                0
## 48                 0                1                0
## 49                 0                0                0
## 50                 0                1                0
##    Alchornea.costaricensis Alchornea.latifolia Alibertia.edulis
## 1                       2                   0                0
## 2                       1                   0                0
## 3                       2                   0                0
## 4                      18                   0                0
## 5                       3                   0                0
## 6                       2                   1                0
## 7                       0                   0                0
## 8                       2                   0                0
## 9                       2                   0                0
## 10                      2                   0                0
## 11                     10                   0                0
## 12                      3                   0                0
## 13                      1                   0                1
## 14                      4                   0                0
## 15                      2                   0                0
## 16                      2                   0                0
## 17                      2                   0                0
## 18                      0                   0                0
## 19                      1                   0                0
## 20                      2                   0                0
## 21                      2                   0                0
## 22                      4                   0                0
## 23                      1                   0                0
## 24                      0                   0                0
## 25                      2                   0                0
## 26                      3                   0                0
## 27                      3                   0                0
## 28                      2                   0                0
## 29                      1                   0                0
## 30                      6                   0                0
## 31                      4                   0                0
## 32                      6                   0                0
## 33                      3                   0                0
```

```
## 34                        5                 0                 0
## 35                        8                 0                 0
## 36                        3                 0                 0
## 37                        4                 0                 0
## 38                        2                 0                 0
## 39                        3                 0                 0
## 40                        3                 0                 0
## 41                       11                 0                 0
## 42                        0                 0                 0
## 43                        3                 0                 0
## 44                        4                 0                 0
## 45                        0                 0                 0
## 46                        0                 0                 0
## 47                        1                 0                 0
## 48                        3                 0                 0
## 49                        6                 0                 0
## 50                        2                 0                 0
##     Allophylus.psilospermus Alseis.blackiana Amaioua.corymbosa
## 1                         0               25                 0
## 2                         0               26                 0
## 3                         0               18                 0
## 4                         0               23                 0
## 5                         1               16                 0
## 6                         0               14                 0
## 7                         0               18                 0
## 8                         0               14                 0
## 9                         0               16                 0
## 10                        0               14                 0
## 11                        0               14                 0
## 12                        2               19                 0
## 13                        1                8                 0
## 14                        0               17                 0
## 15                        0               15                 0
## 16                        3               25                 0
## 17                        2               31                 0
## 18                        0                7                 0
## 19                        1               13                 0
## 20                        0               10                 0
## 21                        1               12                 0
## 22                        4               22                 0
## 23                        0                5                 0
## 24                        1               14                 0
## 25                        0               20                 0
## 26                        0                7                 0
## 27                        3               17                 0
## 28                        0               16                 0
## 29                        0               15                 0
## 30                        0               36                 0
## 31                        0               11                 0
## 32                        0               21                 0
## 33                        1               24                 0
## 34                        0               42                 0
## 35                        0               93                 0
## 36                        0                8                 0
```

7

```
## 37                         0            19                    0
## 38                         1            25                    0
## 39                         1            38                    0
## 40                         1            65                    0
## 41                         0            13                    0
## 42                         0            13                    0
## 43                         0             8                    0
## 44                         0            13                    0
## 45                         0            10                    0
## 46                         0            29                    2
## 47                         1            17                    0
## 48                         1            12                    0
## 49                         1             6                    1
## 50                         1             9                    0
##     Anacardium.excelsum Andira.inermis Annona.spraguei Apeiba.glabra
## 1                     0              0               1            13
## 2                     0              0               0            12
## 3                     0              0               1             6
## 4                     0              0               0             3
## 5                     0              1               0             4
## 6                     0              1               0            10
## 7                     0              0               0             5
## 8                     1              0               1             4
## 9                     0              1               1             5
## 10                    0              0               0             5
## 11                    1              1               0             2
## 12                    0              0               0             4
## 13                    0              0               3             1
## 14                    0              1               4             5
## 15                    0              0               2             8
## 16                    0              0               0             5
## 17                    0              0               1             1
## 18                    2              0               2             1
## 19                    0              2               1            13
## 20                    0              0               2             6
## 21                    2              0               0             2
## 22                    0              1               0             7
## 23                    2              1               0             3
## 24                    1              2               0             6
## 25                    1              0               0             6
## 26                    0              2               0             4
## 27                    0              0               0             2
## 28                    2              1               0             6
## 29                    0              1               0             5
## 30                    0              2               0             5
## 31                    0              0               0             5
## 32                    0              0               0             4
## 33                    0              2               0             8
## 34                    0              1               0             3
## 35                    0              0               0             5
## 36                    0              0               1             3
## 37                    0              0               0             4
## 38                    0              0               1             1
## 39                    0              0               0             3
```

```
## 40                     2                 0                 0       7
## 41                     2                 1                 0       2
## 42                     0                 1                 0       5
## 43                     0                 2                 0       2
## 44                     0                 0                 0       7
## 45                     0                 0                 0       1
## 46                     0                 0                 3       0
## 47                     0                 0                 1       8
## 48                     3                 1                 2       2
## 49                     1                 2                 0       4
## 50                     2                 1                 0       3
##     Apeiba.tibourbou Aspidosperma.desmanthum Astrocaryum.standleyanum
## 1                  2                       0                        0
## 2                  0                       0                        2
## 3                  1                       0                        1
## 4                  1                       1                        5
## 5                  0                       1                        6
## 6                  0                       1                        2
## 7                  0                       0                        2
## 8                  1                       0                        0
## 9                  0                       0                        2
## 10                 0                       1                        1
## 11                 0                       0                        3
## 12                 0                       0                        1
## 13                 1                       0                       12
## 14                 1                       1                        5
## 15                 0                       0                        0
## 16                 0                       0                        5
## 17                 0                       1                        1
## 18                 1                       0                        6
## 19                 1                       0                        2
## 20                 1                       0                        0
## 21                 0                       2                        3
## 22                 0                       0                        8
## 23                 0                       0                       17
## 24                 0                       0                        7
## 25                 0                       3                       13
## 26                 1                       0                        4
## 27                 0                       0                        5
## 28                 0                       2                        4
## 29                 0                       2                        1
## 30                 1                       0                        1
## 31                 0                       0                        3
## 32                 0                       1                        4
## 33                 1                       3                       10
## 34                 1                       3                        3
## 35                 1                       0                        3
## 36                 0                       3                        2
## 37                 0                       1                        2
## 38                 0                       3                        1
## 39                 0                       5                        1
## 40                 0                       3                        3
## 41                 0                       0                        3
## 42                 1                       2                       13
```

```
## 43                  0                      3                   1
## 44                  0                      2                   6
## 45                  0                      0                   1
## 46                  3                      1                   6
## 47                  1                      2                   5
## 48                  0                      2                   7
## 49                  0                      1                   4
## 50                  1                      2                   4
##    Astronium.graveolens Attalea.butyracea Banara.guianensis
## 1                     6                 0                 0
## 2                     0                 1                 0
## 3                     1                 0                 0
## 4                     3                 0                 0
## 5                     0                 0                 0
## 6                     1                 1                 0
## 7                     2                 1                 0
## 8                     2                 0                 0
## 9                     0                 0                 0
## 10                    0                 0                 0
## 11                    0                 0                 0
## 12                    0                 0                 0
## 13                    0                 4                 0
## 14                    0                 4                 0
## 15                    0                 0                 0
## 16                    0                 1                 0
## 17                    2                 0                 0
## 18                    0                 2                 0
## 19                    0                 0                 0
## 20                    0                 0                 0
## 21                    1                 1                 0
## 22                    2                 1                 0
## 23                    0                 1                 1
## 24                    0                 1                 0
## 25                    0                 2                 0
## 26                    2                 2                 0
## 27                    0                 1                 0
## 28                    1                 0                 0
## 29                    1                 0                 0
## 30                    1                 0                 0
## 31                    1                 2                 0
## 32                    0                 0                 0
## 33                    1                 0                 0
## 34                    7                 0                 0
## 35                    1                 0                 0
## 36                    0                 0                 0
## 37                    0                 0                 0
## 38                    0                 1                 0
## 39                    2                 0                 0
## 40                    1                 0                 0
## 41                    0                 1                 0
## 42                    0                 1                 0
## 43                    0                 0                 0
## 44                    0                 0                 0
## 45                    0                 1                 0
```

```
## 46                          1                 1                 0
## 47                          0                 0                 0
## 48                          0                 2                 0
## 49                          0                 1                 0
## 50                          0                 0                 0
##      Beilschmiedia.pendula Brosimum.alicastrum Brosimum.guianense
## 1                        4                   5                  0
## 2                        5                   2                  0
## 3                        7                   4                  0
## 4                        5                   3                  0
## 5                        8                   2                  0
## 6                        6                   2                  0
## 7                        5                   6                  0
## 8                        9                   4                  0
## 9                       11                   3                  0
## 10                      14                   6                  0
## 11                       1                   5                  0
## 12                       2                   4                  0
## 13                       0                   2                  0
## 14                       3                   4                  0
## 15                       9                   3                  0
## 16                       4                   4                  0
## 17                       2                   5                  0
## 18                       0                   0                  0
## 19                       2                   4                  0
## 20                       1                   0                  0
## 21                       2                   2                  0
## 22                       0                   8                  0
## 23                       0                   2                  0
## 24                      16                   4                  0
## 25                       5                   5                  0
## 26                       3                   3                  0
## 27                       1                   5                  0
## 28                       3                   4                  0
## 29                      11                   2                  0
## 30                       4                   5                  0
## 31                       2                   2                  0
## 32                       5                   8                  0
## 33                       2                   3                  0
## 34                       5                   5                  0
## 35                       1                   1                  0
## 36                       1                   3                  0
## 37                       2                   4                  0
## 38                       5                   8                  0
## 39                       9                   5                  0
## 40                       5                   5                  0
## 41                       7                   6                  0
## 42                       4                   4                  0
## 43                      10                   2                  0
## 44                      21                   2                  0
## 45                      42                   2                  0
## 46                       0                   5                  0
## 47                       1                   1                  1
## 48                       1                   6                  0
```

```
## 49                       11               4                0
## 50                       17               4                0
##    Calophyllum.longifolium Casearia.aculeata Casearia.arborea
## 1                        0                 0                1
## 2                        2                 0                1
## 3                        0                 0                3
## 4                        2                 0                2
## 5                        1                 0                4
## 6                        2                 0                1
## 7                        2                 0                2
## 8                        2                 1                3
## 9                        2                 0                9
## 10                       0                 0                7
## 11                       0                 0                2
## 12                       0                 0                1
## 13                       0                 1                0
## 14                       4                 0                4
## 15                       0                 0                6
## 16                       1                 0                1
## 17                       0                 1                0
## 18                       4                 0                0
## 19                       1                 0                4
## 20                       2                 0                6
## 21                       2                 1                0
## 22                       1                 1                0
## 23                       1                 0                1
## 24                       2                 0                1
## 25                       1                 1                3
## 26                       0                 0                1
## 27                       1                 2                0
## 28                       1                 0                2
## 29                       1                 0                0
## 30                       0                 1                0
## 31                       4                 0                1
## 32                       0                 1                0
## 33                       0                 0                0
## 34                       0                 7                8
## 35                       1                 0                3
## 36                       0                 1                5
## 37                       1                 1                1
## 38                       1                 0                2
## 39                       0                 0                2
## 40                       1                 1                4
## 41                       0                 1                1
## 42                       1                 1                1
## 43                       0                 0                0
## 44                       2                 1                1
## 45                       3                 0                0
## 46                       2                 0                2
## 47                       0                 0                1
## 48                       2                 0                2
## 49                       2                 0                0
## 50                       0                 0                1
##    Casearia.commersoniana Casearia.guianensis Casearia.sylvestris
```

```
## 1                               0                        0                  2
## 2                               0                        0                  1
## 3                               1                        0                  0
## 4                               0                        0                  0
## 5                               1                        0                  0
## 6                               0                        0                  3
## 7                               0                        0                  1
## 8                               0                        0                  0
## 9                               1                        0                  1
## 10                              0                        0                  1
## 11                              0                        0                  0
## 12                              0                        0                  1
## 13                              0                        0                  1
## 14                              0                        0                  0
## 15                              0                        0                  0
## 16                              0                        0                  2
## 17                              0                        1                  0
## 18                              0                        0                  1
## 19                              0                        0                  1
## 20                              0                        0                  1
## 21                              0                        0                  0
## 22                              0                        0                  2
## 23                              0                        0                  1
## 24                              0                        0                  2
## 25                              0                        0                  1
## 26                              0                        0                  1
## 27                              0                        0                  1
## 28                              0                        0                  0
## 29                              0                        0                  0
## 30                              0                        0                  5
## 31                              0                        0                  0
## 32                              0                        0                  4
## 33                              0                        0                  0
## 34                              0                        0                  1
## 35                              0                        0                  3
## 36                              0                        0                  2
## 37                              0                        0                  1
## 38                              0                        0                  0
## 39                              0                        0                  3
## 40                              0                        0                  2
## 41                              0                        0                  2
## 42                              0                        0                  2
## 43                              0                        0                  0
## 44                              0                        0                  1
## 45                              0                        0                  0
## 46                              0                        1                  3
## 47                              0                        0                  0
## 48                              0                        0                  0
## 49                              0                        0                  1
## 50                              0                        0                  0
##    Cassipourea.guianensis Cavanillesia.platanifolia Cecropia.insignis
## 1                       2                         0                12
## 2                       0                         0                 5
## 3                       1                         0                 7
```

```
## 4                                1                        0                    17
## 5                                3                        0                    21
## 6                                4                        0                     4
## 7                                4                        0                     0
## 8                                0                        0                     7
## 9                                2                        0                     2
## 10                               1                        0                    16
## 11                               0                        0                     3
## 12                               2                        0                     2
## 13                               9                        0                     1
## 14                               3                        0                    11
## 15                               0                        0                    24
## 16                               1                        0                     2
## 17                               0                        0                     3
## 18                               6                        0                     0
## 19                               2                        0                     8
## 20                               3                        0                    11
## 21                               1                        0                     2
## 22                               2                        0                     1
## 23                               6                        0                     2
## 24                               1                        0                     3
## 25                               2                        1                    10
## 26                               2                        3                     1
## 27                               0                        1                     3
## 28                               3                        1                     3
## 29                               3                        0                     5
## 30                               3                        1                    14
## 31                               0                        1                     3
## 32                               1                        1                     4
## 33                               0                        1                     6
## 34                               1                        1                     2
## 35                               0                        1                     2
## 36                               0                        0                     6
## 37                               2                        0                    10
## 38                               2                        1                     6
## 39                               0                        1                     4
## 40                               0                        1                     2
## 41                               2                        0                     7
## 42                               2                        0                     2
## 43                               2                        1                     2
## 44                               0                        0                     0
## 45                               3                        0                     5
## 46                               1                        0                     1
## 47                               2                        2                     2
## 48                               0                        1                     0
## 49                               0                        0                     0
## 50                               2                        0                     0
##     Cecropia.obtusifolia Cedrela.odorata Ceiba.pentandra Celtis.schippii
## 1                      0               0               0                0
## 2                      0               0               1                0
## 3                      0               0               1                0
## 4                      0               0               0                2
## 5                      1               0               1                2
## 6                      0               0               0                0
```

```
## 7                       0              0              0              1
## 8                       2              0              1              0
## 9                       0              0              0              0
## 10                      2              0              1              0
## 11                      0              0              2              0
## 12                      1              0              0              1
## 13                      1              0              2              0
## 14                      1              0              0              0
## 15                      0              1              2              1
## 16                      0              0              1              2
## 17                      0              0              2              1
## 18                      0              0              0              0
## 19                      3              0              0              1
## 20                      0              0              1              3
## 21                      4              0              2              2
## 22                      0              0              2              1
## 23                      3              0              2              1
## 24                      0              0              1              4
## 25                      1              0              1              0
## 26                      0              0              1              0
## 27                      0              0              2              0
## 28                      0              0              0              0
## 29                      1              0              3              0
## 30                      1              0              1              1
## 31                      0              1              0              0
## 32                      0              0              1              1
## 33                      1              0              1              1
## 34                      1              0              0              1
## 35                      0              0              1              0
## 36                      0              0              1              0
## 37                      0              0              1              0
## 38                      0              0              1              1
## 39                      0              0              0              1
## 40                      0              0              0              0
## 41                      0              0              1              1
## 42                      0              0              0              0
## 43                      0              0              0              1
## 44                      1              0              0              1
## 45                      0              0              0              3
## 46                      0              0              2              0
## 47                      0              0              0              2
## 48                      0              0              0              1
## 49                      1              0              0              1
## 50                      0              0              0              0
##    Cespedesia.spathulata Chamguava.schippii Chimarrhis.parviflora
## 1                      0                  0                     0
## 2                      0                  0                     0
## 3                      0                  0                     0
## 4                      0                  0                     0
## 5                      0                  0                     0
## 6                      0                  0                     0
## 7                      0                  0                     0
## 8                      0                  0                     0
## 9                      0                  0                     0
```

15

```
## 10                    0             0                 0
## 11                    0             0                 0
## 12                    0             0                 0
## 13                    0             0                 1
## 14                    0             0                 0
## 15                    0             0                 0
## 16                    1             0                 0
## 17                    0             0                 0
## 18                    0             2                 0
## 19                    0             0                 0
## 20                    0             0                 0
## 21                    0             0                 0
## 22                    0             0                 0
## 23                    0             0                 0
## 24                    0             1                 0
## 25                    0             0                 0
## 26                    0             0                 0
## 27                    0             0                 0
## 28                    0             0                 0
## 29                    0             0                 0
## 30                    0             0                 0
## 31                    0             0                 0
## 32                    0             0                 0
## 33                    0             0                 0
## 34                    0             0                 0
## 35                    0             0                 0
## 36                    0             0                 0
## 37                    0             0                 0
## 38                    0             0                 0
## 39                    0             0                 0
## 40                    0             0                 0
## 41                    0             0                 0
## 42                    0             0                 0
## 43                    0             0                 0
## 44                    0             0                 0
## 45                    0             0                 0
## 46                    0             0                 0
## 47                    0             0                 0
## 48                    0             0                 0
## 49                    1             0                 0
## 50                    0             0                 0
##     Maclura.tinctoria Chrysochlamys.eclipes Chrysophyllum.argenteum
## 1                   0                     0                       4
## 2                   0                     0                       1
## 3                   0                     0                       2
## 4                   0                     0                       2
## 5                   0                     0                       6
## 6                   0                     0                       2
## 7                   0                     0                       3
## 8                   0                     0                       2
## 9                   0                     0                       4
## 10                  0                     0                       2
## 11                  0                     0                       2
## 12                  0                     0                       1
```

```
## 13                 0                 0                 4
## 14                 0                 0                 2
## 15                 0                 0                 1
## 16                 0                 1                 2
## 17                 0                 0                 1
## 18                 1                 0                 0
## 19                 0                 0                 0
## 20                 0                 0                 2
## 21                 0                 0                 2
## 22                 0                 0                 0
## 23                 0                 0                 1
## 24                 0                 0                 2
## 25                 0                 0                 1
## 26                 0                 0                 0
## 27                 0                 0                 1
## 28                 0                 0                 0
## 29                 0                 0                 3
## 30                 0                 0                 1
## 31                 0                 0                 0
## 32                 0                 0                 1
## 33                 0                 0                 2
## 34                 0                 0                 1
## 35                 0                 0                 1
## 36                 0                 0                 3
## 37                 0                 0                 2
## 38                 0                 0                 0
## 39                 0                 0                 2
## 40                 0                 0                 0
## 41                 0                 1                 3
## 42                 0                 0                 2
## 43                 0                 0                 0
## 44                 0                 0                 1
## 45                 0                 0                 2
## 46                 0                 0                 1
## 47                 0                 0                 5
## 48                 0                 0                 1
## 49                 0                 0                 2
## 50                 0                 0                 2
##    Chrysophyllum.cainito Coccoloba.coronata Coccoloba.manzinellensis
## 1                      0                  0                        0
## 2                      0                  0                        0
## 3                      0                  0                        0
## 4                      0                  1                        0
## 5                      0                  2                        0
## 6                      0                  0                        0
## 7                      1                  0                        0
## 8                      0                  1                        2
## 9                      0                  2                        0
## 10                     0                  1                        0
## 11                     0                  0                        0
## 12                     0                  0                        0
## 13                     0                  1                        1
## 14                     2                  0                        0
## 15                     1                  1                        0
```

```
## 16                    0                1                  0
## 17                    0                0                  0
## 18                    2                0                  2
## 19                    1                0                  0
## 20                    0                2                  0
## 21                    0                1                  0
## 22                    1                1                  1
## 23                    2                1                  0
## 24                    1                0                  0
## 25                    2                1                  0
## 26                    0                0                  0
## 27                    1                0                  0
## 28                    0                1                  0
## 29                    1                0                  0
## 30                    0                0                  2
## 31                    0                1                  0
## 32                    0                0                  0
## 33                    1                2                  0
## 34                    2                0                  1
## 35                    0                0                  1
## 36                    0                1                  1
## 37                    0                0                  0
## 38                    0                0                  0
## 39                    0                0                  0
## 40                    1                0                  0
## 41                    0                0                  1
## 42                    0                0                  0
## 43                    2                0                  0
## 44                    0                0                  0
## 45                    1                0                  0
## 46                    1                0                  0
## 47                    1                0                  1
## 48                    0                0                  0
## 49                    0                1                  0
## 50                    1                0                  0
##    Colubrina.glandulosa Cordia.alliodora Cordia.bicolor Cordia.lasiocalyx
## 1                     0                2             12                 8
## 2                     0                3             14                 6
## 3                     0                3             35                 6
## 4                     0                7             23                11
## 5                     0                1             13                 7
## 6                     0                1              7                 6
## 7                     0                2              5                 6
## 8                     0                0             10                 3
## 9                     0                0              7                 0
## 10                    0                2             13                 4
## 11                    0                3             10                 5
## 12                    0                0              2                 3
## 13                    0                2              0                 4
## 14                    0                1             11                 7
## 15                    0                1             21                 3
## 16                    0                1             11                10
## 17                    0                0              7                 3
## 18                    0                2              2                 3
```

```
## 19                   0            5             8             4
## 20                   0            0            17             4
## 21                   0            0             5            11
## 22                   1            0             4             5
## 23                   0            0             2            10
## 24                   0            0             3             4
## 25                   0            0             3             4
## 26                   0            1             1             8
## 27                   0            0             3             9
## 28                   0            0             4             4
## 29                   0            2             3             5
## 30                   0            2             5             0
## 31                   0            2             0             6
## 32                   0            0             3             7
## 33                   0            0             3            11
## 34                   0            2             0             5
## 35                   0            0             3             4
## 36                   0            0             9            10
## 37                   0            6             2            13
## 38                   0            2             3             8
## 39                   0            0             1             8
## 40                   0            0             2             3
## 41                   0            1             6            12
## 42                   0            0             9            12
## 43                   0            1             2            12
## 44                   0            0             3            20
## 45                   0            0             1             8
## 46                   0            6             7            17
## 47                   0            1             3            13
## 48                   0            0             3            14
## 49                   0            0             2             7
## 50                   0            1             2            11
##      Coussarea.curvigemma Croton.billbergianus Cupania.cinerea Cupania.latifolia
## 1                       0                    2               0                 0
## 2                       0                    2               0                 0
## 3                       0                    0               0                 0
## 4                       1                   11               0                 1
## 5                       0                    6               0                 0
## 6                       2                    0               0                 0
## 7                       1                    0               0                 0
## 8                       0                    4               0                 0
## 9                       1                    2               0                 0
## 10                      1                    0               0                 0
## 11                      0                    1               0                 0
## 12                      3                    2               0                 0
## 13                      4                   12               0                 0
## 14                      0                   11               0                 0
## 15                      0                    1               0                 0
## 16                      1                    3               0                 2
## 17                      4                    0               0                 0
## 18                      6                    4               0                 0
## 19                      3                    1               1                 0
## 20                      0                    0               0                 1
## 21                      0                    1               0                 0
```

```
## 22                      11                0                0                0
## 23                       2                2                0                0
## 24                       1                0                0                0
## 25                       0                1                0                0
## 26                       0                1                0                0
## 27                       2                0                0                1
## 28                       2                0                0                0
## 29                       0                1                0                0
## 30                       2                2                0                0
## 31                       0                0                0                0
## 32                       0                0                0                0
## 33                       0                0                0                0
## 34                       0                0                0                1
## 35                       1                1                0                0
## 36                       0                0                0                1
## 37                       0                2                0                1
## 38                       0                2                0                0
## 39                       0                0                0                0
## 40                       0                1                0                0
## 41                       0                6                0                3
## 42                       0                3                0                0
## 43                       0                0                0                0
## 44                       0                0                0                0
## 45                       0                1                0                0
## 46                       5                0                0                1
## 47                       1                3                0                0
## 48                       1                6                0                0
## 49                       0                2                0                0
## 50                       0                1                0                0
##     Cupania.rufescens Cupania.seemannii Dendropanax.arboreus
## 1                   0                 2                    0
## 2                   0                 2                    3
## 3                   0                 1                    6
## 4                   0                 0                    0
## 5                   0                 3                    5
## 6                   0                 0                    2
## 7                   0                 1                    1
## 8                   0                 2                    6
## 9                   0                 2                    1
## 10                  0                 0                    3
## 11                  0                 2                    2
## 12                  0                 1                    2
## 13                  1                 2                    5
## 14                  0                 0                    2
## 15                  0                 4                    5
## 16                  0                 0                    3
## 17                  2                 3                    2
## 18                  1                 0                    2
## 19                  0                 1                    3
## 20                  0                 2                    1
## 21                  0                 2                    3
## 22                  0                 0                    0
## 23                  0                 1                    1
## 24                  0                 1                    3
```

```
## 25               0               1              10
## 26               0               0               0
## 27               0               2               0
## 28               0               0               0
## 29               0               2               2
## 30               0               1               3
## 31               0               0               0
## 32               0               1               0
## 33               0               0               1
## 34               0               0               2
## 35               0               1               0
## 36               0               1               0
## 37               0               0               1
## 38               0               0               1
## 39               0               1               0
## 40               0               0               1
## 41               0               1               1
## 42               0               1               0
## 43               0               0               1
## 44               0               0               0
## 45               0               0               2
## 46               0               1               0
## 47               0               1               0
## 48               0               0               0
## 49               0               0               1
## 50               0               1               1
##      Desmopsis.panamensis Diospyros.artanthifolia Dipteryx.oleifera
## 1                       0                       1                 1
## 2                       0                       1                 1
## 3                       4                       1                 3
## 4                       0                       1                 0
## 5                       0                       0                 0
## 6                       0                       0                 0
## 7                       0                       0                 0
## 8                       0                       0                 2
## 9                       0                       0                 1
## 10                      1                       1                 2
## 11                      0                       1                 0
## 12                      0                       0                 0
## 13                      0                       0                 0
## 14                      0                       0                 1
## 15                      0                       0                 1
## 16                      0                       0                 0
## 17                      0                       1                 0
## 18                      0                       0                 0
## 19                      1                       0                 1
## 20                      0                       0                 2
## 21                      0                       0                 0
## 22                      0                       2                 0
## 23                      1                       0                 0
## 24                      0                       0                 0
## 25                      0                       0                 0
## 26                      0                       0                 1
## 27                      0                       0                 1
```

```
## 28                     0                   0                   3
## 29                     0                   0                   1
## 30                     0                   0                   2
## 31                     0                   1                   0
## 32                     0                   0                   1
## 33                     1                   0                   1
## 34                     1                   0                   0
## 35                     0                   0                   0
## 36                     1                   0                   1
## 37                     1                   0                   0
## 38                     0                   1                   0
## 39                     1                   0                   0
## 40                     0                   0                   0
## 41                     0                   0                   0
## 42                     0                   0                   0
## 43                     0                   0                   2
## 44                     1                   0                   1
## 45                     0                   0                   2
## 46                     0                   3                   1
## 47                     0                   2                   0
## 48                     0                   0                   0
## 49                     0                   0                   0
## 50                     0                   0                   1
##     Drypetes.standleyi Elaeis.oleifera Enterolobium.schomburgkii
## 1                    2               0                         0
## 2                    1               0                         0
## 3                    2               0                         0
## 4                    0               0                         0
## 5                    0               0                         0
## 6                    0               0                         0
## 7                    0               0                         0
## 8                    0               0                         0
## 9                    0               0                         0
## 10                   0               0                         0
## 11                   3               0                         0
## 12                   2               0                         0
## 13                   0               6                         0
## 14                   0               0                         0
## 15                   0               0                         0
## 16                   2               0                         0
## 17                   3               0                         0
## 18                   1               9                         0
## 19                   1               1                         1
## 20                   0               0                         0
## 21                   7               0                         0
## 22                   4               0                         0
## 23                   0               5                         0
## 24                   0               0                         0
## 25                   2               0                         0
## 26                   8               0                         0
## 27                   7               0                         0
## 28                   2               0                         0
## 29                   4               0                         0
## 30                   3               0                         1
```

```
## 31                      15                       0                                    0
## 32                       6                       0                                    0
## 33                       2                       0                                    0
## 34                       1                       0                                    0
## 35                       1                       0                                    0
## 36                      39                       0                                    0
## 37                      13                       0                                    0
## 38                      12                       0                                    0
## 39                       2                       0                                    0
## 40                       0                       0                                    0
## 41                      21                       0                                    0
## 42                      14                       0                                    0
## 43                      17                       0                                    0
## 44                       8                       0                                    0
## 45                       7                       0                                    0
## 46                      33                       0                                    0
## 47                      12                       0                                    0
## 48                      11                       0                                    0
## 49                       5                       0                                    0
## 50                      12                       0                                    0
##    Erythrina.costaricensis Erythroxylum.macrophyllum Eugenia.florida
## 1                        0                         0                0
## 2                        0                         1                1
## 3                        0                         0                0
## 4                        0                         0                7
## 5                        0                         0                2
## 6                        3                         0                0
## 7                        0                         0                0
## 8                        0                         1                1
## 9                        1                         1                1
## 10                       0                         1                3
## 11                       1                         0                1
## 12                       0                         1                1
## 13                       0                         0                2
## 14                       1                         0                1
## 15                       1                         1                0
## 16                       1                         0                0
## 17                       0                         0                2
## 18                       0                         0                2
## 19                       0                         0                2
## 20                       1                         1                1
## 21                       0                         0                1
## 22                       0                         2                1
## 23                       1                         1                2
## 24                       3                         0                1
## 25                       0                         1                2
## 26                       1                         0                1
## 27                       0                         1                1
## 28                       0                         0                0
## 29                       0                         0                5
## 30                       0                         1                3
## 31                       0                         0                0
## 32                       0                         0                1
## 33                       0                         0                1
```

```
## 34                              0                    0              4
## 35                              0                    1              1
## 36                              1                    0              2
## 37                              1                    1              2
## 38                              0                    0              3
## 39                              0                    0              4
## 40                              0                    0              1
## 41                              0                    0              1
## 42                              1                    0              2
## 43                              2                    0              3
## 44                              4                    0              2
## 45                              1                    0              1
## 46                              0                    0              4
## 47                              0                    0              4
## 48                              0                    1              1
## 49                              2                    1              0
## 50                              0                    1              0
##      Eugenia.galalonensis Eugenia.nesiotica Eugenia.oerstediana
## 1                       0                 0                   3
## 2                       0                 0                   2
## 3                       0                 1                   5
## 4                       0                 0                   1
## 5                       0                 0                   5
## 6                       0                 0                   2
## 7                       0                 5                   2
## 8                       1                 4                   3
## 9                       0                 3                   3
## 10                      0                 0                   3
## 11                      0                 0                   6
## 12                      1                 2                   1
## 13                      0                 2                  11
## 14                      0                 3                   1
## 15                      0                 2                   4
## 16                      0                 0                   7
## 17                      0                 2                   3
## 18                      0                 2                   4
## 19                      1                 1                   6
## 20                      0                 0                   2
## 21                      1                 1                   2
## 22                      0                 1                   2
## 23                      0                 1                   2
## 24                      0                 0                   2
## 25                      1                 0                   6
## 26                      1                 0                   1
## 27                      0                 2                   3
## 28                      0                 1                   5
## 29                      1                 0                   1
## 30                      0                 0                   5
## 31                      0                 0                   3
## 32                      0                 1                   2
## 33                      0                 1                   5
## 34                      0                 3                   7
## 35                      0                 0                   6
## 36                      0                 2                   0
```

```
## 37                 0                0                4
## 38                 0                1               10
## 39                 0                2                4
## 40                 2                2                3
## 41                 0                0                7
## 42                 0                0                8
## 43                 0                3                4
## 44                 0                0                3
## 45                 0                1                2
## 46                 0                1                0
## 47                 1                1                2
## 48                 0                1                1
## 49                 0                2                1
## 50                 2                1                2
##     Faramea.occidentalis Ficus.colubrinae Ficus.costaricana Ficus.insipida
## 1                     14                0                 0              0
## 2                     36                1                 0              0
## 3                     39                0                 0              0
## 4                     39                0                 0              0
## 5                     22                0                 0              0
## 6                     16                0                 0              0
## 7                     38                0                 0              0
## 8                     41                0                 0              0
## 9                     33                0                 0              0
## 10                    42                0                 0              0
## 11                    17                0                 0              0
## 12                    38                0                 0              0
## 13                    39                0                 0              1
## 14                    31                0                 0              0
## 15                    31                0                 0              0
## 16                    27                0                 0              0
## 17                    42                0                 0              0
## 18                    35                0                 1              0
## 19                    42                0                 0              0
## 20                    21                0                 1              0
## 21                    17                0                 0              0
## 22                    58                0                 0              0
## 23                    26                0                 1              1
## 24                    24                0                 0              0
## 25                    35                0                 0              0
## 26                    31                0                 0              0
## 27                    51                0                 0              0
## 28                    58                0                 0              0
## 29                    54                0                 0              0
## 30                    61                0                 0              0
## 31                    30                0                 0              0
## 32                    60                0                 0              0
## 33                    53                0                 0              0
## 34                    49                0                 0              0
## 35                    37                0                 0              0
## 36                    32                0                 1              0
## 37                    65                0                 0              0
## 38                    80                0                 1              0
## 39                    43                0                 2              0
```

```
## 40                       41          0              0              1
## 41                       22          0              0              0
## 42                       25          0              0              0
## 43                       15          0              0              0
## 44                       15          0              0              0
## 45                       10          0              0              0
## 46                       22          0              0              0
## 47                       27          0              0              0
## 48                       15          0              0              0
## 49                       11          0              0              0
## 50                        7          0              0              0
##     Ficus.maxima Ficus.obtusifolia Ficus.popenoei Ficus.tonduzii Ficus.trigonata
## 1              1                 0              0              0               0
## 2              0                 0              0              0               0
## 3              0                 0              0              1               0
## 4              0                 0              0              2               0
## 5              0                 0              0              1               0
## 6              0                 0              0              0               0
## 7              0                 0              1              0               0
## 8              0                 0              0              0               0
## 9              0                 0              0              0               0
## 10             0                 0              0              0               0
## 11             0                 0              0              0               0
## 12             0                 0              1              1               0
## 13             0                 0              0              0               0
## 14             0                 1              0              0               0
## 15             0                 0              0              2               0
## 16             0                 0              0              1               0
## 17             0                 0              0              0               0
## 18             0                 0              0              0               0
## 19             0                 0              0              0               0
## 20             0                 0              0              3               0
## 21             0                 0              0              0               0
## 22             1                 1              0              0               0
## 23             0                 0              0              0               0
## 24             0                 2              0              0               0
## 25             0                 0              0              1               0
## 26             0                 0              0              0               0
## 27             0                 0              0              0               0
## 28             0                 0              0              0               0
## 29             0                 0              0              0               0
## 30             0                 0              0              0               0
## 31             1                 0              0              1               0
## 32             0                 0              0              0               0
## 33             0                 1              0              0               0
## 34             0                 0              0              0               1
## 35             0                 0              0              0               0
## 36             0                 0              0              1               0
## 37             0                 0              0              1               0
## 38             0                 0              0              1               0
## 39             0                 0              0              0               0
## 40             0                 0              0              0               0
## 41             1                 1              0              0               0
## 42             0                 0              0              2               1
```

26

```
## 43            0              0              0              2       1
## 44            0              0              1              0       1
## 45            0              0              0              0       0
## 46            0              0              0              0       0
## 47            0              1              0              0       0
## 48            0              0              0              1       0
## 49            0              0              0              1       0
## 50            0              0              0              1       1
##     Ficus.yoponensis Garcinia.intermedia Garcinia.madruno Genipa.americana
## 1                  1                   0                4                0
## 2                  0                   1                0                0
## 3                  0                   1                0                1
## 4                  0                   3                0                0
## 5                  0                   2                1                0
## 6                  1                   1                0                0
## 7                  1                   2                0                1
## 8                  0                   2                0                0
## 9                  0                   1                0                1
## 10                 0                   0                1                1
## 11                 0                   1                0                0
## 12                 0                   3                0                0
## 13                 0                   3                0                1
## 14                 0                   1                0                1
## 15                 0                   0                1                0
## 16                 0                   1                0                2
## 17                 0                   0                0                1
## 18                 0                   2                0                1
## 19                 0                   3                0                0
## 20                 0                   0                1                0
## 21                 0                   1                0                0
## 22                 0                   3                0                0
## 23                 0                   2                1                0
## 24                 0                   1                0                0
## 25                 1                   3                1                0
## 26                 0                   2                0                1
## 27                 0                   2                1                0
## 28                 0                   4                0                0
## 29                 0                   1                0                1
## 30                 0                   1                0                0
## 31                 0                   0                0                0
## 32                 0                   3                0                0
## 33                 0                   0                0                0
## 34                 0                   4                1                0
## 35                 1                   2                0                0
## 36                 0                   0                0                1
## 37                 0                   1                0                0
## 38                 0                   2                0                0
## 39                 0                   6                0                1
## 40                 0                   6                0                0
## 41                 0                   0                0                2
## 42                 0                   0                0                0
## 43                 0                   2                0                0
## 44                 0                   4                0                0
## 45                 0                   0                0                1
```

27

```
## 46                   0                8                0                1
## 47                   1                3                0                1
## 48                   0                0                0                0
## 49                   0                0                0                1
## 50                   0                4                0                3
##    Guapira.myrtiflora Guarea.fuzzy Guarea.grandifolia Guarea.guidonia
## 1                   3            1                  0               2
## 2                   1            1                  0               6
## 3                   0            0                  0               2
## 4                   1            1                  0               5
## 5                   1            3                  0               3
## 6                   7            0                  0               4
## 7                   3            0                  0               4
## 8                   1            2                  1               0
## 9                   1            0                  0               1
## 10                  1            3                  0               5
## 11                  1            1                  1               5
## 12                  3            1                  0               3
## 13                  2            0                  0               4
## 14                  0            0                  0               3
## 15                  1            2                  2               0
## 16                  2            2                  0               7
## 17                  1            0                  0               2
## 18                  0            0                  0               2
## 19                  3            0                  0               2
## 20                  1            1                  1               5
## 21                  3            3                  0               7
## 22                  3            0                  1               4
## 23                  1            2                  0               6
## 24                  7            0                  0               8
## 25                  2            1                  0               6
## 26                  2            1                  0               6
## 27                  4            1                  0              12
## 28                  2            2                  0               8
## 29                  2            3                  1               3
## 30                  2            2                  0               2
## 31                  2            0                  0               9
## 32                  0            2                  0              11
## 33                  4            1                  1              27
## 34                  2            5                  0              16
## 35                  1            0                  0               3
## 36                  2            2                  0              10
## 37                  1            2                  1              24
## 38                  5            2                  0              12
## 39                  3            1                  1               9
## 40                  4            2                  0               6
## 41                  1            0                  0              18
## 42                  1            1                  0               8
## 43                  1            1                  0              16
## 44                  0            3                  0               8
## 45                  2            7                  0              11
## 46                  2            2                  0               4
## 47                  2            0                  0              10
## 48                  4            1                  0              13
```

```
## 49                    1              1                   0              20
## 50                    0              2                   0              14
##    Guatteria.dumetorum Guazuma.ulmifolia Guettarda.foliacea Gustavia.superba
## 1                    6                 0                  1               10
## 2                   16                 0                  5                5
## 3                    6                 0                  1                0
## 4                    3                 1                  2                1
## 5                    9                 0                  1                3
## 6                    7                 0                  0                1
## 7                    8                 0                  0                8
## 8                    6                 0                  4                4
## 9                    2                 0                  1                4
## 10                   2                 0                  3                4
## 11                   3                 0                  1                2
## 12                   2                 0                  0                3
## 13                   0                 2                  2               10
## 14                   7                 1                  0                4
## 15                  16                 1                  4                4
## 16                   5                 1                  0               10
## 17                   3                 0                  1                7
## 18                   0                 1                  2                3
## 19                   3                 1                  1                6
## 20                   7                 2                  4                4
## 21                  10                 0                  0                6
## 22                   5                 0                  0                9
## 23                   2                 1                  0                3
## 24                   5                 1                  3                4
## 25                   2                 2                  3               14
## 26                  13                 0                  0                8
## 27                   3                 2                  0                3
## 28                   3                 1                  1                8
## 29                   5                 1                  0                6
## 30                   1                 2                  6               23
## 31                  10                 0                  1                2
## 32                  11                 0                  2                8
## 33                   3                 0                  0                6
## 34                   1                 5                  3               25
## 35                   0                 5                  7              247
## 36                   8                 2                  2                1
## 37                   5                 0                  0                1
## 38                   3                 0                  2               11
## 39                   1                 2                  2               22
## 40                   4                 0                  3               63
## 41                   5                 1                  1                6
## 42                   7                 0                  2                4
## 43                   5                 1                  1                1
## 44                   6                 0                  2               17
## 45                   1                 0                  0                2
## 46                   1                 0                  1               11
## 47                   0                 0                  4               11
## 48                   2                 1                  3                4
## 49                   7                 1                  1               15
## 50                   4                 0                  2               10
##    Hampea.appendiculata Hasseltia.floribunda Heisteria.acuminata
```

```
## 1                         0                 5                   0
## 2                         0                 9                   0
## 3                         1                 4                   0
## 4                         0                11                   0
## 5                         0                 9                   1
## 6                         0                 2                   1
## 7                         0                 7                   0
## 8                         0                 6                   0
## 9                         2                 3                   0
## 10                        1                 4                   0
## 11                        0                 5                   0
## 12                        1                 0                   0
## 13                        0                 1                   0
## 14                        0                 4                   1
## 15                        0                20                   0
## 16                        0                 7                   0
## 17                        0                 1                   0
## 18                        0                 2                   0
## 19                        0                 3                   0
## 20                        0                 6                   0
## 21                        0                 3                   1
## 22                        0                 5                   0
## 23                        0                 6                   0
## 24                        1                 5                   0
## 25                        1                 3                   0
## 26                        0                 7                   1
## 27                        0                 1                   0
## 28                        0                 3                   0
## 29                        1                 1                   0
## 30                        0                10                   0
## 31                        0                 2                   0
## 32                        0                 7                   0
## 33                        0                 4                   0
## 34                        0                 1                   0
## 35                        0                 7                   0
## 36                        1                 1                   1
## 37                        1                 3                   0
## 38                        0                 2                   0
## 39                        0                 2                   0
## 40                        1                 3                   0
## 41                        0                 1                   1
## 42                        1                 4                   0
## 43                        0                 6                   0
## 44                        0                 6                   0
## 45                        1                 1                   0
## 46                        0                 0                   0
## 47                        0                 1                   0
## 48                        0                 2                   0
## 49                        0                 7                   0
## 50                        0                16                   0
##    Heisteria.concinna Hirtella.americana Hirtella.triandra Hura.crepitans
## 1                   4                  0                21                0
## 2                   5                  0                14                0
## 3                   4                  0                 5                0
```

```
## 4                     6                0                4                0
## 5                     4                0                6                0
## 6                     8                0                6                2
## 7                     2                0                7                1
## 8                     5                0               14                1
## 9                     1                0                8                0
## 10                    5                0                7                0
## 11                    5                0               12                0
## 12                   12                0                6                2
## 13                    4                0               11                1
## 14                    0                0               13                0
## 15                    3                0                4                0
## 16                    2                0                4                3
## 17                   13                0                4                0
## 18                    8                0               12                0
## 19                    7                0               24                0
## 20                    1                0               12                0
## 21                    1                0               17                0
## 22                    9                0                6                2
## 23                    5                0               10                5
## 24                    7                1               15                0
## 25                    3                0               26                0
## 26                    4                0               24                4
## 27                    1                0                8                2
## 28                    4                0                9                2
## 29                    5                0                7                5
## 30                    0                0                3                1
## 31                    6                0               14                3
## 32                    6                0                8                7
## 33                    5                0                9                2
## 34                    4                0                4                5
## 35                    2                0                1                0
## 36                    4                0               24                2
## 37                    6                0                7                3
## 38                   15                0                3                2
## 39                   12                0                3                2
## 40                    3                0                7                3
## 41                    6                0               31                2
## 42                    4                0               18                3
## 43                   10                0               23                1
## 44                    6                0               18                6
## 45                   18                0               26                7
## 46                   15                4               22                5
## 47                    6                0               33                7
## 48                    3                0               41                7
## 49                    8                0               43                1
## 50                   11                0               27                2
##    Hieronyma.alchorneoides Inga.acuminata Inga.cocleensis Inga.goldmanii
## 1                        0              0               2              0
## 2                        2              0               4              0
## 3                        0              0               4              1
## 4                        0              0               6              0
## 5                        0              0               0              2
## 6                        0              0               0              1
```

```
## 7                            0               0               1               0
## 8                            0               0               6               1
## 9                            1               0               4               1
## 10                           0               0               5               2
## 11                           0               0               0               1
## 12                           0               0               0               0
## 13                           1               0               2               1
## 14                           2               0               3               1
## 15                           0               0               2               2
## 16                           0               7               0               0
## 17                           0               2               2               1
## 18                           2               0               1               2
## 19                           1               0               2               0
## 20                           3               0               2               3
## 21                           1               0               0               0
## 22                           1               1               3               2
## 23                           5               0               1               6
## 24                           0               0               0               1
## 25                           2               0               0               0
## 26                           1               2               0               1
## 27                           0               0               0               2
## 28                           2               1               0               2
## 29                           1               0               0               0
## 30                           0               0               0               1
## 31                           1               0               0               0
## 32                           0               0               0               1
## 33                           0               0               0               2
## 34                           0               0               0               1
## 35                           3               0               0               0
## 36                           1               0               0               2
## 37                           3               3               0               2
## 38                           1               0               0               0
## 39                           0               0               0               0
## 40                           1               0               0               1
## 41                           2               1               0               1
## 42                           1               2               0               0
## 43                           0               3               0               0
## 44                           0               0               0               1
## 45                           0               0               0               0
## 46                           0               0               2               1
## 47                           2               3               0               1
## 48                           0               1               0               1
## 49                           1               0               0               1
## 50                           0               0               0               0
##     Inga.laurina Inga.semialata Inga.nobilis Inga.oerstediana Inga.pezizifera
## 1              0              0            0                0               0
## 2              0              0            0                0               0
## 3              0              2            1                0               0
## 4              0              4            3                0               0
## 5              1              0            1                0               0
## 6              0              0            0                0               0
## 7              0              0            2                0               0
## 8              0              4            2                0               0
## 9              0              1            2                0               0
```

32

```
## 10             0            1            3            0            0
## 11             0            2            0            0            0
## 12             1            1            0            0            0
## 13             1            0            0            0            0
## 14             0            1            0            0            0
## 15             0            8            5            0            0
## 16             0            6            0            0            0
## 17             0            0            1            0            0
## 18             0            1            1            0            0
## 19             1            0            0            0            0
## 20             0            9            2            0            0
## 21             1            1            1            1            0
## 22             0            2            0            0            0
## 23             0            0            0            0            0
## 24             0            2            1            0            0
## 25             0            1            0            0            0
## 26             0            2            2            0            0
## 27             0            1            2            0            0
## 28             0            2            1            0            0
## 29             0            1            0            1            0
## 30             1            1            1            0            0
## 31             0            1            0            0            0
## 32             0            1            2            0            0
## 33             0            0            0            0            0
## 34             0            0            2            0            0
## 35             0            1            0            0            0
## 36             0            3            0            0            0
## 37             0            2            0            0            0
## 38             0            3            1            0            0
## 39             0            4            1            0            0
## 40             0            7            1            0            3
## 41             0            3            2            0            0
## 42             0            7            3            0            0
## 43             0            0            6            0            2
## 44             0            1            2            0            5
## 45             0            3            2            0            3
## 46             3            1            2            0            0
## 47             1            1            3            0            3
## 48             0            4            3            0            0
## 49             0            3            2            0            1
## 50             0            0            4            0            3
##    Inga.punctata Inga.ruiziana Inga.sapindoides Inga.spectabilis
## 1              3             0                2                0
## 2              0             0                0                2
## 3              0             0                3                0
## 4              0             0                2                1
## 5              0             0                5                0
## 6              0             0                0                0
## 7              0             0                0                0
## 8              0             0                1                0
## 9              0             0                1                0
## 10             0             0                0                0
## 11             0             0                0                1
## 12             0             0                2                0
```

```
## 13               0               0                   0                   0
## 14               0               0                   4                   2
## 15               0               0                   1                   1
## 16               0               0                   0                   0
## 17               0               0                   1                   1
## 18               0               3                   1                   0
## 19               0               0                   3                   1
## 20               1               0                   1                   1
## 21               1               1                   1                   0
## 22               0               0                   2                   0
## 23               0               0                   0                   0
## 24               0               0                   4                   0
## 25               0               0                   2                   0
## 26               0               0                   0                   0
## 27               1               0                   1                   0
## 28               0               0                   4                   0
## 29               0               0                   0                   0
## 30               0               0                   2                   1
## 31               0               0                   2                   0
## 32               0               0                   2                   0
## 33               0               0                   1                   0
## 34               1               0                   3                   0
## 35               1               0                   2                   0
## 36               0               0                   2                   0
## 37               0               0                   3                   0
## 38               0               0                   1                   0
## 39               0               0                   0                   0
## 40               0               0                   1                   0
## 41               1               0                   2                   1
## 42               0               0                   3                   1
## 43               0               0                   1                   0
## 44               0               0                   1                   1
## 45               0               0                   0                   0
## 46               0               0                   1                   0
## 47               0               0                   1                   0
## 48               0               0                   3                   0
## 49               0               0                   2                   0
## 50               1               1                   2                   0
##     Inga.umbellifera Jacaranda.copaia Lacistema.aggregatum Lacmellea.panamensis
## 1                  0                6                    1                    1
## 2                  0               10                    0                    0
## 3                  0                9                    0                    0
## 4                  1                2                    1                    2
## 5                  0                3                    1                    2
## 6                  0                7                    2                    1
## 7                  0                4                    1                    3
## 8                  2                8                    0                    2
## 9                  2                5                    0                    0
## 10                 1               12                    2                    0
## 11                 0                7                    0                    0
## 12                 0                2                    0                    1
## 13                 0                3                    0                    1
## 14                 0               12                    0                    2
## 15                 1               23                    1                    1
```

```
## 16                 0                 6                 1                 0
## 17                 0                 4                 2                 1
## 18                 0                 3                 0                 3
## 19                 1                 7                 1                 4
## 20                 0                10                 1                 1
## 21                 0                 8                 0                 1
## 22                 0                 6                 1                 0
## 23                 0                 4                 0                 2
## 24                 0                 2                 0                 0
## 25                 0                 5                 2                 1
## 26                 0                 0                 1                 0
## 27                 0                 3                 1                 1
## 28                 0                 3                 1                 0
## 29                 0                 3                 1                 1
## 30                 0                 3                 0                 2
## 31                 1                 0                 0                 0
## 32                 0                 3                 1                 0
## 33                 1                 6                 2                 1
## 34                 0                 2                 0                 1
## 35                 1                 3                 1                 1
## 36                 1                 3                 1                 1
## 37                 0                 2                 0                 0
## 38                 0                 1                 0                 3
## 39                 0                 1                 2                 1
## 40                 0                 1                 0                 1
## 41                 0                 3                 0                 1
## 42                 0                 3                 3                 1
## 43                 0                 2                 0                 1
## 44                 1                 0                 0                 0
## 45                 0                 1                 1                 0
## 46                 0                 7                 0                 2
## 47                 1                13                 1                 2
## 48                 0                 1                 0                 2
## 49                 0                 3                 0                 0
## 50                 0                 1                 0                 0
##    Laetia.procera Laetia.thamnia Lafoensia.punicifolia Licania.hypoleuca
## 1               0              0                     0                 0
## 2               1              1                     0                 0
## 3               1              1                     0                 0
## 4               0              0                     0                 0
## 5               1              0                     0                 1
## 6               0              0                     0                 0
## 7               0              0                     0                 0
## 8               1              2                     0                 1
## 9               0              1                     0                 0
## 10              0              1                     0                 1
## 11              1              1                     0                 0
## 12              1              0                     0                 0
## 13              0              3                     0                 1
## 14              1              3                     1                 0
## 15              0              2                     0                 1
## 16              0              0                     0                 0
## 17              1              1                     0                 0
## 18              2              0                     0                 0
```

```
## 19                1                3                        4                2
## 20                0                2                        0                1
## 21                1                0                        0                0
## 22                0                0                        0                1
## 23                0                1                        0                0
## 24                0                2                        0                0
## 25                0                1                        0                1
## 26                0                0                        0                0
## 27                0                1                        0                0
## 28                0                0                        0                0
## 29                0                0                        0                1
## 30                0                0                        0                0
## 31                0                0                        0                0
## 32                0                0                        0                0
## 33                0                0                        0                0
## 34                0                0                        0                0
## 35                0                0                        0                1
## 36                0                1                        0                0
## 37                0                0                        0                0
## 38                0                0                        0                0
## 39                0                0                        0                0
## 40                0                0                        0                0
## 41                0                0                        0                1
## 42                0                0                        0                0
## 43                0                0                        0                0
## 44                0                0                        0                0
## 45                0                0                        0                0
## 46                0                0                        0                0
## 47                0                0                        0                0
## 48                0                0                        0                0
## 49                0                0                        0                1
## 50                0                0                        0                0
##       Licania.platypus Lindackeria.laurina Lonchocarpus.heptaphyllus
## 1                    0                   0                         7
## 2                    0                   0                         7
## 3                    0                   0                         3
## 4                    0                   0                         9
## 5                    0                   0                         2
## 6                    0                   0                         1
## 7                    1                   1                         4
## 8                    0                   0                         2
## 9                    0                   2                         2
## 10                   0                   2                         4
## 11                   1                   0                         2
## 12                   0                   1                         3
## 13                   0                   3                         4
## 14                   0                   4                         3
## 15                   0                   0                         2
## 16                   0                   0                         2
## 17                   0                   2                         5
## 18                   0                   5                         3
## 19                   0                   3                         1
## 20                   0                   2                         1
## 21                   1                   0                         2
```

```
##     Luehea.seemannii Macrocnemum.roseum Maquira.guianensis.costaricana
## 22                0                2                             1
## 23                1                2                             4
## 24                0                6                             2
## 25                0                2                             2
## 26                0                1                             2
## 27                0                2                             0
## 28                0                1                             0
## 29                0                2                             3
## 30                0                1                             7
## 31                0                0                             3
## 32                0                2                             1
## 33                0                0                             1
## 34                0                0                             1
## 35                0                2                             2
## 36                0                0                             4
## 37                0                0                             2
## 38                0                0                             0
## 39                0                1                             1
## 40                0                0                             3
## 41                1                2                             1
## 42                0                0                             1
## 43                0                1                             2
## 44                0                0                             0
## 45                0                0                             1
## 46                0                7                             2
## 47                1                3                             3
## 48                2                0                             1
## 49                2                1                             0
## 50                0                1                             2
##     Luehea.seemannii Macrocnemum.roseum Maquira.guianensis.costaricana
## 1                 1                0                             4
## 2                 0                0                             3
## 3                 0                0                             7
## 4                 0                0                             7
## 5                 1                0                            10
## 6                 1                0                             4
## 7                 2                0                             3
## 8                 0                0                             4
## 9                 1                0                             7
## 10                0                0                             3
## 11                4                0                             6
## 12                1                0                             3
## 13                4                0                             2
## 14                1                0                             0
## 15                0                0                             4
## 16                4                0                             4
## 17                1                0                             2
## 18                5                0                             0
## 19                4                0                             1
## 20                0                0                             2
## 21                4                0                             5
## 22                2                0                             2
## 23                6                0                             2
## 24                0                0                             5
```

```
## 25                         2                  0                                   4
## 26                         1                  1                                   7
## 27                         3                  1                                   3
## 28                         3                  0                                   2
## 29                         1                  0                                   2
## 30                         5                  0                                   2
## 31                         2                  0                                   4
## 32                         3                  3                                   3
## 33                         4                  0                                   3
## 34                         3                  2                                   3
## 35                         6                  6                                   1
## 36                         2                  0                                   5
## 37                         2                  2                                   0
## 38                         2                  0                                   3
## 39                         2                  0                                   1
## 40                         1                  4                                   0
## 41                         2                  1                                   2
## 42                         2                  0                                   4
## 43                         1                  1                                   4
## 44                         1                  0                                   5
## 45                         0                  0                                   7
## 46                         0                  0                                   0
## 47                         1                  2                                   1
## 48                         1                  1                                   4
## 49                         1                  0                                   5
## 50                         0                  1                                   2
##    Margaritaria.nobilis Marila.laxiflora Maytenus.schippii Miconia.affinis
## 1                     0                1                 2               0
## 2                     0                0                 0               0
## 3                     0                0                 0               0
## 4                     0                0                 1               1
## 5                     1                0                 0               0
## 6                     0                0                 1               0
## 7                     0                0                 2               0
## 8                     0                0                 0               1
## 9                     0                0                 0               0
## 10                    0                0                 1               1
## 11                    0                0                 1               0
## 12                    0                0                 0               0
## 13                    0                0                 0               0
## 14                    0                0                 0               1
## 15                    0                0                 0               0
## 16                    0                0                 0               0
## 17                    0                0                 0               1
## 18                    0                0                 1               0
## 19                    0                0                 1               0
## 20                    0                0                 1               1
## 21                    0                0                 1               0
## 22                    0                0                 0               0
## 23                    0                0                 0               0
## 24                    0                0                 0               0
## 25                    0                0                 0               0
## 26                    0                0                 1               0
## 27                    0                0                 0               0
```

```
## 28                        0                0                1                0
## 29                        0                0                0                0
## 30                        0                0                0                0
## 31                        0                1                0                0
## 32                        0                0                1                0
## 33                        0                0                0                0
## 34                        0                0                0                1
## 35                        0                0                0                0
## 36                        0                0                0                0
## 37                        0                0                0                0
## 38                        0                0                0                0
## 39                        0                0                0                1
## 40                        0                0                0                0
## 41                        0                0                2                0
## 42                        0                0                0                0
## 43                        0                0                1                0
## 44                        0                0                1                0
## 45                        0                0                0                0
## 46                        0                0                0                0
## 47                        0                0                0                0
## 48                        1                0                0                0
## 49                        0                0                1                0
## 50                        0                8                1                0
##      Miconia.argentea Miconia.elata Miconia.hondurensis Mosannona.garwoodii
## 1                   2             0                   0                   1
## 2                   0             0                   0                   0
## 3                   1             0                   0                   0
## 4                   0             0                   0                   0
## 5                   1             0                   0                   1
## 6                   0             0                   0                   1
## 7                   1             0                   0                   1
## 8                   4             0                   0                   0
## 9                   0             0                   0                   0
## 10                  0             0                   0                   1
## 11                  0             0                   0                   0
## 12                  0             0                   0                   0
## 13                  5             0                   0                   0
## 14                  3             0                   1                   0
## 15                  0             0                   1                   0
## 16                  0             0                   0                   0
## 17                  3             0                   0                   2
## 18                  4             0                   0                   1
## 19                  0             1                   2                   0
## 20                 10             0                   1                   1
## 21                  0             0                   0                   0
## 22                  0             0                   2                   1
## 23                  0             0                   0                   0
## 24                  6             0                   0                   0
## 25                  0             0                   0                   0
## 26                  0             0                   0                   0
## 27                  2             0                   0                   0
## 28                  0             0                   0                   0
## 29                  2             0                   0                   0
## 30                  8             0                   0                   0
```

```
## 31                0                0                0                1
## 32                1                0                0                0
## 33                0                0                0                0
## 34                3                0                0                0
## 35                3                0                0                0
## 36                0                0                0                0
## 37                2                0                0                0
## 38                1                0                0                0
## 39                1                0                0                0
## 40                0                0                0                0
## 41                1                0                0                0
## 42                0                0                0                0
## 43                0                0                0                0
## 44                0                0                0                1
## 45                0                0                0                1
## 46                3                0                0                1
## 47                3                0                0                1
## 48                0                0                0                0
## 49                0                0                0                0
## 50                0                0                0                0
##    Myrcia.gatunensis Myrospermum.frutescens Nectandra.cissiflora
## 1                  1                      0                    0
## 2                  0                      0                    1
## 3                  0                      0                    2
## 4                  0                      0                    2
## 5                  0                      0                    2
## 6                  0                      2                    0
## 7                  0                      0                    1
## 8                  0                      0                    2
## 9                  1                      0                    3
## 10                 0                      0                    5
## 11                 0                      0                    3
## 12                 0                      0                    0
## 13                 0                      0                    0
## 14                 1                      0                    1
## 15                 0                      0                    0
## 16                 0                      0                    0
## 17                 0                      0                    1
## 18                 0                      0                    0
## 19                 1                      0                    0
## 20                 0                      0                    2
## 21                 0                      0                    1
## 22                 0                      0                    0
## 23                 0                      0                    0
## 24                 0                      1                    0
## 25                 0                      0                    0
## 26                 0                      0                    0
## 27                 0                      0                    0
## 28                 0                      0                    1
## 29                 0                      0                    0
## 30                 0                      0                    0
## 31                 0                      1                    0
## 32                 0                      0                    0
## 33                 0                      0                    1
```

```
## 34                 0                 0                 0
## 35                 0                 0                 0
## 36                 0                 0                 0
## 37                 0                 0                 0
## 38                 0                 0                 0
## 39                 0                 0                 0
## 40                 0                 0                 0
## 41                 0                 0                 1
## 42                 0                 0                 3
## 43                 0                 0                 1
## 44                 0                 0                 0
## 45                 1                 0                 0
## 46                 0                 3                 0
## 47                 0                 0                 0
## 48                 0                 0                 0
## 49                 0                 0                 0
## 50                 0                 0                 0
##    Nectandra.lineata Nectandra.purpurea Ochroma.pyramidale Ocotea.cernua
## 1                  0                  1                  1             0
## 2                  0                  0                  0             0
## 3                  0                  0                  0             1
## 4                  0                  0                  0             1
## 5                  0                  0                  0             0
## 6                  0                  1                  0             0
## 7                  0                  0                  0             1
## 8                  0                  0                  3             0
## 9                  0                  0                  0             1
## 10                 0                  0                  0             0
## 11                 0                  0                  0             0
## 12                 1                  0                  0             2
## 13                 0                  0                  0             5
## 14                 0                  0                  0             1
## 15                 0                  0                  1             2
## 16                 1                  0                  0             0
## 17                 0                  0                  0             0
## 18                 1                  0                  0             1
## 19                 0                  0                  0             2
## 20                 1                  0                  0             1
## 21                 1                  0                  0             0
## 22                 0                  0                  0             0
## 23                 0                  0                  0             1
## 24                 1                  0                  0             1
## 25                 0                  0                  0             1
## 26                 0                  0                  0             0
## 27                 0                  0                  0             0
## 28                 0                  0                  0             0
## 29                 0                  0                  0             0
## 30                 0                  0                  0             1
## 31                 0                  0                  0             0
## 32                 0                  0                  0             0
## 33                 0                  0                  0             0
## 34                 0                  0                  0             2
## 35                 0                  0                  0             1
## 36                 1                  0                  0             0
```

```
## 37                0                0                0                0
## 38                0                1                0                0
## 39                2                0                0                1
## 40                0                0                0                0
## 41                0                0                0                3
## 42                0                0                0                0
## 43                0                0                0                0
## 44                0                0                0                0
## 45                0                0                0                0
## 46                0                1                0                0
## 47                0                0                0                0
## 48                0                0                0                0
## 49                0                0                0                0
## 50                1                0                0                0
##     Ocotea.oblonga Ocotea.puberula Ocotea.whitei Oenocarpus.mapora
## 1                0                0             1                22
## 2                0                0             0                21
## 3                1                0             2                14
## 4                2                2             3                23
## 5                0                0            16                17
## 6                0                1             3                19
## 7                0                0             0                20
## 8                0                2             1                20
## 9                0                0             1                18
## 10               1                2             3                20
## 11               3                1             3                17
## 12               0                0             0                19
## 13               0                3             0                17
## 14               1                0             1                22
## 15               1                3             1                11
## 16               0                0             2                15
## 17               0                0             0                31
## 18               0                0             0                24
## 19               0                1             1                24
## 20               0                2             5                19
## 21               2                0            12                11
## 22               1                0             0                24
## 23               0                0             0                22
## 24               0                1             2                24
## 25               1                1             1                14
## 26               0                0            15                 6
## 27               3                0             1                11
## 28               1                0             0                10
## 29               0                1             0                16
## 30               1                0             0                12
## 31               0                0            29                 7
## 32               2                0             4                 5
## 33               0                0             2                10
## 34               0                0             0                 9
## 35               1                0             0                 4
## 36               2                0            11                24
## 37               0                0             8                15
## 38               2                0             0                11
## 39               1                0             0                 4
```

```
## 40              1            0            0            2
## 41              2            0            2           11
## 42              1            0            7           19
## 43              1            0            7           11
## 44              1            0            5           10
## 45              1            1           13            8
## 46              0            0            0           36
## 47              1            0            1           28
## 48              1            1            4           15
## 49              1            0            8            4
## 50              0            0            9           12
##     Ormosia.amazonica Ormosia.coccinea Ormosia.macrocalyx Pachira.quinata
## 1                   0                0                  0               0
## 2                   0                0                  0               0
## 3                   0                0                  0               0
## 4                   0                0                  0               0
## 5                   0                0                  0               0
## 6                   0                0                  0               0
## 7                   0                0                  0               1
## 8                   0                0                  0               0
## 9                   0                0                  0               0
## 10                  0                0                  0               0
## 11                  0                0                  0               0
## 12                  0                0                  1               0
## 13                  0                0                  0               0
## 14                  0                0                  0               0
## 15                  0                0                  0               0
## 16                  0                0                  0               0
## 17                  0                0                  0               0
## 18                  0                0                  0               0
## 19                  0                1                  0               0
## 20                  0                0                  0               0
## 21                  0                0                  0               0
## 22                  0                0                  0               0
## 23                  0                0                  0               0
## 24                  0                0                  0               0
## 25                  0                0                  0               0
## 26                  0                0                  0               0
## 27                  0                0                  1               0
## 28                  0                0                  0               0
## 29                  1                0                  0               0
## 30                  0                0                  0               0
## 31                  0                0                  0               0
## 32                  0                0                  0               0
## 33                  0                0                  1               0
## 34                  0                1                  0               0
## 35                  0                1                  0               0
## 36                  0                0                  0               0
## 37                  0                0                  0               0
## 38                  0                0                  0               0
## 39                  0                1                  0               0
## 40                  0                0                  0               0
## 41                  0                0                  0               0
## 42                  0                0                  0               0
```

```
## 43                 0                0                0                0
## 44                 0                1                0                0
## 45                 0                0                0                0
## 46                 0                0                0                0
## 47                 0                0                0                0
## 48                 0                0                0                0
## 49                 0                0                0                0
## 50                 0                0                0                0
##     Pachira.sessilis Perebea.xanthochyma Cinnamomum.triplinerve
## 1                  0                   0                      0
## 2                  0                   1                      0
## 3                  0                   0                      1
## 4                  0                   0                      0
## 5                  0                   1                      1
## 6                  0                   0                      0
## 7                  0                   0                      2
## 8                  0                   0                      0
## 9                  0                   8                      1
## 10                 0                   6                      0
## 11                 0                   0                      0
## 12                 0                   0                      1
## 13                 0                   0                      0
## 14                 0                   2                      1
## 15                 0                   1                      0
## 16                 0                   0                      1
## 17                 0                   0                      0
## 18                 0                   0                      0
## 19                 0                   0                      0
## 20                 0                   1                      0
## 21                 0                   0                      0
## 22                 0                   0                      1
## 23                 0                   0                      1
## 24                 0                   0                      2
## 25                 0                   0                      1
## 26                 0                   0                      0
## 27                 0                   0                      0
## 28                 0                   0                      0
## 29                 0                   0                      0
## 30                 9                   0                      0
## 31                 0                   0                      0
## 32                 0                   0                      0
## 33                 0                   0                      0
## 34                 0                   0                      0
## 35                 0                   0                      1
## 36                 0                   1                      1
## 37                 0                   0                      0
## 38                 0                   0                      0
## 39                 0                   0                      0
## 40                 0                   0                      0
## 41                 0                   0                      1
## 42                 0                   0                      0
## 43                 0                   0                      0
## 44                 0                   0                      0
## 45                 0                   0                      0
```

```
## 46                  0                0                0
## 47                  0                0                0
## 48                  0                0                0
## 49                  0                0                0
## 50                  0                0                0
##    Picramnia.latifolia Piper.reticulatum Platymiscium.pinnatum
## 1                    0                0                    3
## 2                    0                0                    3
## 3                    1                0                    5
## 4                    0                0                    1
## 5                    0                2                    1
## 6                    0                0                    1
## 7                    0                0                    6
## 8                    1                0                    0
## 9                    0                0                    2
## 10                   0                0                    0
## 11                   1                1                    0
## 12                   0                0                    0
## 13                   1                0                    2
## 14                   1                0                    2
## 15                   0                0                    1
## 16                   0                0                    1
## 17                   0                1                    2
## 18                   0                0                    1
## 19                   0                0                    2
## 20                   1                0                    0
## 21                   0                0                    0
## 22                   1                0                    0
## 23                   0                0                    1
## 24                   0                0                    2
## 25                   1                0                    3
## 26                   6                1                    1
## 27                   3                1                    0
## 28                   0                0                    4
## 29                   0                0                    0
## 30                   0                0                    0
## 31                   2                0                    0
## 32                   2                0                    2
## 33                   0                0                    0
## 34                   2                1                    2
## 35                   1                0                    1
## 36                   2                1                    0
## 37                   2                0                    2
## 38                   1                0                    1
## 39                   0                0                    0
## 40                   0                0                    0
## 41                   5                0                    0
## 42                   1                0                    2
## 43                   0                0                    1
## 44                   1                0                    1
## 45                   1                0                    2
## 46                   2                0                    2
## 47                   0                0                    1
## 48                   4                1                    0
```

```
## 49                 1                 0                            0
## 50                 1                 0                            0
##    Platypodium.elegans Posoqueria.latifolia Poulsenia.armata Pourouma.bicolor
## 1                    2                    0               24                5
## 2                    1                    1               16                3
## 3                    3                    0               28                0
## 4                    0                    0               15                0
## 5                    0                    0               25                1
## 6                    2                    0               15                0
## 7                    3                    0                8                0
## 8                    3                    0               13                1
## 9                    1                    0                5                1
## 10                   0                    0               24                0
## 11                   1                    0               22                1
## 12                   2                    0                8                0
## 13                   2                    0                0                0
## 14                   1                    0               13                0
## 15                   2                    0               16                0
## 16                   1                    0               32                0
## 17                   0                    1                2                0
## 18                   1                    0                0                0
## 19                   1                    0                4                0
## 20                   1                    0               15                0
## 21                   0                    0               44                0
## 22                   0                    0                5                0
## 23                   1                    3                1                0
## 24                   0                    0                6                0
## 25                   1                    1                4                0
## 26                   2                    0               22                0
## 27                   1                    1                9                0
## 28                   2                    0                1                0
## 29                   0                    0                2                0
## 30                   1                    0                8                0
## 31                   0                    0               24                0
## 32                   1                    0                2                0
## 33                   0                    0                4                0
## 34                   0                    0                1                0
## 35                   1                    0                0                0
## 36                   1                    0               14                0
## 37                   0                    0                6                0
## 38                   0                    0                1                0
## 39                   0                    0                1                0
## 40                   2                    0                2                0
## 41                   0                    1               11                0
## 42                   0                    0               26                0
## 43                   0                    0               55                0
## 44                   1                    0               55                0
## 45                   0                    1               57                1
## 46                   0                    3                0                0
## 47                   2                    0                4                0
## 48                   0                    3               23                0
## 49                   0                    0               39                0
## 50                   0                    0               43                0
##    Pouteria.fossicola Pouteria.reticulata Pouteria.stipitata Prioria.copaifera
```

```
##    1               0               5               0              13
##    2               0               7               0              12
##    3               0               3               1              12
##    4               0               6               0               5
##    5               0               5               0               3
##    6               0               4               0              26
##    7               0               4               0              18
##    8               0               4               0               5
##    9               0               3               0               1
##   10               0               0               1               2
##   11               0               5               1              26
##   12               0               4               0              21
##   13               0               5               0               7
##   14               0               5               1               3
##   15               0               4               0               0
##   16               0               3               1              18
##   17               0               5               6              25
##   18               0              17               1               5
##   19               0              10               5               5
##   20               0               1               2               0
##   21               1               1               0              14
##   22               0               2               1              17
##   23               0               6               0               1
##   24               1               4               0               4
##   25               0               9               0               1
##   26               0               3               0              11
##   27               0               2               1              11
##   28               0               2               0               4
##   29               0               2               1              14
##   30               0               3               1               9
##   31               0               3               0               3
##   32               0               4               0               1
##   33               0               3               1               5
##   34               0               3               0              14
##   35               0               4               0               7
##   36               0               3               1               0
##   37               0               2               0               1
##   38               0               4               0               5
##   39               0               4               0               6
##   40               0               5               0               1
##   41               0               3               0               0
##   42               0               4               0               1
##   43               0               4               0               1
##   44               0               2               0               1
##   45               0               2               1               0
##   46               0               4               3               3
##   47               0               7               1               1
##   48               0               5               0               2
##   49               0               2               1               0
##   50               0               1               0               0
##    Protium.costaricense Protium.panamense Protium.tenuifolium
##    1                  5                 2                  11
##    2                  4                 0                   8
##    3                  1                 2                   3
```

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```
## 4                         3                3                9
## 5                         7                2                3
## 6                         1                1                2
## 7                         0                0                6
## 8                         0                3                7
## 9                         4                0                4
## 10                        4                1                6
## 11                        2                0                4
## 12                        0                0                5
## 13                        0                0                4
## 14                        3                4                5
## 15                        4                0                4
## 16                        1                0                2
## 17                        1                1                2
## 18                        0                0                1
## 19                        0                2                5
## 20                        7                0                9
## 21                        2                1                7
## 22                        0                2                4
## 23                        0                2                3
## 24                        0                1                7
## 25                        6                4                7
## 26                        4                0                6
## 27                        2                1                4
## 28                        3                1                2
## 29                        1                1                6
## 30                        4                2                9
## 31                        3                0                9
## 32                        2                1                3
## 33                        1                0                8
## 34                        5                3                8
## 35                        1                0                1
## 36                        3                0                3
## 37                        4                0                8
## 38                        1                0               10
## 39                        3                1               10
## 40                        2                0                7
## 41                        0                1                6
## 42                        3                2               12
## 43                        1                0                6
## 44                        3                2                8
## 45                        1                3               11
## 46                        0                0               18
## 47                        1                1               27
## 48                        1                0               26
## 49                        2                0               22
## 50                        5                0               23
##     Pseudobombax.septenatum Psidium.friedrichsthalianum Psychotria.grandis
## 1                         0                           0                  0
## 2                         0                           0                  0
## 3                         0                           0                  0
## 4                         0                           0                  0
## 5                         0                           0                  0
## 6                         0                           0                  0
```

```
## 7                               0                     0               0
## 8                               0                     0               0
## 9                               0                     0               0
## 10                              0                     0               0
## 11                              0                     0               0
## 12                              0                     0               0
## 13                              0                     1               0
## 14                              0                     0               0
## 15                              0                     0               0
## 16                              0                     0               0
## 17                              0                     0               0
## 18                              0                     0               0
## 19                              0                     0               0
## 20                              0                     0               0
## 21                              1                     0               0
## 22                              0                     0               0
## 23                              1                     0               2
## 24                              1                     0               0
## 25                              0                     0               0
## 26                              0                     1               0
## 27                              1                     0               0
## 28                              1                     0               0
## 29                              0                     0               0
## 30                              1                     0               0
## 31                              0                     0               0
## 32                              0                     0               0
## 33                              0                     1               0
## 34                              0                     0               0
## 35                              2                     0               0
## 36                              0                     0               0
## 37                              0                     0               0
## 38                              0                     0               0
## 39                              0                     0               0
## 40                              0                     0               0
## 41                              0                     0               0
## 42                              0                     0               0
## 43                              0                     1               0
## 44                              0                     0               0
## 45                              0                     0               0
## 46                              0                     0               0
## 47                              0                     0               0
## 48                              0                     0               0
## 49                              0                     0               0
## 50                              0                     0               0
##    Pterocarpus.rohrii Quararibea.asterolepis Quassia.amara Randia.armata
## 1                   1                     11             0             3
## 2                   0                     12             0             2
## 3                   0                     15             0             1
## 4                   2                     14             0             4
## 5                   1                      9             0             2
## 6                   1                      3             0             9
## 7                   2                     21             0            14
## 8                   2                      7             0             4
## 9                   1                      4             0             4
```

```
## 10                 0                18               0                1
## 11                 2                25               0                7
## 12                 2                11               0                2
## 13                 2                 1               0               15
## 14                 2                10               0                3
## 15                 2                 8               0                2
## 16                 1                25               0                3
## 17                 1                 9               0                5
## 18                 3                 0               0               10
## 19                 1                 2               0                2
## 20                 3                15               0                3
## 21                 0                12               0                1
## 22                 0                11               0               11
## 23                 4                 6               0                1
## 24                 0                12               0                4
## 25                 1                22               0                4
## 26                 2                20               0                3
## 27                 1                20               0               10
## 28                 2                24               0                5
## 29                 1                14               0                6
## 30                 3                13               0                4
## 31                 1                25               0                7
## 32                 6                21               0               20
## 33                 1                22               0               16
## 34                 1                17               0               11
## 35                 2                11               0                5
## 36                 0                11               0                2
## 37                 3                14               1                2
## 38                 2                20               0                8
## 39                 2                20               0                5
## 40                 0                22               0                7
## 41                 2                11               0                3
## 42                 3                19               0                1
## 43                 1                12               0                2
## 44                 1                23               0                1
## 45                 1                32               0                1
## 46                 3                 3               3                4
## 47                 1                 7               0                2
## 48                 2                21               0                4
## 49                 3                25               0                0
## 50                 2                14               0                2
##    Sapium.broadleaf Sapium.glandulosum Schizolobium.parahyba Senna.dariensis
## 1                 0                  0                     0                0
## 2                 0                  0                     0                0
## 3                 0                  1                     0                0
## 4                 0                  0                     0                0
## 5                 0                  2                     0                0
## 6                 0                  0                     1                0
## 7                 0                  0                     0                0
## 8                 0                  0                     0                0
## 9                 0                  0                     0                0
## 10                0                  0                     0                0
## 11                0                  0                     0                0
## 12                0                  0                     0                0
```

```
## 13                0                0                0                0
## 14                0                0                0                0
## 15                0                0                0                0
## 16                0                0                0                0
## 17                0                0                0                0
## 18                0                1                0                0
## 19                0                1                0                0
## 20                0                0                0                0
## 21                0                0                0                0
## 22                0                0                1                0
## 23                0                0                0                0
## 24                0                1                0                0
## 25                0                1                0                0
## 26                0                1                0                0
## 27                0                2                0                0
## 28                0                0                0                0
## 29                0                0                0                0
## 30                0                0                0                0
## 31                0                0                0                0
## 32                0                0                0                0
## 33                0                1                0                0
## 34                0                1                0                0
## 35                0                1                0                0
## 36                0                0                0                0
## 37                0                0                0                0
## 38                0                0                0                0
## 39                0                0                0                0
## 40                0                0                0                0
## 41                0                0                0                1
## 42                0                0                0                0
## 43                1                0                0                0
## 44                1                0                0                0
## 45                1                0                0                0
## 46                0                1                0                0
## 47                0                0                0                0
## 48                0                1                0                0
## 49                0                1                0                0
## 50                0                1                0                0
##     Simarouba.amara Siparuna.guianensis Siparuna.pauciflora Sloanea.terniflora
## 1                14                   3                   0                  1
## 2                 6                   2                   0                  0
## 3                16                   1                   1                  2
## 4                 8                   2                   0                  2
## 5                 7                   0                   3                  3
## 6                 7                   1                   0                  2
## 7                13                   1                   0                  1
## 8                14                   0                   0                  2
## 9                12                   0                   1                  1
## 10               17                   0                   1                  2
## 11                7                   1                   0                  1
## 12                9                   0                   0                  1
## 13                2                   0                   0                  1
## 14                4                   0                   0                  1
## 15                6                   0                   2                  0
```

```
## 16                 8                 1                 0                 0
## 17                 2                 0                 0                 1
## 18                 2                 1                 0                 0
## 19                 6                 0                 1                 1
## 20                 8                 0                 0                 0
## 21                 4                 0                 0                 1
## 22                 5                 0                 0                 0
## 23                 1                 0                 0                 0
## 24                 3                 0                 1                 0
## 25                10                 0                 0                 0
## 26                 5                 0                 0                 1
## 27                16                 0                 0                 0
## 28                 7                 0                 0                 1
## 29                 3                 0                 0                 1
## 30                 8                 0                 1                 1
## 31                 5                 0                 1                 2
## 32                 5                 0                 0                 2
## 33                 2                 0                 0                 2
## 34                 2                 0                 0                 1
## 35                 0                 0                 0                 0
## 36                 9                 0                 0                 3
## 37                 6                 0                 1                 3
## 38                 3                 0                 0                 4
## 39                 1                 0                 0                 1
## 40                 4                 0                 1                 1
## 41                 1                 0                 0                 1
## 42                 4                 0                 0                 7
## 43                 0                 0                 1                 2
## 44                 0                 0                 0                 1
## 45                 3                 0                 0                 5
## 46                 3                 0                 0                 2
## 47                 4                 0                 0                 4
## 48                 0                 0                 0                 3
## 49                 4                 0                 0                 2
## 50                 3                 0                 1                 5
##    Socratea.exorrhiza Solanum.hayesii Sorocea.affinis Spachea.membranacea
## 1                  15               0               1                   0
## 2                  22               0               1                   0
## 3                  31               0               1                   0
## 4                   9               0               1                   0
## 5                  55               1               0                   0
## 6                  44               0               1                   0
## 7                  23               0               0                   0
## 8                  22               0               0                   0
## 9                  17               0               0                   0
## 10                 12               2               1                   0
## 11                  5               0               1                   0
## 12                  8               0               0                   0
## 13                  0               0               0                   0
## 14                  6               0               0                   0
## 15                  7               1               1                   0
## 16                  1               2               0                   0
## 17                  0               0               0                   0
## 18                  0               0               0                   0
```

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```
## 19                 3                 0                 1                 0
## 20                 6                 0                 0                 1
## 21                 5                 1                 0                 0
## 22                 0                 0                 0                 0
## 23                 1                 1                 1                 0
## 24                 5                 0                 1                 0
## 25                 5                 0                 0                 7
## 26                 3                 0                 0                 0
## 27                 0                 1                 2                 0
## 28                 0                 0                 1                 0
## 29                 0                 0                 1                 0
## 30                 0                 0                 0                 0
## 31                 8                 0                 2                 0
## 32                 0                 1                 1                 0
## 33                 0                 0                 0                 0
## 34                 0                 0                 0                 0
## 35                 0                 1                 0                 0
## 36                 1                 1                 0                 0
## 37                 0                 0                 0                 0
## 38                 2                 0                 0                 0
## 39                 0                 0                 0                 0
## 40                 0                 0                 0                 0
## 41                 0                 0                 0                 0
## 42                 3                 0                 0                 0
## 43                 7                 0                 1                 0
## 44                 5                 0                 0                 0
## 45                 9                 0                 1                 0
## 46                 0                 0                 0                 0
## 47                 0                 0                 3                 0
## 48                 0                 0                 2                 0
## 49                 2                 0                 3                 0
## 50                 4                 0                 0                 0
##     Spondias.mombin Spondias.radlkoferi Sterculia.apetala
## 1                 1                   2                 1
## 2                 1                   0                 2
## 3                 0                   3                 0
## 4                 1                   3                 0
## 5                 1                   5                 0
## 6                 0                   0                 1
## 7                 0                   5                 1
## 8                 1                   0                 0
## 9                 0                   1                 0
## 10                2                   1                 0
## 11                0                   1                 0
## 12                1                   0                 0
## 13               10                   1                 3
## 14                1                   0                 0
## 15                0                   2                 0
## 16                0                   2                 0
## 17                1                   0                 1
## 18                3                   3                 2
## 19                0                   0                 1
## 20                0                   3                 0
## 21                0                   1                 0
```

```
## 22                     0               1               0
## 23                     2               2               1
## 24                     0               1               0
## 25                     0               2               0
## 26                     0               0               1
## 27                     0               0               0
## 28                     0               0               1
## 29                     0               2               0
## 30                     1               1               1
## 31                     0               1               0
## 32                     0               1               2
## 33                     0               0               0
## 34                     0               1               0
## 35                     0               1               0
## 36                     0               3               0
## 37                     0               1               1
## 38                     0               0               0
## 39                     0               1               0
## 40                     0               2               0
## 41                     0               3               1
## 42                     0               1               1
## 43                     0               1               1
## 44                     0               0               0
## 45                     0               0               1
## 46                     0               1               2
## 47                     0               0               1
## 48                     1               2               0
## 49                     1               1               0
## 50                     1               1               0
##     Swartzia.simplex.var.grandiflora Swartzia.simplex.continentalis
## 1                                   3                              1
## 2                                   3                              4
## 3                                   0                              2
## 4                                   1                              2
## 5                                   1                              1
## 6                                   9                              5
## 7                                   9                              7
## 8                                   5                              0
## 9                                   5                              0
## 10                                  0                              0
## 11                                 10                              5
## 12                                 13                             13
## 13                                  2                              2
## 14                                  3                              3
## 15                                  1                              0
## 16                                  5                              5
## 17                                  6                              4
## 18                                  9                              2
## 19                                  6                              4
## 20                                  2                              0
## 21                                  2                              1
## 22                                  6                              4
## 23                                  2                              4
## 24                                  4                              3
```

```
## 25                                              2                              1
## 26                                              5                              2
## 27                                              6                              4
## 28                                              8                              1
## 29                                              6                              4
## 30                                              3                              0
## 31                                              0                              1
## 32                                              4                              3
## 33                                             13                              4
## 34                                             14                              2
## 35                                              4                              1
## 36                                              0                              3
## 37                                              8                              3
## 38                                             10                              2
## 39                                              5                              3
## 40                                              1                              3
## 41                                              0                              0
## 42                                              3                              1
## 43                                              8                              0
## 44                                              3                              2
## 45                                              1                              1
## 46                                              0                              0
## 47                                              0                              1
## 48                                              4                              2
## 49                                              2                              1
## 50                                              1                              1
##     Symphonia.globulifera Handroanthus.guayacan Tabebuia.rosea
## 1                       0                     1              1
## 2                       1                     0              2
## 3                       1                     1              1
## 4                       1                     0              2
## 5                       2                     0              3
## 6                       0                     1              0
## 7                       0                     0              1
## 8                       1                     0              0
## 9                       1                     0              0
## 10                      0                     0              0
## 11                      0                     0              0
## 12                      1                     0              0
## 13                      0                     2              6
## 14                      0                     1              0
## 15                      2                     1              0
## 16                      1                     0              1
## 17                      0                     1              1
## 18                      0                     0              0
## 19                      0                     0              0
## 20                      0                     0              1
## 21                      2                     0              2
## 22                      0                     2              0
## 23                      0                     0              4
## 24                      1                     1              0
## 25                      1                     0              0
## 26                      0                     0              2
## 27                      0                     2              0
```

```
## 28                      0                  6               1
## 29                      0                  1               0
## 30                      0                  4               3
## 31                      0                  0               2
## 32                      0                  0               1
## 33                      0                  0               5
## 34                      0                  0               0
## 35                      0                  1               0
## 36                      0                  0               2
## 37                      0                  0               1
## 38                      0                  0               1
## 39                      1                  0               4
## 40                      0                  0               2
## 41                      2                  0               1
## 42                      1                  0               1
## 43                      0                  2               0
## 44                      0                  1               2
## 45                      2                  0               1
## 46                      0                  1               3
## 47                      1                  0               3
## 48                      0                  0               5
## 49                      1                  0               2
## 50                      3                  1               1
##      Tabernaemontana.arborea Tachigali.versicolor Talisia.nervosa
## 1                          9                    6               0
## 2                          5                    1               0
## 3                          6                    3               0
## 4                         10                    3               0
## 5                         16                    0               0
## 6                         11                    1               0
## 7                          9                    2               0
## 8                          8                    0               0
## 9                         12                    3               0
## 10                        10                    1               0
## 11                         4                    4               0
## 12                         6                    2               0
## 13                        12                    3               1
## 14                        22                    0               0
## 15                         8                    5               0
## 16                        11                    2               0
## 17                         3                    1               0
## 18                        10                    3               0
## 19                         9                    2               0
## 20                        13                    3               0
## 21                         4                    1               0
## 22                        10                    1               0
## 23                         5                    1               0
## 24                         9                    3               0
## 25                         6                    3               0
## 26                         4                    4               0
## 27                        12                    2               0
## 28                         5                    8               0
## 29                         2                    2               0
## 30                        21                    1               0
```

```
## 31                              1                    5                    0
## 32                              4                    1                    0
## 33                              2                    1                    0
## 34                              5                    0                    0
## 35                              2                    1                    0
## 36                              1                    1                    0
## 37                              0                    1                    0
## 38                              4                    1                    0
## 39                              3                    2                    0
## 40                              2                    0                    0
## 41                              1                    3                    0
## 42                              2                    1                    0
## 43                              0                    2                    0
## 44                              1                    0                    0
## 45                              2                    2                    0
## 46                              2                    1                    0
## 47                              1                    1                    0
## 48                              8                    0                    0
## 49                              2                    2                    0
## 50                              7                    2                    0
##      Talisia.princeps Terminalia.amazonia Terminalia.oblonga
## 1                   1                   1                  0
## 2                   0                   0                  0
## 3                   0                   0                  0
## 4                   0                   0                  0
## 5                   0                   1                  0
## 6                   0                   1                  0
## 7                   0                   0                  0
## 8                   0                   0                  0
## 9                   0                   0                  0
## 10                  0                   0                  0
## 11                  0                   0                  0
## 12                  0                   0                  0
## 13                  0                   5                  0
## 14                  0                   2                  0
## 15                  0                   0                  0
## 16                  0                   0                  3
## 17                  0                   0                  0
## 18                  0                   2                  0
## 19                  0                   0                  0
## 20                  0                   1                  0
## 21                  0                   0                  1
## 22                  0                   0                  1
## 23                  0                   6                  0
## 24                  0                   1                  0
## 25                  0                   2                  2
## 26                  1                   0                  5
## 27                  0                   0                 10
## 28                  1                   0                  0
## 29                  0                   1                  0
## 30                  0                   0                  0
## 31                  0                   1                  8
## 32                  0                   0                  2
## 33                  0                   0                  0
```

```
## 34                   0                  0                  0
## 35                   0                  2                  0
## 36                   0                  0                  0
## 37                   0                  0                  0
## 38                   0                  0                  0
## 39                   0                  0                  0
## 40                   0                  1                  0
## 41                   0                  0                  0
## 42                   0                  0                  0
## 43                   0                  0                  0
## 44                   0                  0                  0
## 45                   0                  0                  0
## 46                   0                  0                  0
## 47                   0                  0                  0
## 48                   0                  0                  2
## 49                   0                  1                  9
## 50                   0                  0                  0
##      Tetragastris.panamensis Tetrathylacium.johansenii Theobroma.cacao
## 1                          5                         0               1
## 2                          7                         0               1
## 3                         10                         0               0
## 4                         10                         0               0
## 5                          7                         0               1
## 6                         17                         0               0
## 7                          8                         0               0
## 8                          9                         0               0
## 9                          5                         0               0
## 10                         6                         0               0
## 11                        10                         0               0
## 12                        10                         0               0
## 13                         6                         0               0
## 14                         5                         0               0
## 15                         3                         0               0
## 16                         6                         0               1
## 17                        13                         0               0
## 18                        11                         2               0
## 19                         9                         0               0
## 20                         4                         0               0
## 21                         4                         0               0
## 22                         9                         0               0
## 23                        11                         2               0
## 24                        15                         0               1
## 25                         7                         0               1
## 26                         6                         0               0
## 27                        11                         1               0
## 28                        13                         0               0
## 29                         8                         0               1
## 30                         5                         1               0
## 31                         5                         0               0
## 32                         4                         0               1
## 33                         1                         0               0
## 34                         2                         1               0
## 35                         1                         0               0
## 36                         5                         0               0
```

```
## 37                         9                                     0                            0
## 38                         1                                     0                            0
## 39                         2                                     0                            0
## 40                         1                                     0                            0
## 41                         7                                     0                            1
## 42                         7                                     0                            0
## 43                         6                                     0                            1
## 44                         4                                     0                            0
## 45                         9                                     0                            0
## 46                        20                                     0                            0
## 47                        25                                     0                            0
## 48                         8                                     0                            0
## 49                         4                                     0                            0
## 50                         8                                     0                            2
##      Thevetia.ahouai Tocoyena.pittieri Trattinnickia.aspera Trema.micrantha
## 1                  0                 0                    3               0
## 2                  0                 1                    1               0
## 3                  0                 0                    1               0
## 4                  0                 0                    0               2
## 5                  0                 0                    2               1
## 6                  0                 0                    0               0
## 7                  0                 0                    0               0
## 8                  0                 0                    2               0
## 9                  0                 0                    2               0
## 10                 0                 0                    1               0
## 11                 0                 0                    0               1
## 12                 0                 1                    0               1
## 13                 0                 0                    0               0
## 14                 0                 0                    0               0
## 15                 0                 0                    1               0
## 16                 0                 0                    1               0
## 17                 0                 0                    3               0
## 18                 0                 0                    0               0
## 19                 0                 0                    3               1
## 20                 0                 0                    0               0
## 21                 0                 1                    1               0
## 22                 0                 0                    0               0
## 23                 1                 0                    0               1
## 24                 0                 0                    1               0
## 25                 0                 0                    0               1
## 26                 0                 0                    0               0
## 27                 0                 0                    1               0
## 28                 0                 0                    1               1
## 29                 0                 0                    0               0
## 30                 0                 0                    0               0
## 31                 0                 0                    0               0
## 32                 0                 0                    0               0
## 33                 0                 1                    0               0
## 34                 0                 0                    0               0
## 35                 0                 0                    0               0
## 36                 0                 0                    4               0
## 37                 0                 0                    1               0
## 38                 0                 0                    0               0
## 39                 0                 0                    0               3
```

```
## 40              0                0                1                0
## 41              1                0                0                0
## 42              0                0                0                1
## 43              0                0                0                0
## 44              0                0                0                1
## 45              0                0                0                0
## 46              0                0                7                0
## 47              0                0                1                0
## 48              0                0                1                0
## 49              0                0                0                0
## 50              0                1                1                1
##     Trichanthera.gigantea Trichilia.pallida Trichilia.tuberculata
## 1                       0                 0                     18
## 2                       0                 1                     27
## 3                       0                 0                     28
## 4                       0                 1                     35
## 5                       0                 0                     15
## 6                       0                 0                     31
## 7                       0                 1                     27
## 8                       0                 0                     36
## 9                       0                 0                     65
## 10                      0                 0                     46
## 11                      0                 2                     41
## 12                      0                 1                     46
## 13                      0                 8                     35
## 14                      0                 1                     33
## 15                      0                 6                     33
## 16                      0                 3                     25
## 17                      0                 2                     36
## 18                      0                 5                     23
## 19                      0                 1                     44
## 20                      0                10                     33
## 21                      0                 0                     23
## 22                      0                 1                     42
## 23                      0                 1                     23
## 24                      1                 2                     38
## 25                      1                 6                     26
## 26                      0                 1                     15
## 27                      0                 3                     20
## 28                      0                 0                     43
## 29                      0                 0                     47
## 30                      0                 4                     33
## 31                      0                 1                     33
## 32                      0                 8                     50
## 33                      0                 1                     37
## 34                      0                 2                     31
## 35                      0                 1                     30
## 36                      0                 0                     28
## 37                      0                 4                     33
## 38                      0                 1                     59
## 39                      0                 0                     79
## 40                      0                 2                     97
## 41                      0                 0                     19
## 42                      0                 0                     15
```

```
## 43                             0                0                36
## 44                             0                0                26
## 45                             0                0                26
## 46                             0                0                16
## 47                             0                1                16
## 48                             0                0                19
## 49                             0                1                26
## 50                             0                0                18
##     Trichospermum.galeottii Triplaris.cumingiana Trophis.caucana
## 1                          0                    0               2
## 2                          0                    0               0
## 3                          0                    0               0
## 4                          0                    0               0
## 5                          0                    0               2
## 6                          0                    1               0
## 7                          0                    0               0
## 8                          0                    0               0
## 9                          0                    0               0
## 10                         0                    1               0
## 11                         0                    1               2
## 12                         0                    3               0
## 13                         0                   13               0
## 14                         0                    7               0
## 15                         0                    0               0
## 16                         0                    2               0
## 17                         0                    3               1
## 18                         0                    6               0
## 19                         0                    1               0
## 20                         1                    0               0
## 21                         0                    2               1
## 22                         0                    1               1
## 23                         0                   11               0
## 24                         0                    1               0
## 25                         0                    3               0
## 26                         0                    2               1
## 27                         0                    3               0
## 28                         0                    0               0
## 29                         0                    0               0
## 30                         0                    0               0
## 31                         0                    1               0
## 32                         0                   13               0
## 33                         0                   11               0
## 34                         0                   11               0
## 35                         0                    1               0
## 36                         0                    0               0
## 37                         0                    3               0
## 38                         0                    6               0
## 39                         0                    4               0
## 40                         0                    5               0
## 41                         0                    1               0
## 42                         0                    0               0
## 43                         0                    1               4
## 44                         0                    6               1
## 45                         0                    5               4
```

```
## 46                              0                        1                   0
## 47                              0                        3                   0
## 48                              0                        6                   3
## 49                              0                        4                   8
## 50                              0                        4                   3
##    Trophis.racemosa Turpinia.occidentalis Unonopsis.pittieri Virola.multiflora
## 1                 1                     0                  1                 0
## 2                 1                     1                  5                 0
## 3                 0                     1                 12                 0
## 4                 1                     4                  3                 0
## 5                 0                     2                  4                 0
## 6                 0                     1                  3                 2
## 7                 1                     0                  3                 0
## 8                 0                     1                  2                 0
## 9                 0                     1                  5                 0
## 10                2                     1                  9                 1
## 11                0                     1                  4                 0
## 12                0                     1                  0                 1
## 13                0                     0                  0                 0
## 14                1                     0                  3                 0
## 15                0                     5                 11                 0
## 16                2                     2                  1                 1
## 17                0                     0                  0                 0
## 18                2                     0                  0                 0
## 19                3                     0                  4                 0
## 20                0                     5                 10                 0
## 21                0                     1                  6                 2
## 22                0                     1                  1                 0
## 23                1                     0                  1                 0
## 24                1                     2                  3                 0
## 25                2                     0                  3                 0
## 26                1                     0                  4                 1
## 27                1                     7                  0                 0
## 28                0                     1                  0                 0
## 29                0                     3                  5                 0
## 30                2                     1                  1                 1
## 31                1                     0                  3                 5
## 32                2                     0                  4                 0
## 33                1                     2                  5                 0
## 34                0                     1                  1                 0
## 35                0                     0                  0                 0
## 36                0                     2                  9                 2
## 37                0                     5                  8                 2
## 38                0                     0                  2                 0
## 39                0                     2                  0                 0
## 40                1                     1                  0                 0
## 41                0                     2                  4                 2
## 42                0                     0                  5                 3
## 43                1                     0                  5                 0
## 44                0                     0                  3                 0
## 45                0                     0                  4                 0
## 46                0                     0                  0                 0
## 47                2                     0                  0                 0
## 48                2                     0                  0                 1
```

```
## 49                0                 0                 2                 0
## 50                0                 1                 4                 1
##    Virola.sebifera Virola.surinamensis Vismia.baccifera Vochysia.ferruginea
## 1               17                   4                0                   0
## 2               12                   3                0                   0
## 3               11                   2                0                   0
## 4               16                   2                0                   0
## 5               31                   6                0                   0
## 6               19                   1                0                   0
## 7                8                   1                0                   0
## 8               19                   1                0                   0
## 9               16                   1                0                   0
## 10              17                   2                0                   0
## 11               6                   4                0                   0
## 12               6                   2                0                   2
## 13               0                   0                0                   3
## 14              17                   1                0                   1
## 15              16                   4                0                   0
## 16              24                   5                0                   0
## 17               5                   0                0                   1
## 18               0                   2                0                   2
## 19              12                   1                0                   0
## 20              15                   4                0                   0
## 21              15                  10                0                   0
## 22               7                   1                0                   0
## 23               9                   1                0                   0
## 24              12                   1                0                   0
## 25              12                   4                0                   0
## 26              20                  12                0                   0
## 27              12                   1                0                   0
## 28              18                   1                0                   0
## 29               9                   1                0                   0
## 30               8                   3                0                   0
## 31              20                   6                0                   0
## 32              18                   4                0                   0
## 33              16                   3                0                   0
## 34               7                   1                0                   0
## 35              11                   0                0                   0
## 36              14                   5                0                   0
## 37              14                   4                1                   0
## 38              11                   0                0                   0
## 39               7                   2                0                   0
## 40              11                   1                0                   0
## 41              12                   7                0                   0
## 42              12                   5                0                   0
## 43              14                   8                0                   0
## 44              10                   1                0                   0
## 45              13                   7                0                   0
## 46               0                   0                0                   2
## 47              11                   1                0                   1
## 48               7                   5                0                   0
## 49               6                  16                0                   0
## 50              14                   7                0                   0
##    Xylopia.macrantha Zanthoxylum.ekmanii Zanthoxylum.juniperinum
```

```
##  1              1               3               0
##  2              0               4               0
##  3              0               8               1
##  4              0              13               1
##  5              0               3               0
##  6              0               1               0
##  7              0               2               0
##  8              0               4               0
##  9              0              13               1
## 10              4               7              10
## 11              1               1               0
## 12              0               0               0
## 13              1               5               2
## 14              0              12               3
## 15              3               5               6
## 16              1               2               1
## 17              2               1               0
## 18              1               0               2
## 19              1               3               1
## 20              1               4               2
## 21             15               7               2
## 22              0               1               1
## 23              0               0               0
## 24              0               0               0
## 25              0               4               3
## 26             15               1               1
## 27              8               4               1
## 28              0               0               0
## 29              0               2               0
## 30              0               1               0
## 31             23               0               1
## 32              4               4               0
## 33              8               3               0
## 34              1               0               0
## 35              0               0               0
## 36             20               2               1
## 37              1               5               0
## 38              1               2               1
## 39              0               1               1
## 40              0               0               0
## 41              9               3               0
## 42             14               4               0
## 43              2               1               0
## 44              1               2               0
## 45              0               2               1
## 46              3               1               1
## 47              1               2               1
## 48              1               5               0
## 49              0               1               0
## 50              0               0               0
##    Zanthoxylum.panamense Zanthoxylum.setulosum Zuelania.guidonia
## 1                      2                     0                 0
## 2                      2                     0                 0
## 3                      2                     0                 0
```

## 4	5	0	1
## 5	5	0	0
## 6	3	0	2
## 7	0	0	0
## 8	2	0	0
## 9	4	0	0
## 10	4	0	0
## 11	1	0	0
## 12	0	0	0
## 13	0	0	0
## 14	1	0	0
## 15	2	0	0
## 16	0	0	0
## 17	1	0	1
## 18	1	0	1
## 19	3	0	0
## 20	1	0	0
## 21	0	0	0
## 22	1	0	0
## 23	0	0	0
## 24	0	0	0
## 25	1	0	0
## 26	0	0	0
## 27	2	0	0
## 28	0	0	1
## 29	0	0	0
## 30	3	0	0
## 31	1	0	0
## 32	2	0	0
## 33	1	0	0
## 34	3	0	0
## 35	1	0	0
## 36	0	0	0
## 37	4	0	0
## 38	1	0	0
## 39	1	0	0
## 40	0	0	0
## 41	1	1	0
## 42	1	0	1
## 43	0	0	0
## 44	0	0	0
## 45	0	0	0
## 46	1	0	0
## 47	0	0	1
## 48	1	0	2
## 49	1	0	0
## 50	2	0	0

```r
site1.sum.f <- S.obs(BCI[1,])

site1.sum.v <- specnumber(BCI[1,])

print(paste("Vegan=", site1.sum.v))
```

```
## [1] "Vegan= 93"
```

```r
print(paste("Function=", site1.sum.f))
```

```
## [1] "Function= 93"
```
```r
###
site4.sum.f <- S.obs(BCI[1:4,])

site4.sum.v <- specnumber(BCI[1:4,])

print(paste("Vegan=", site4.sum.v))
```

```
## [1] "Vegan= 93" "Vegan= 84" "Vegan= 90" "Vegan= 94"
```
```r
print(paste("Function=", site4.sum.f))
```

```
## [1] "Function= 93" "Function= 84" "Function= 90" "Function= 94"
```

Question 1: Does `specnumber()` from `vegan` return the same value for observed richness in `site1` as our function `S.obs`? What is the species richness of the first four sites (i.e., rows) of the BCI matrix?

> ***Answer 1***: The vegan library "specnumber()" output is the same as the same as the written function. For Site 1, the species richness is 93, Site 2 is 84, Site 3 is 90, and Site 4 is 94

Coverage: How well did you sample your site?

In the R code chunk below, do the following:

1. Write a function to calculate Good's Coverage, and

2. Use that function to calculate coverage for all sites in the BCI matrix.

```r
GC <- function (x = ""){1- (rowSums(x ==1)/rowSums(x))}
GC_all <- GC(BCI)
print(GC_all)
```

```
##         1         2         3         4         5         6         7         8
## 0.9308036 0.9287356 0.9200864 0.9468504 0.9287129 0.9174757 0.9326923 0.9443155
##         9        10        11        12        13        14        15        16
## 0.9095355 0.9275362 0.9152120 0.9071038 0.9242054 0.9132420 0.9350649 0.9267735
##        17        18        19        20        21        22        23        24
## 0.8950131 0.9193084 0.8891455 0.9114219 0.8946078 0.9066986 0.8705882 0.9030612
##        25        26        27        28        29        30        31        32
## 0.9095023 0.9115479 0.9088729 0.9198966 0.8983516 0.9221053 0.9382423 0.9411765
##        33        34        35        36        37        38        39        40
## 0.9220183 0.9239374 0.9267887 0.9186047 0.9379310 0.9306488 0.9268868 0.9386503
##        41        42        43        44        45        46        47        48
## 0.8880597 0.9299517 0.9140049 0.9168704 0.9234234 0.9348837 0.8847059 0.9228916
##        49        50
## 0.9086651 0.9143519
```
```r
GC.df <-data.frame(GC_all)
print(GC.df)
```

```
##      GC_all
## 1 0.9308036
## 2 0.9287356
## 3 0.9200864
## 4 0.9468504
## 5 0.9287129
```

```
## 6  0.9174757
## 7  0.9326923
## 8  0.9443155
## 9  0.9095355
## 10 0.9275362
## 11 0.9152120
## 12 0.9071038
## 13 0.9242054
## 14 0.9132420
## 15 0.9350649
## 16 0.9267735
## 17 0.8950131
## 18 0.9193084
## 19 0.8891455
## 20 0.9114219
## 21 0.8946078
## 22 0.9066986
## 23 0.8705882
## 24 0.9030612
## 25 0.9095023
## 26 0.9115479
## 27 0.9088729
## 28 0.9198966
## 29 0.8983516
## 30 0.9221053
## 31 0.9382423
## 32 0.9411765
## 33 0.9220183
## 34 0.9239374
## 35 0.9267887
## 36 0.9186047
## 37 0.9379310
## 38 0.9306488
## 39 0.9268868
## 40 0.9386503
## 41 0.8880597
## 42 0.9299517
## 43 0.9140049
## 44 0.9168704
## 45 0.9234234
## 46 0.9348837
## 47 0.8847059
## 48 0.9228916
## 49 0.9086651
## 50 0.9143519
```

```r
range(GC.df)
```

```
## [1] 0.8705882 0.9468504
```

```r
max(GC.df)
```

```
## [1] 0.9468504
```

Question 2: Answer the following questions about coverage:

a. What is the range of values that can be generated by Good's Coverage?
b. What would we conclude from Good's Coverage if n_i equaled N?
c. What portion of taxa in `site1` was represented by singletons?
d. Make some observations about coverage at the BCI plots.

Answer 2a: Good's Coverage results in values <1. For the BCI dataset, the range of values was [.8706, .9469].

Answer 2b: If n1 = N in Good's Coverage, then the coverage would equal to zero. This would insinuate that all the taxa sampled are singleton species and all organisms found in the population are rare. Therefore, the sample is extremely diverse or there is a potential for sampling error given the high number of rare taxa.

Answer 2c: From calculating Good's Coverage for the BCI dataset, .9308 (93.08%) of the taxa at Site 1 are singletons.

Answer 2d: Given that the range of singletons is 87.06% to 94.69%, a majority of taxa represented in the BCI at each site is singletons. Therefore, the samples are rich in biodiversity but low in evenness.

Estimated richness

In the R code chunk below, do the following:

1. Load the microbial dataset (located in the **Week-2/data** folder),

2. Transform and transpose the data as needed (see handout),

3. Create a new vector (`soilbac1`) by indexing the bacterial OTU abundances of any site in the dataset,

4. Calculate the observed richness at that particular site, and

5. Calculate coverage of that site

```
soil.bac <-read.table("data/soilbac.txt", sep = "\t", header =TRUE, row.names =1)
print(soil.bac)
```

##	T1_1	T1_2	T1_3	T7_1	T7_2	T7_3	DF_1	DF_2	CF_1	CF_2	CF_3
## 1	31	42	12	151	65	83	92	64	164	140	190
## 2	11	14	10	0	1	6	11	6	149	50	86
## 3	2	1	2	27	3	1	11	5	18	13	46
## 4	25	46	78	50	120	60	26	7	0	4	0
## 5	124	195	270	25	17	3	0	0	0	0	0
## 6	5	5	6	42	55	29	11	18	2	4	1
## 7	4	20	7	3	4	1	5	9	29	4	29
## 8	0	0	0	2	0	0	9	7	32	27	42
## 9	1	2	0	3	15	8	25	15	35	63	9
## 10	2	0	0	1	0	2	2	0	0	0	0
## 11	0	3	2	0	1	0	3	3	50	8	5
## 12	28	36	13	0	0	0	0	0	0	0	0
## 13	0	0	2	1	50	13	11	4	0	2	0
## 14	0	1	0	0	7	3	5	15	0	3	8
## 15	4	10	0	1	6	1	10	4	73	18	32
## 16	0	0	5	6	18	10	12	13	3	18	20
## 17	13	19	12	4	2	6	23	34	26	16	16
## 18	1	1	2	2	42	10	11	11	0	2	0
## 19	0	2	0	2	14	4	6	7	1	1	0
## 20	1	11	3	14	56	36	13	17	0	5	0
## 21	8	16	18	0	12	8	0	5	0	1	0

```
## 22        0    5    2    1   53   17   10    6    0    9    1
## 23        2    5    0    0    0    0    0    0    0    0    0
## 24        2    1    0   15    6    7    8   11    2    0    0
## 25        2    1    0    0    1    1    1    0   48   12   29
## 26        4    6    2    3    0    2    6    0   15   19    7
## 27       11   17   12    0    0    0    0    0    0    1    0
## 28        4    3    0    6    4    2    0    0   13    3   18
## 29        1    3    0    0    0    0    0    0    4    9   30
## 30        0    1    0    7    1   21    4    2    5    3    1
## 31        1    3    0    8    2   14    0    3    2    4    0
## 32        6    5    5    0    0    0    0    0    0    0    0
## 33        4   18    6    2   17    1    0    0    0    1    0
## 34        0    0    0    6    9    9    3    1    0    1    0
## 35       14   26   40    0   52    5   12    7    1    8    0
## 36        0    0    0    2    0   12    9    8    0    1    5
## 37       13   20   19    0    0    0    0    0    0    0    0
## 38       22   11   12   12    2    2    0    0    0    0    0
## 39       10   19    5    0    0    0    0    0    2    6    0
## 40        3    1    3    0    0    0    3    0   35   12   21
## 41        0    0    0    0    0    0   19   15    0    1    1
## 42        2    3    4   19   17   16   31   37    6   13    8
## 43        0    0    0    0    0    0    0    0    5    4    5
## 44        8    3    5   10    2    3    4    0    0    5    0
## 45        1    7    3    3   10    3    8   10    0    2    1
## 46        2    0    0   13    0    6    1    3    0    0    1
## 47        3    0    0   11    6    7   12    8    0    6    4
## 48        2    2    2    3   54   15    6    0    0    0    0
## 49        2    1    0    0    0    1    3    3    5    8   18
## 50        7    3    3    0    2    4   15   20    7   14   18
## 51       12    5    3    0    1    0    2    1    3    5    0
## 52        2    3    3    2    3    6   17   16    7    6    9
## 53        0    1    0    1    7   13   22   16    6    9    3
## 54       10    3    7    0    0    0    0    0    0    0    0
## 55        6   11    4    0    1    0    9   11   42   13   14
## 56        1    2    0    0    5    2    3    3    0    2   10
## 57        8    9   11    3   51   24    8    6    1    3    0
## 58        6    2    4   11    5    4    3   12    0    1    3
## 59        0    0    0    0    0    0    7   13    0    2    6
## 60        7    3    4    0    0    0    0    0    3    0    0
## 61        0    1    2    3    8    9    6    7    0    2    0
## 62        1    3    0    1    4    1    2    6   18   16   14
## 63       11   10   13   23    2    4    1    7    0    0    0
## 64        4   12    4    1    6    1    5    0    0    5    0
## 65        3   16    5    0    0    0    0    3    7    7    2
## 66        6   11    9    0    0    0    0    2    0    0    0
## 67        4    8    7    5   15    7    0    2    2    0    0
## 68        0    2    0    0    0    1    5    7   10    1    9
## 69        0    0    0    3    0    0    3    1   12    8   21
## 70        1    3    2    2   19   12    3    3    0    3    1
## 71        2    1    5   22    8   13   13    8    1    5    1
## 72        2    1    0    1    0    0   23    9    9   12    8
## 73        0    0    0    0    0    0    4    2   15    6    6
## 74        4    3    4    1    5    6    3    0    0    0    0
## 75        2    0    0    2    0    1    4    4    1    1    9
```

```
## 76      1    0    1    0    0    0    0    0    7   23    9
## 77      6    7    2   12   13   14    4    4    2    0    0
## 78      0    0    0    5   19    1    6    3    0    0    0
## 79      1    9   18    0    0    0    0    0    0    0    0
## 80      2    0    2    6    2    2    1    2    0    0    0
## 81      0    0    0    0    0    0    1    2    2    3   15
## 82      0    1    0   12    7    3   20    4    0    1    2
## 83      1    0    0    0    0    0    1    2    1    0    0
## 84      2    2    3    7    9    3    1    1    0    1    2
## 85      0    2    1    6    4    0    1    4    0    1    0
## 86      0    0    0    5    0    0    6    8    0    0   11
## 87      0    0    0    0    0    0    0    1    0    0    1
## 88      0    0    0    0    0    0   14    4    5   20    0
## 89      2    0    0    7    0    2    5    3    9   14   15
## 90      2    1    3   15    9   13    0    1    0    0    0
## 91      0    0    0    0    0    0    2    0    3    3    1
## 92      0    0    0    0    0    0    0    0    0    0    0
## 93      0    0    1    0    0    0    0    0   13    0    6
## 94      2    3   84    0    0    1    0    0   22    1    0
## 95      0    0    0    0    5    3    2    0    0    0    0
## 96      0    0    0    0    0    0    1    0   14    1    8
## 97     11   16   19    0    0    1    0    0    0    0    0
## 98      1    0    2    2    2    1    2    0    0    1    1
## 99      1    1    1    0    0    0    0    0    0    0    0
## 100     0    0    0    4    4    5    1    3    1    2    0
## 101     0    0    0    2    6    5   10    3    0    1    0
## 102     0    0    0    0    0    0    0    0    0    0    0
## 103     0    0    0    1    3    8   14   15    2    1    0
## 104     0    0    0    5    2    3    9    1    7    5    3
## 105     0    0    0    0    0    0    0    0   14    1    3
## 106     1    4    0    0    1    0    1    1    0    4    0
## 107    18    3   14    0    0    0    0    0    0    0    0
## 108     0    0    0    4    0    1    0    0    0    2   15
## 109     0    5    9   11    0    0    1    0    0    0    0
## 110     0    0    0    0    0    0    0    0   25    1    0
## 111     0    0    0   16    3    4   10   16    0    0    0
## 112     6    6    1   17    0    6    6    3    0    2    0
## 113    12    4    4    0    0    0    0    0    0    0    0
## 114     4    5    2    0    0    2    2    0    0    0    0
## 115     3    1    2    0    0    0    0    0    0    0    0
## 116     0    0    0    0    1    0   10   17    0    8    1
## 117     0    6    0    6    3    1    1    4    1    3   10
## 118     0    0    1   20   15   11    5   24    6   11    0
## 119     3    8    2    0   21    7   19   33    4   16    5
## 120     0    1    1    4   11   10    5    2    0    0    0
## 121     2    3   10    0    3    0    0    0    0    0    0
## 122     0    0    0    0    0    0    6    9    0    4    0
## 123     0    0    0    0    0    0   22    7   37   11    4
## 124     9    7    4    0    0    0    0    0    0    0    0
## 125     0    1    3    2    6   13    2    2    0    1    0
## 126     0    0    0    2    2    0    9    9    0    4    0
## 127     0    0    0    6    6   10    3    1    0    0    0
## 128     0    1    1    2    0    0    0    0    0    0    1
## 129     0    0    2    8    8    4   24   24    0    6    0
```

```
## 130     0    0    0    0    0    0    0    4   28    0   17
## 131     0    0    3    0    0    0    0    0    0    0    0
## 132     0    0    0    0    0    0    0    0   10    9    4
## 133     0    0    0    5    0    3    0    0    0    0    0
## 134     0    0    0    0    0    0    1    0    3    2    6
## 135     0    0    0    0    1    7    0   13    0    0    0
## 136     0    0    0    1    1    0    0    0    0    0    0
## 137     1    1    5    0    5    0    1    3    0    1    0
## 138     1    0    1    1    2    0    0    0    3    0    0
## 139     0    0    0    0    0    0    0    0   14    0    1
## 140     2    2    6    0    3    4    1    5    0    2    0
## 141     0    0    0    0    0    0    0    2    0    1    0
## 142     0    0    0    0    0    0    1    0    0    0    0
## 143     0    0    0    0    0    0    1    0    1    6    6
## 144     4   14    7    0    0    0    0    0    0    0    0
## 145     1    3    1    1    1    0    0    0    0    0    0
## 146     0    0    0    0    0    0    0    0    0    0    0
## 147     0    0    0    0    4    7    2    2    4    0    0
## 148     0    0    0    2    5    7    6   11    1    2    0
## 149    14   10    6    0    0    0    0    0    0    0    0
## 150     1    2    0    2    2    6    1    4    4   10   17
## 151     0    0    0    0    0    0    0    0    8    2   16
## 152     0    0    0    0    0    0    0    1    2    7   12
## 153     2    1    3    8    2    1    0    2   10   10    7
## 154     2    5    2    0    2    0    8    9    2    5    3
## 155    14    6    2    0    0    0    0    0    0    0    0
## 156     4    0    1    0    0    3    3    2    0    2    2
## 157     7    4    5    0    0    0    0    0    0    0    0
## 158     1    1    0    3    0    3    3    5    0    2    0
## 159     0    0    0    3    3    0    2    3    0    0    0
## 160    13    3    5    0    0    0    0    0    0    0    0
## 161     1    5    2    2    5    6    1    1    0    0    1
## 162     5    4    1    1    0    3    0    0    1    0    2
## 163     0    0    1    1    0    0    0    0    0    0    0
## 164     1    1    0    1    0    0    6    5    4    2   13
## 165     0    0    0    0    0    0    0    0   25    0    0
## 166     0    3    0    0    0    0    0    0    1    1    1
## 167     4    1    2    3    3    2    2    1    0    1    2
## 168     0    0    0    0    0    3    0    0    0    0    0
## 169    11    8   15    0    0    0    0    0    0    0    0
## 170     0    1    9    0    0    2    1    0    1    0    2
## 171     2    7    3    8    3   11    5    8    0    0    0
## 172     6    5    6    0    1    0    2    8    3    6    1
## 173     0    0    0    5    0    1    3    2    2    0    0
## 174     0    0    0    3    2    2    4    4    0    0    1
## 175     1    1    2    2    1    4    0    0    0    0    0
## 176     0    3    2    1   12   16    5    4    0    0    0
## 177     4    0    4    0    0    0    0    0    0    0    0
## 178     4    3    3    7    6    0   11    5    4   10    1
## 179     4    1    1    6    1    2    2    9    0    2    8
## 180     0    1    1    1    2    3    1    3    0    0    0
## 181     0    0    0    0    0    0    1    0    3    2    4
## 182     0    0    0    0    0    0    0    0   22    0    0
## 183     1    0    0    0    0    0    1    0    0    0    0
```

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```
## 184    0    0    3    0    0    6    1    2    0    0    0
## 185    2    2    2    1    1    8    0    1    0    0    1
## 186    1    2    3    2    4    3    0    1    0    0    0
## 187    0    2    1    3    2    2    1    2    0    6    3
## 188    7    5    2    0    0    6    0    1    0    0    0
## 189   13    6   12    0    0    0    0    0    5    0    0
## 190    0    0    0    0    8    9    1    1    0    3    0
## 191    0    0    0    0    2    3    2    3    0    1    0
## 192    2    2    3    0    0    0    0    0    0    0    0
## 193    5    6    3    0    0    0    0    0    0    0    0
## 194    2    8    0    0    0    0    0    0    1    0    1
## 195    0    0    0    0    0    0    0    0   11    0    0
## 196    0    0    0    0    0    0    0    0    0    0   12
## 197    0    1    0    0    0    0    0    0    6    0    0
## 198    2    1    0    0    1    0    0    0    3    2    2
## 199    0    0    0    0    3    3    1    1    0    0    1
## 200    0    0    0    0    0    1    0    2    4    0    8
## 201    2    5    7    0    0    1    0    0    0    0    0
## 202    2    1    0    6    1   15    0    0    1    0    3
## 203    0    1    0    1    1    1    9    5   18   10    7
## 204    2    1    0    0    1    0    0    0    0    0    0
## 205    0    8    4    2    0    6    5    5    0    2    0
## 206    0    1    0    0    0    3    0    0    0    0    0
## 207    1    2    2    1    9    4    4    0    0    0    0
## 208    0    3    0    4    1    5    0    0    0    1    0
## 209    0    0    0    0    2    0    0    1    2    0    0
## 210    0    0    0    5    0    4    0    1    0    0    0
## 211    4    3    6    0    0    0    0    0    0    0    0
## 212    0    0    0    0    5    1    1    3    1    0    0
## 213    0    8    2    3    0    0    0    0    0    0    0
## 214    1    1    0    1    3    3    3    5    0    0    2
## 215    0    0    0    0    0    0    1    0    0    0    0
## 216    0    0    0    3    1    4    2   10    0    0    0
## 217    0    3    2    1    0    0    7   11   12    5   16
## 218    1    0    0    0    0    0    4    3    3    1    6
## 219    0    4    1    2    0    3    2    6    0    2    0
## 220    0    0    0    0    0    0    0    0    7    0    6
## 221   10   13    8    0   10    0    1    0    0    0    0
## 222    3    2    6    1    0    0    0    0    0    0    1
## 223    0    0    0    0    0    0    0    0    4    0    0
## 224    0    0    0   13    2    0    1    0    0    0    0
## 225    3    2    0    0    3    0    3    2    0    0    0
## 226    0    0    1    1    4    1    2    3    0    1    0
## 227    0    0    0    3    2    3    0    6    2    2    0
## 228    4   11    9    1    6    1   11    6    1    4    3
## 229    0    2    0    0    0    0    0    0    0    3    2
## 230    1    0    0    8    2    4    1    8    0    0    0
## 231    7   10    4    2    0    1    1    0    0    0    0
## 232    1    1    1    6    3    2    0    6    6    3    1
## 233    1    0    0    2    0    0    4    0    1    5   13
## 234    0    0    0    3    0    0    0    2    0    0    1
## 235    8    8    3    1    0    0    0    0    0    0    0
## 236    1    0    0    1    1    1    0    0    0    0    0
## 237    0    0    0    0    0    0    1    0    4    7    1
```

```
## 238       0    0    0    0    0    0    4    8    0    2    7
## 239       6    2    9    1    5    6    0    3    0    0    0
## 240       0    1    1    2    0    0    6    6    3    6    4
## 241       0    0    0    1    0    0    5    0    0    0    0
## 242       0    0    0    0    4    3    1    0    0    0    0
## 243       0    0    0    0    0    0    0    0    1    0    0
## 244       0    0    0    0    0    3    0    0    0    0    0
## 245       0    0    0    0    0    0    5    0    0    6    3
## 246       0    0    0    3    0    5    3    1    0    0    0
## 247       0    0    0    1   10    3    2    3    0    1    0
## 248       0    0    0    0    0    1    2    1    0    0    1
## 249       0    2    0    0    6    0    1    1    0    0    0
## 250       0    0    0    1    0    1    2    2    1    2    1
## 251       0    0    0    0    0    2    0    0    1    0    0
## 252       1    0    1    2    2    7    4    0    0    0    1
## 253       0    0    0    1    5    1    1    4    0    2    0
## 254       0    2    1    2    3    0    0    0    0    0    0
## 255       0    0    0    1    6    4    3    2    0    0    0
## 256       1    0    0    3    0    3    5    2    0    2    1
## 257       0    0    0    0    5    2    3    2    0    0    0
## 258       0    2    0    0    0    0    7    4    0    2    1
## 259       0    0    0    5    2    1    0    0    0    0    0
## 260       0    0    0    3    3    1    2    5    0    2    0
## 261       0    1    0    0    0    0    2   12    0    0    3
## 262       0    0    0    6    5    6    4    7    2    0    0
## 263       0    2    6   12    0    0    5    6    0    0    0
## 264       0    0    0    0    0    0    9    5    0    0    0
## 265       0    1    0    1    6    0    0    0    0    0    1
## 266       0    1    0    0    8    9    3    2    4    2    0
## 267       0    0    0    7    4    5    0    0    0    0    0
## 268       2    0    0    0    4    1    0    2    1    3    0
## 269       0    0    0    0    0    0    0    5    0    0    0
## 270       1    4    3    0    1    0    0    0    0    0    0
## 271       2    2    1    0    2    5    0    0    0    0    0
## 272       2    0    0    0    0    0    0    0    0    2    0
## 273       0    0    1    1    1    0    0    2    0    0    2
## 274       0    0    0   14    3    6    0    0    0    0    0
## 275       0    0    0    7    0    0    0    0    0    0    0
## 276       0    1    0    5    0    1    2    2    1    0    0
## 277       1    0    0    2    0    0    2    1    3    1    0
## 278       0    1    1    0    0    0    0    0    0    0    0
## 279       0    1    1    0    1    4    0    0    0    0    0
## 280       7    1    0    0    0    0    0    0    0    0    0
## 281       1    1    0    0    2    1    0    6    0    0    1
## 282       0    0    0    0    0    0    5    0    0    0    0
## 283       0    3    0    1    0    0    4    1    0    1    2
## 284       0    1    3    0    0    0    0    0    2    1    3
## 285       0    0    0    0    0    0    0    0    0    0    1
## 286       2    2    0    1    2    0    3    1    0    3    5
## 287       9    1    0    0    0    0    0    0    0    0    0
## 288       0    0    0    0    0    0    1    5    0    7    3
## 289       0    0    0    0    0    0    0    1    7    1    6
## 290       1    0    0    0    0    0    1    0    2    1    1
## 291       0    1    0    0    0    0   12    8    9   14    1
```

```
## 292      0    2    2    0    0    0    0    0    0    0    0
## 293      0    0    0    0    0    0    1    0    1    2    1
## 294      0    0    0    0    0    2    0    0    0    1    0
## 295      0    0    0    0    0    0    2    0    0    9    5
## 296      0    2    0    1    7    8    0    3    1    0    1
## 297      1    4    0    6    0    0    4    7    0    5    0
## 298      0    0    0    0    7    0    3    0    0    5    0
## 299      0    0    0    1    2    3    3    1    1    4    0
## 300      1    0    1    6    1    5    1    4    1    2    0
## 301      2    1    6    0    0    0    2    1    0    0    0
## 302      2    1    0    1    2    1   10   14    0    1    4
## 303      0    0    0    0    0    0    1    0    2    2    7
## 304      0    0    0    0    0    0    0    0    0    1    1
## 305      0    0    0    4    0    0    0    0    0    0    0
## 306      0    0    0    0    0    0    0    0    5    1    2
## 307      0    0    0    3    1    2    1    3    0    1    0
## 308      4    4    2    0    0    0    0    0    0    0    0
## 309      1    2    1    0    2    3    2    8    0    0    0
## 310      0    1    1    6    4    3    0    0    0    0    0
## 311      0    0    0    0    9    2    2    1    0    0    0
## 312      0    1    2    0    5    6    0    0    0    0    0
## 313      0    0    0    0    6    8    0    0    0    0    0
## 314      2    3   10    0    0    0    0    0    0    0    0
## 315      1    0    0    6    0    3    0    0    0    0    0
## 316      0    0    0    0    0    0    2    8    0    0    0
## 317      7    5    3    0    0    0    0    0    0    0    0
## 318      1    0    1    0    0    0    0    0    7    0    0
## 319      1    2    2    4    3    2   13    7    7    7    5
## 320      0    2    0    0    0    0   10    1    1    0    1
## 321      0    1    0    0    0    0    3    1    0    1    0
## 322      0    0    0    4    2    1    1    0    2    2    0
## 323      0    0    1    0    0    3    0    0    1    2    0
## 324      0    0    0    0    0    0    0    0    1    0    0
## 325      0    0    0    0    0    0    0    0    5    1    3
## 326      0    0    2    2   16    7    1    0    4    0    0
## 327      0    0    0    0    0    0    2    3    3    0    0
## 328      0    0    0    2    0    0    5    3    1    6    0
## 329      0    0    1    0    0    0    0    7    0    0    0
## 330      2    1    2    1    0    0    0    0    0    0    0
## 331      1    0    2    9    9    1    3    2    0    0    0
## 332      0    0    0    0    2    4    0    0    0    0    0
## 333      5   10   10    0    3    2    0    1    0    0    0
## 334      0    0    0    0    0    0    0    0    0    0    0
## 335      0    2    1    1    2    0    0    0    0    0    0
## 336      0    0    0    0    6    0    1    0    0    0    0
## 337      5    0    1    2    0    0    0    0    0    0    2
## 338      0    0    0    0    0    2    0    0    0    0    0
## 339      0    0    0    3    0    0    1    3    0    2    6
## 340      0    0    1    5    1    2    0    0    0    0    0
## 341      6    3    2    9    4    4    6    2    0    0    0
## 342      0    0    0    0    0    0    0    0    6    0    0
## 343      0    0    0    0    0    0    0    0    0    0    6
## 344      0    2    0    3    4    1    0    0    0    0    0
## 345      2    1    1    0    0    1    0    1    0    0    0
```

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```
## 346     6     3     0     0     0     0     0     0     0     0     0
## 347     1     0     1     0     0     2     7     7     5     2    13
## 348     0     0     0     1     3     0     3     5     0     1     0
## 349     0     0     0     1     0     4     0     2     0     0     0
## 350     0     0     0     0     0     0     9     7     0     2     0
## 351     0     0     0     0     1     3     0     0     0     0     0
## 352     0     0     0     0     0     0     3     7     0     2     0
## 353     0     2     2     0     0     3     0     1     0     0     0
## 354     0     0     0     0     8     0     0     0     0     0     0
## 355     1     0     1     0     0     0     2     3     3     2     4
## 356     1     4     0     3     1     3     0     0     0     0     2
## 357     2     5     2     7     8     8    17     8     0     2     1
## 358     0     0     0     0     0     0     1     0     0     1     1
## 359     3     4     2     0     0     0     0     0     0     0     3
## 360     0     0     0     0     0     0     0     0     0     0     0
## 361     2     1     2     0     0     0     0     0     0     0     0
## 362     1     4     0     0     0     3    23    10     1     3     3
## 363     1     0     2     1     3     0     4     1     2     4     5
## 364     4     0     0     0     0     3     0     0     0     0     0
## 365     1     0     0     0     0     0     0     0     0     0     7
## 366     0     1     0     3     0    10     0     0     1     1     0
## 367     1     0     0     1     1     0     0     0     0     0     0
## 368     0     1     0     1     0     0     1     4     1     2     3
## 369     0     0     0     1     1     3     2     2     1     3     0
## 370     0     1     2     1     3     1     1     5     0     2     0
## 371     0     2     3     4     0     1    11    17     6     2     2
## 372     0     1     0     4     0     2     2     2     1     1     6
## 373     2     1     7     0     0     0     0     0     0     0     0
## 374     2     1     2     8     4    12     0     4     0     1     1
## 375     0     1     1     0     0     0     0     0     7     1     3
## 376     1     1     0     0     0     0     1     2     0     0     0
## 377     0     1     0     2     0     1     1     1     0     0     0
## 378     7     6     0     0     0     0     0     0     0     0     0
## 379     0     0     0     2     0     1     9     0     0     0     0
## 380     1     0     2     0     0     0     0     0     0     0     0
## 381     2     0     6     0     0     0     0     0     0     0     0
## 382     0     0     0     0     0     0     0     0     0     0     0
## 383    10     1    17     0     0     0     0     0     0     0     0
## 384     0     1     1     1     0     0     3     3     0     0     0
## 385     0     0     3     0    10     0     0     2     0     0     0
## 386     0     0     0     0     0     0     5     1     0     4     0
## 387     0     0     0     0     0     0     1     0     6     0     0
## 388     0     0     0     0     0     0     0     0     0     0     0
## 389     0     0     0     0     0     0     0     1     3     1     0
## 390     0     0     0     0     0     0     1     1     0     3     2
## 391     2     0     0     1     0     1     3     5     2     4     5
## 392     0     0     0     2     0     1     1     0     0     2     0
## 393     3     3     1     2     1     0     0     0     0     0     0
## 394     0     0     0     0     0     0     0     0     8     1     0
## 395     0     3     0     0     0     0     0     0     0     0     0
## 396     1     2     1     0     0     0     0     0     0     1     0
## 397     0     0     0     0     0     0     0     0     0     0     5
## 398     0     0     0     1     0     1     1     1     0     0     0
## 399     0     0     0     0     0     0     0     6     0     0     0
```

```
## 400     0    0    0    0    0    0    4    0   12    3    1
## 401     0    0    0    0    0    0    0    0    0    0    0
## 402     0    0    0   10    0    0    0    0    0    0    0
## 403     2    6    0    2    0    0    4    4    0    0    3
## 404     0    2    2    0    2    7    1    3    0    0    0
## 405     0    0    0    1    0    2   10    7    0    0    0
## 406     0    0    0    1    2    2    1    0    0    0    0
## 407     0    0    0    0    0    0    0    0    7    0    0
## 408     2    0    0    0    1    0    0    0    2    0    0
## 409     0    0    0    1    1    0    0    0    0    0    0
## 410     0    0    0    0    0    0    0    0    0    0    0
## 411     0    0    0    0    0    0    0    1   13    4    9
## 412     0    2    0    1    0    0    4    0    0    2    4
## 413     6    1    8    0    0    0    0    0    0    0    0
## 414     0    0    0    1    1    0    1    0    0    0    1
## 415     0    0    0    0    1    4    0    2    0    0    0
## 416     0    1    0    0    4    3    0    0    0    0    0
## 417     0    2    0    0    0    0    0    0    0    0    0
## 418     0    0    0    1    2    0    1    4    5    0    1
## 419     0    1    0    0    0    0    1    1    2    0    5
## 420     0    0    0    0    0    0    2    0    0    0    1
## 421     0    0    0    2    0    0    0    0    0    0    0
## 422     0    0    0    1    2    0    0    5    0    0    0
## 423     0    0    0    0    1    0    0    0    1    0    0
## 424     0    0    0    0    0    1    4    0    0    3    0
## 425     0    0    1    2    0    0    0    0    0    1    2
## 426     0    0    0    0    0    0    0    0    0    0    0
## 427     0    3    0    0    0    0    0    0    0    0    0
## 428     0    1    0    9    0    0    0    0    0    0    0
## 429     0    0    0    0    0    0    0    0    0    0    0
## 430     0    0    0    1    0    0    3    1    6    0    1
## 431     1    0    0    0    0    0    1    1    0    0    0
## 432     0    0    0    0    0    0    0    0    3    0    0
## 433     0    0    0    0    0    0    2    0    1    4    1
## 434     0    0    0    0    0    0    0    0    0    0    0
## 435     0    1    1    0    0    2    0    0    0    0    0
## 436     0    0    0    0    5    2    0    4    0    0    0
## 437     0    1    1    5   10    0    0    1    0    3    0
## 438     1    0    3    1    4    0    0    0    0    0    0
## 439     0    0    0    0    0    0    0    0   11    0    0
## 440     0    1    0    0    4    1    2    4    0    0    0
## 441     0    0    0    0    0    0    0    0    0    0    0
## 442     0    0    0    0    0    0    2    0    0    8    4
## 443     0    0    0    1    2    1    1    0    1    2    0
## 444     0    0    0    0    0    0    8    0    1    4    4
## 445     0    0   10    0    0    0    0    0    0    0    0
## 446     0    0    0    0    0    0    0    3    0    2    0
## 447     0    0    0    1    0    3    0    0    1    0    0
## 448     1    0    1    2    1   10    1    0    0    0    0
## 449     0    0    0    0    0    0    0    1    3    1    2
## 450     0    0    0    0    0    0    0    0    4    3    4
## 451     7    0    1    0    0    0    0    0    0    0    0
## 452     0    0    0    2    3    1    2    2    0    0    0
## 453     0    0    0    2    0    2    9    1    0    0    0
```

```
## 454      0    4    1    0    1    0    0    5    0    0    0
## 455      0    0    0    0    0    0    2    7    0    1    1
## 456      1    2    1    0    0    0    0    0    0    0    0
## 457      0    0    2    0    3    1    2    2    0    0    0
## 458      0    0    0    1    6    0    4    3    4    4    1
## 459      1    0    0    1    0    0    0    1    3    1    0
## 460      0    0    1    1    0    0    0    0    0    2    0
## 461      0    0    0    0    0    0    1    3    3    7    3
## 462      0    0    0    0    0    0    0    0    1    3    0
## 463      1    2    3    0    1    0    0    0    0    0    0
## 464      0    0    1    2    0    0    2    5    5    0   11
## 465      0    0    7    0    1    0    0    0    0    0    0
## 466      0    0    0    0    3    2    0    3    0    0    0
## 467      0    0    0    3    0    0    5    1    0    0    0
## 468      0    6    2    0    2    1    3    0    0    1    0
## 469      0    0    0    0    0    0    0    0    0    0    1
## 470      0    0    0    0    0    0    0    0    1    1    0
## 471      0    1    0    1    0    5    0    0    0    0    0
## 472      0    0    0    0    0    0    0    0    2    0    1
## 473      0    0    0    0    0    0    0    0    0    0    0
## 474      0    0    0    3    0    0    0    0    1    0    0
## 475      3    5    2    0    0    0    0    0    0    1    0
## 476      0    0    0    0    0    0    0    0    3    1    1
## 477      0    0    0    1    1    0    3    3    1    1    1
## 478      0    0    0    0    0    0    9    1    0    0    0
## 479      0    0    0    0    0    0    0    0    4    0    0
## 480      0    0    0    0    1    0    0    0    4    0    0
## 481      0    0    0    1    2    2    1    1    0    0    0
## 482      1    1    0    0    0    1    2    0    0    1    0
## 483      0    0    0    4    0    0    0    0    0    0    0
## 484      0    0    0    0    4    0    1    0    0    1    0
## 485      0    0    0    5    0    1    0    0    0    0    0
## 486      3    0    0    0    0    2    1    0    0    1    0
## 487      0    1    0    0    3    0    3    1    0    0    0
## 488      1    0    1    0    0    4    1    0    0    0    0
## 489      2   13    0    0    0    0    0    0    0    0    0
## 490      0    3    3    5   21    8    2    4    0    0    0
## 491      0    0    0    0    1    1    1    9    0    1    0
## 492      0    0    0    0    0    0    0    2    0    1    0
## 493      0    0    0    0    0    0    0    0    0    0    0
## 494      1    0    1    2    0    0    0    1    0    0    0
## 495      0    0    0    1    0    3    1    0    0    0    0
## 496      0    0    0    2    0    1    3    2    0    0    0
## 497      0    3    0    0    0    0    0    0    0    0    0
## 498      0    0    0    5    0    0    0    0    0    0    0
## 499      0    0    0    0    0    0    0    0    6    0    3
## 500      4    3    2    0    0    0    0    0    3    3    3
## 501      0    0    0    4    0    0    5    1    0    0    0
## 502      0    0    0    0    0    0    2    0    4    6    5
## 503      0    0    0    3    6    1    1    0    0    1    0
## 504      1    0    0    2    1    0    1    7    1    0    0
## 505      0    0    0    0    3    0    3    0    0    0    0
## 506      0    0    0    0    0    1    1    0    0    1    0
## 507      7    1    3    0    0    0    0    0    0    0    0
```

## 508	0	0	0	0	0	0	9	0	0	0	0
## 509	0	0	0	0	0	0	0	0	0	0	2
## 510	0	1	0	0	0	1	2	0	0	0	0
## 511	0	0	0	1	2	2	2	1	0	1	2
## 512	0	1	1	6	1	0	4	0	0	0	2
## 513	0	0	1	0	2	0	2	1	0	2	0
## 514	0	0	0	0	0	0	0	0	0	0	0
## 515	0	0	0	0	0	0	0	0	0	0	0
## 516	0	0	0	0	0	0	0	0	0	0	0
## 517	0	0	1	0	0	0	0	0	0	0	0
## 518	2	3	0	0	0	0	0	0	1	2	1
## 519	0	0	1	0	0	0	1	0	0	0	0
## 520	3	5	0	0	0	0	3	0	0	0	0
## 521	4	11	3	0	0	0	0	0	0	0	0
## 522	0	0	3	0	2	3	0	1	0	0	0
## 523	0	2	3	2	0	0	2	5	0	0	0
## 524	0	0	0	1	4	1	1	1	0	0	0
## 525	0	1	0	0	0	0	0	0	0	0	0
## 526	2	0	1	0	0	0	0	0	0	0	0
## 527	0	0	0	0	0	0	5	0	0	0	0
## 528	0	0	1	0	1	2	0	0	1	0	0
## 529	0	0	0	3	0	2	0	0	0	0	0
## 530	2	0	0	0	0	0	0	0	0	0	0
## 531	0	0	0	0	0	0	0	0	0	0	0
## 532	4	0	0	0	0	0	0	0	0	0	0
## 533	0	2	0	0	0	3	1	0	0	1	1
## 534	0	0	0	0	0	0	0	0	0	0	9
## 535	0	0	0	0	0	0	0	0	0	0	0
## 536	2	0	0	0	9	4	2	0	0	0	0
## 537	0	0	0	0	0	0	0	0	4	1	5
## 538	0	1	1	0	1	5	2	6	0	0	0
## 539	0	0	0	0	0	0	0	3	0	1	2
## 540	1	0	0	4	0	0	0	1	0	0	0
## 541	3	3	2	0	0	0	0	0	0	0	0
## 542	0	0	0	10	4	0	0	0	0	0	0
## 543	3	4	0	0	0	0	0	0	0	0	0
## 544	0	0	0	1	4	5	2	3	0	0	0
## 545	0	0	0	1	0	0	0	0	1	0	0
## 546	0	0	0	0	0	0	0	0	0	0	0
## 547	0	0	0	0	7	0	0	0	0	0	0
## 548	0	1	0	0	0	0	0	0	0	1	0
## 549	0	0	0	1	2	0	2	0	1	0	0
## 550	0	0	0	0	0	0	0	0	0	0	0
## 551	0	0	0	0	0	0	0	0	11	0	0
## 552	1	1	0	0	0	0	0	0	0	0	0
## 553	0	1	0	0	2	0	0	1	0	0	1
## 554	0	0	1	2	3	0	2	4	0	0	0
## 555	2	0	2	2	0	4	3	1	2	2	1
## 556	0	0	0	0	7	4	0	0	0	0	0
## 557	2	0	7	0	0	0	0	0	0	0	0
## 558	1	2	0	0	6	0	0	0	0	0	0
## 559	0	0	3	0	0	3	0	0	0	0	0
## 560	1	0	2	0	3	0	1	2	0	0	0
## 561	0	0	0	0	0	0	0	4	0	1	0

```
## 562      0      0      0      1      3      0      1      0      0      0      0
## 563      0      2      0      0      0      0      0      0      0      3      1
## 564      2      1      0      0      1      0      0      0      0      0      0
## 565      2      4      2      0      0      0      0      0      0      0      0
## 566      2      0      0      0      0      0      0      0      0      0      0
## 567      0      0      0      0      0      0      0      0      0      2      1
## 568      0      0      1      0      2      3      4      3      0      0      0
## 569      0      0      0      0      0      0      0      0      0      0      0
## 570      0      1      1      0      0      0      0      0      0      0      0
## 571      0      0      0      0      1      4      1      0      0      0      0
## 572      0      3      0      0      0      0      0      0      0      0      0
## 573      0      0      0      0      0      0      0      0      0      0      0
## 574      2      0      0      1      1      0      0      0      2      2      3
## 575      0      0      0      0      2      3      3      1      0      0      0
## 576      1      1      0      1      4      4      0      0      0      0      0
## 577      1      0      0      1      0      0      0      5      3      2      0
## 578      3      2      6      0     16      1      0      0      0      0      0
## 579      4      0      2      6      0      2      0      0      0      0      0
## 580      0      0      0      0      0      0      0      0      3      0      0
## 581      0      0      1      0      0      2      1      0      0      0      0
## 582      0      0      0      0      0      0      0      0      0      1      0
## 583      0      0      0      0      0      0      1      0      6      2      1
## 584      0      0      0      0      0      0      4      2      0      0      0
## 585      0      0      0      0      0      0      0      0      0      1      0
## 586      0      1      0      2      6      0      0      0      0      0      0
## 587      1      0      1      1      1      0      0      0      0      0      0
## 588      0      0      0      0      2      1      1      0      0      1      3
## 589      1      0      1      0      1      7      0      0      0      0      0
## 590      0      0      0      0      4      3      0      0      0      0      0
## 591      0      0      0      5      1      1      0      2      0      0      0
## 592      0      0      0      0      0      0      0      0      1      2      1
## 593      0      0      0      0      0      0      3      0      2      0      1
## 594      0      0      3      0      0      0      0      1      0      0      0
## 595      0      0      0      0      0      0      0      0      9      2      3
## 596      0      0      0      6      0      0      1      0      0      1      1
## 597      0      0      0      1      0      0      2      6      0      0      3
## 598      0      0      0      0      0      0      0      0      0      1      1
## 599      0      0      0      0      2      2      1      0      0      0      0
## 600      0      0      0      5      0      0      4      0      8      0      0
## 601      0      0      0      0      0      0      0      0      0      1      1
## 602      0      0      0      1      0      0      1      2      3      1      4
## 603      0      0      0      0      2      0      0      1      0      0      0
## 604      0      0      0      0     10      1      1      3      0      1      0
## 605      0      0      1      7      0      0      0      0      0      0      0
## 606      0      2      1      3      0      0      6      2      0      2      1
## 607      1      1      1      0      0      0      0      0      0      0      0
## 608      0      0      0      0      0      0      0      1      0      0      0
## 609      0      0      0      0      0      0      1      0      5      0      4
## 610      2      2      0      2      0      1      0      0      1      0      3
## 611      0      0      0      3      2      1      0      0      0      0      0
## 612      0      0      0      2      0      5      3      4      0      0      0
## 613      0      0      0      0      0      0      0      0      1      4      4
## 614      0      0      0      0      0      0      0      0      4      0      0
## 615      0      0      0      0      0      0      2      0      1      0      0
```

```
## 616    0    0    0    0    0    1    0    0    0    0    0
## 617    0    0    0    2    2    1    0    1    3    0    5
## 618    1    4    0    0    0    0    0    0    0    0    0
## 619    0    0    0    0    5    3    1    0    0    0    0
## 620    0    1    0    0    1    0    0    0    8    2    0
## 621    2    2    4    0    0    0    0    0    0    0    0
## 622    0    0    0    0    1    2    0    5    0    0    0
## 623    0    0    0    0    0    0    2    1    1    0    1
## 624    0    0    0    6    3    3    2    0    0    0    0
## 625    0    0    0    0    0    0    0    0    4    0    4
## 626    1    4    3    0    0    0    0    0    0    0    0
## 627    0    0    0    1    0    0    0    7    0    0    0
## 628    0    0    0    0    0    0    0    0    0    0    0
## 629    0    0    0    0    0    0    1    0    5    2   12
## 630    0    0    0    0    0    0    0    0    3    0    0
## 631    0    0    0    1    2    9    0    0    0    0    0
## 632    0    0    0    0    0    8    0    0    0    0    0
## 633    0    0    0   10    3    2    2    2    0    1    0
## 634    0    1    0    2    0    0    3    0    0    0    0
## 635    0    0    0    0    0    3    1    1    0    0    0
## 636    0    0    0    0    0    0    0    0    9    1    0
## 637    0    0    0    2    5    4    3    2    0    0    0
## 638    0    1    1    0    0    0    0    0    0    0    0
## 639    0    0    0    4    0    0    2    2    0    0    1
## 640    0    0    1    0    0    0    0    2    0    0    0
## 641    0    0    0    0    5    0    1    0    0    0    0
## 642    0    2    1    2    1    3    5    0    0    0    3
## 643    0    2    0    0    0    0    0    2    0    0    0
## 644    1    2    0    0    3    0    0    0    0    0    0
## 645    0    0    0    0    0    0    1    1    3    2    1
## 646    0    0    0    0    0    0    0    0    0    0    0
## 647    0    0    0    0    2    0    1    0    0    0    0
## 648    0    0    0    1    3    2    0    2    2    0    0
## 649    0    0    0    0    0    0    0    0    0    0    0
## 650    0    0    0    0    0    0    0    0    0    0    0
## 651    0    0    0    0    4    0    1    0    0    0    0
## 652    0    0    0    0    0    5    0    0    0    1    0
## 653    0    1    0    0    0    0    3    3    0    0    0
## 654    0    0    0    0    2    5    0    0    0    0    0
## 655    0    0    0    0    0    0    0    0    0    0    1
## 656    0    0    0    0    0    0    0    0    6    1    1
## 657    0    0    0    0    0    0    0    0    1    1    0
## 658    0    0    0    0    1    0    1    3    0    0    0
## 659    2    1    3    1    3    0    0    0    0    0    0
## 660    0    0    0    1    0    1    1    6    0    3    4
## 661    0    0    0    7    0    0    0    0    0    0    0
## 662    0    0    1    0    0    0    0    0    0    0    0
## 663    0    2    0    4    0    0    0    1    0    0    0
## 664    1    0    0    0    1    0    1    0    1    0    0
## 665    0    0    0    0    0    0    1    0    1    1    1
## 666    0    0    0    0    0    2    0    0    0    0    0
## 667    0    0    3    1    4    0    0    0    0    0    0
## 668    0    0    0    0    0    0    0    0    3    0    0
## 669    0    0    0    0    0    0    8    0    0    1    0
```

```
## 670    0    1    0    3    0    5    0    2    0    2    2
## 671    0    0    0    0    1    0    1    0    0    2    0
## 672    0    0    0    0    0    0    1    0    0    0    0
## 673    0    0    4    1    5    4    0    0    2    1    0
## 674    0    0    0    0    0    0    4    2    8    4    3
## 675    4    2    0    0    0    0    0    0    0    0    0
## 676    0    0    0    0    0    0   13    2    2    5    0
## 677    0    0    0    0    0    0    3    1   10    4    0
## 678    5    0    1    0    0    0    0    0    0    0    0
## 679    0    1    1    1    0    3    1    2    0    0    0
## 680    0    0    0    2    1    0    2    0    0    0    0
## 681    0    0    0    0    0    0    0    0    0    0    0
## 682    0    0    0    0    0    0    0    0    0    1    0
## 683    1    1    0    0    0    7    0    0    0    0    0
## 684    0    0    0    0    0    0    0    0    0    0    0
## 685    0    0    0    1    0    0    0    0    0    0    0
## 686    0    0    0    4    1    6    0    0    0    0    0
## 687    0    0    0    0    0    0    0    0    0    0    0
## 688    0    1    0    0    2    5    1    0    0    2    0
## 689    0    0    0    0    0    0    0    0    0    1    3
## 690    0    0    0    0    0    0    0    0    4    0    0
## 691    1    1    0    2    0    0    2    2    0    0    0
## 692    1    2    1    0    0    0    0    0    0    0    1
## 693    0    1    0    1    1    2    0    3    0    0    1
## 694    0    0    0    0    0    1    1    0    0    0    0
## 695    0    0    0    0    0    0    0    0    0    0    0
## 696    2    4    1    0    0    0    0    0    0    0    0
## 697    0    0    0    0    6    2    0    0    0    0    0
## 698    0    0    1    1    0    8    1    0    0    0    0
## 699    0    1    0    1    0    0    1    1    0    0    0
## 700    0    0    0    0    1    4    4    0    0    1    0
## 701    0    0    0    0    0    0    0    0    0    0    0
## 702    0    0    0    0    2    0    0    2    0    2    0
## 703    0    1    0    4    0    0    0    1    0    0    0
## 704    2    7    0    0    0    0    0    0    0    0    0
## 705    0    0    0    1    2    1    2    0    3    0    0
## 706    0    0    0    1    0    0    6    6    2    3    1
## 707    0    0    0    5    1    0    4    0    0    3    0
## 708    0    0    1    0    3    0    1    0    0    1    0
## 709    0    0    0    3    5    4    0    0    0    0    0
## 710    0    0    0    1    0    0    0    0    0    0    0
## 711    0    0    0    0    0    0    0    0    4    0    3
## 712    0    2    0    1    0    0    5    1    4    0    0
## 713    0    7    0    0    0    0    0    0    0    0    0
## 714    0    0    0    0    0    0    0    0    0    0    0
## 715    0    0    0    0    0    0    0    0    0    0    0
## 716    0    0    3    0    0    0    0    0    0    0    0
## 717    0    0    1    2    3    1    1    0    5    1    0
## 718    0    0    0    0    0    0    0    4    0    0    0
## 719    4    0    0    0    4    4    0    3    0    0    0
## 720    2    4    0    0    0    3    0    2    0    0    2
## 721    0    1    0    1    1    8    1    0    0    0    0
## 722    0    0    0    0    0    0    0    0    0    0    0
## 723    0    0    0    1    2    0    0    2    0    1    0
```

```
## 724    0    0    1    0    0    0    0    0    0    1    0
## 725    2    2    0    1    0    0    0    0    0    0    0
## 726    0    0    0    0    0    0    1    0    0    0    0
## 727    0    0    0    4    0    1    0    0    0    0    0
## 728    2    1    1    0    0    0    0    0    5    3    0
## 729    0    0    0    0    0    0    5    0    1    4    0
## 730    0    0    1    0    0    0    0    0    0    0    1
## 731    0    1    0    1    4    0    1    0    0    0    0
## 732    4    0    1    1    0    0    0    0    0    0    0
## 733    2    0    2    0    2    0    1    0    3    1    0
## 734    0    0    0    1    1    0    0    0    0    0    0
## 735    1    1    1    0    0    0    2    0    0    1    0
## 736    2    3    1    1    0    0    0    0    0    0    0
## 737    0    0    0    0    1    0    1    0    1    0    0
## 738    0    0    1    0    3    5    2    0    0    1    0
## 739    0    0    0    1    1    3    0    0    0    0    1
## 740    0    0    0    0    0    0    0    0    0    5    3
## 741    0    0    0    0    0    0    1    0    2    0    0
## 742    0    0    0    0    0    0    0    0    9    0    1
## 743    0    0    0    0    1    0    1    4    0    2    0
## 744    0    0    1    4    1    0    3    2    0    1    1
## 745    0    0    0    0    1    3    0    1    1    1    0
## 746    0    1    1    6    0    6    0    0    0    0    0
## 747    0    0    0    0    0    0    0    0    0    0    0
## 748    0    0    0    0    0    0    0    0    0    0    0
## 749    1    0    0    5    0    0    3    0    0    0    0
## 750    0    0    0    0    0    0    0    0    0    0    0
## 751    0    0    0    0    0    1    2    5    0    1    0
## 752    0    0    0    0    0    0    3    0    0    0    0
## 753    1    2    1    0    0    0    0    0    1    0    0
## 754    0    0    1    0    2    0    0    0    0    0    0
## 755    0    0    0    0    0    0    1    4    0    0    0
## 756    0    0    0    0    0    0    0    0    0    0    0
## 757    0    1    1    0    3    0    0    0    0    2    0
## 758    1    0    0    1    1    2    0    0    3    0    0
## 759    0    0    0    0    0    0    0    0    0    0    0
## 760    0    0    0    0    0    0    0    0    0    5    0
## 761    1    0    1    1    2    0    0    0    1    0    0
## 762    0    0    0    2    0    0    0    3    0    0    0
## 763    0    0    2    2    0    1    0    0    0    0    0
## 764    0    0    0    0    0    0    0    0    6    1    0
## 765    0    3    1    0    1    1    0    1    0    0    0
## 766    0    0    0    0    0    0    0    0    0    0    1
## 767    0    0    0    0    0    0    0    0    4    0    2
## 768    1    0    0    0    0    0    6    0    0    4    2
## 769    0    0    0    0    0    0    1    0    3    3    3
## 770    0    0    0    0    0    3    1    2    0    0    0
## 771    3    3    3    2    1    0    2    0    0    1    0
## 772    0    0    0    0    2    3    0    1    0    0    0
## 773    0    0    0    0    0    0    2    1    0    0    2
## 774    0    0    0    1    0    3    6    0    0    1    0
## 775    0    0    0    0    0    0    0    0    0    1    6
## 776    0    0    0    0    0    0    1    3    4    2    4
## 777    0    0    0    0    0    0    0    0    0    0    0
```

```
## 778      0    0    0    0    0    0    0    0    0    0    0
## 779      1    3    3    4    0    2    0    0    0    0    0
## 780      0    0    0    0    0    0    2    4    2    1    0
## 781      0    0    0    0    0    0    0    0    2    1    0
## 782      2    2   12    0    0    0    1    0    0    0    0
## 783      0    0    0    0    0    0    0    0    0    0    0
## 784      0    0    0    0    0    0    1    0    3    0    0
## 785      4    4    8    0    0    1    1    0    0    0    0
## 786      1    2    1    0    0    0    6    6    0    0    0
## 787      0    0    0    4    1    0    0    0    0    0    0
## 788      0    2    1    0    1    0    3    6    0    1    0
## 789      0    0    0    3    1    0    0    0    1    0    1
## 790      0    0    0    0    0    0    0    0    0    2    2
## 791      0    0    1    0    0    0    0    0    0    0    0
## 792      4    0    4    0    0    0    0    0    0    0    0
## 793      0    0    0    4    0    0    2    2    0    1    5
## 794      0    0    0    0    4    1    0    2    0    1    1
## 795      3    2    0    1    0    0    0    0    0    0    0
## 796      1    0    0    0    0    1    1    0    0    1    0
## 797      1    2    0    1    0    0    0    0    0    1    0
## 798      0    0    0    0    0    0    0    2    1    4    0
## 799      0    0    0    0    0    0    0    0    4    1    5
## 800      0    0    1    0    3    0    2    0    0    0    0
## 801      0    0    1    4    0    2    0    1    0    0    1
## 802      0    0    0    0    0    0    1    0    1    0    1
## 803      0    3    0    0    0    0    0    0    3    3    4
## 804      0    0    0    0    0    1    0    0    0    0    0
## 805      0    0    0    0    0    0    2    0    0    0    0
## 806      0    0    0    0    1    2    0    0    0    0    0
## 807      0    0    0    0    0    0    0    2    0    0    0
## 808      0    0    0    0    0    3    0    0    0    0    0
## 809      0    2    0    0    0    0    0    0    3    0    0
## 810      0    0    1    3    0    0    8    6    0    0    0
## 811      3    0    4    0    0    0    0    0    0    0    0
## 812      2    1    0    0    0    0    0    0    0    0    0
## 813      1    1    0    0    3    1    0    0    0    1    1
## 814      0    0    0    0    1    5    0    0    0    0    0
## 815      2    0    2    0    0    0    0    0    0    0    0
## 816      0    0    0    0    0    0    1    0    0    0    1
## 817      0    0    0    0    0    0    0    0    0    4    0
## 818      0    0    0    0    0    0    0    0    0    0    0
## 819      0    0    0    0    5    3    1    0    0    0    0
## 820      2    1    0    0    0    0    0    0    0    0    0
## 821      0    0    0    0    0    0    0    0    0    0    6
## 822      0    0    1    0    3    2    0    0    0    0    0
## 823      0    8    0    0    0    0    0    0    0    0    0
## 824      0    4    1    0    1    0    0    0    0    0    0
## 825      0    0    0    0    0    6    0    1    0    0    0
## 826      0    0    1    3    5    0    1    1    0    0    0
## 827      0    0    0    0    0    0    0    0    0    0    0
## 828      2    2    3    0    0    0    0    0    0    0    0
## 829      0    1    4    0    1    9    0    0    0    0    0
## 830      0    1    0    0    0    0    0    0    0    0    0
## 831      0    0    0    2    0    0    3    4    0    0    0
```

```
## 832    0    0    1    0    2    1    2    0    0    3    0
## 833    0    0    0    0    0    0    1    0    3    1    8
## 834    0    0    0    0    0    0    0    0    2    2    2
## 835    0    0    1    0    0    0    0    0    0    0    0
## 836    0    0    0    0    0    0    1    3    0    0    0
## 837    0    1    0    0    4    3    1    1    0    0    0
## 838    0    0    0    2    0    0    0    0    0    0    0
## 839    0    0    1    0    1    0    2    0    0    0    1
## 840    0    0    0    0    1    1    2    1    0    1    0
## 841    1    0    2    2    0    0    0    0    0    0    0
## 842    0    1    1    0    0    2    0    0    0    0    0
## 843    0    0    0    0    0    0    6    0    0    0    0
## 844    0    0    0    0    0    0    0    0    0    0    0
## 845    0    0    0    0    0    0    0    0    2    0    0
## 846    0    2    0    2    0    2    1    3    0    2    0
## 847    0    0    0    0    0    0    0    0    2    1    0
## 848    0    0    0    0    0    3    0    0    0    0    0
## 849    0    0    1    4    3    0    0    0    0    0    0
## 850    0    5    2    0    0    0    0    0    0    0    0
## 851    1    0    0    2    0    5    4    4    1    0    0
## 852    0    0    0    0    0    0    0    0    2    1    2
## 853    0    0    0    2    3    1    0    0    0    0    0
## 854    0    0    0    0    1    3    1    0    0    0    0
## 855    1    1    2    0    0    0    0    0    0    0    3
## 856    0    0    0    0    0    0    0    0    3    2    0
## 857    0    0    0    1    1    3    0    0    0    0    1
## 858    0    0    0    0    0    1    0    0    0    1    1
## 859    0    0    1    0    0    0    0    0    0    0    0
## 860    0    3    0    1    1    0    1    0    0    0    0
## 861    1    0    0    0    0    1    1    0    0    0    0
## 862    7    0    1    0    0    0    0    0    0    0    0
## 863    0    0    0    3    0    0    1    0    0    3    0
## 864    0    0    0    0    0    0    0    0    0    0    0
## 865    0    0    0    0    0    2    0    0    0    0    0
## 866    0    0    0    0    0    0    1    0    1    0    1
## 867    0    1    0    0    2    2    4    0    0    9    0
## 868    0    0    0    0    1    0    0    5    0    0    0
## 869    0    0    0    8    3    3    1    2    0    2    1
## 870    0    0    0    0    0    0    1    0    0    1    0
## 871    2    0    1    3    0    0    0    0    0    0    0
## 872    1    0    0    0    0    0    1    6    1    1    1
## 873    0    0    1    0    0    0    0    0    0    0    0
## 874    0    0    0    0    5    0    1    0    0    0    0
## 875    0    0    0    0    0    6    0    0    0    0    0
## 876    0    0    0    3    5    2    1    0    0    0    1
## 877    0    0    1    0    0    0    0    0    0    0    0
## 878    0    0    0    0    0    0    0    0    1    1    0
## 879    0    0    0    4    0    7    1    0    0    0    0
## 880    0    0    0    2    0    0    0    0    2    0    0
## 881    0    0    0    1    2    0    0    0    0    0    0
## 882    0    1    0    0    0    0    0    0    0    0    0
## 883    0    0    0    0    0    0    0    2    0    0    0
## 884    1    0    0    0    0    0    0    0    0    0    0
## 885    1    3    0    0    3    1    0    0    0    0    0
```

```
## 886      0    0    1    1    5    1    4    2    1    1    0
## 887      0    0    0    0    0    0    0    0    0    4    1
## 888      0    0    1    0    1    0    0    0    0    0    0
## 889      0    1    1    2    0    0    0    0    2    0    1
## 890      0    1    0    0    1    2    0    1    0    1    0
## 891      0    0    0    0    0    1    1    7    0    0    0
## 892      1    3    0    0    0    0    0    0    0    0    0
## 893      1    0    0    0    3    0    0    0    0    0    0
## 894      0    0    0    0    1    0    0    0    0    0    0
## 895      1    1    0    0    0    0    0    0    0    0    0
## 896      0    0    1    1    1    3    0    1    0    0    0
## 897      2    0    3    2    2    0    3    0    0    0    0
## 898      0    1    3    2    1    0    0    0    0    0    0
## 899      0    0    0    0    0    0    0    1    0    0    1
## 900      0    0    0    0    0    0    1    0    0    0    0
## 901      7    1    6    0    0    0    0    0    0    0    0
## 902      0    2    0    1    1    0    1    0    0    0    0
## 903      0    2    0    1    0    1    2    0    0    3    0
## 904      0    0    0    0    3    1    5    0    0    0    0
## 905      0    0    0    0    0    0    0    0    0    0    0
## 906      0    0    0    1    0    0    0    0    0    0    0
## 907      0    0    0    0    0    1    0    0    0    0    0
## 908      0    0    0    0    0    0    0    0    7    0    0
## 909      0    0    0    0    1    0    0    2    0    0    0
## 910      0    0    0    0    2    0    1    2    0    2    0
## 911      0    4    0    0    2    6    3    0    0    0    0
## 912      1    0    0    0    0    0    0    0    3    2    0
## 913      0    0    0    0    0    0    0    0    0    1    0
## 914      0    0    0    0    1    1    1    2    0    0    0
## 915      1    1    0    0    0    0    1    3    0    0    0
## 916      0    1    0    2    4    0    0    2    0    0    0
## 917      0    0    0    0    1    0    2    3    0    0    0
## 918      0    0    0    0    6    5    2    4    0    0    0
## 919      0    0    0    2    0    1    0    0    0    0    0
## 920      0    0    0    0    0    0    3    0    0    0    0
## 921      1    2    3    0    0    0    0    0    0    0    0
## 922      0    0    0    0    0    0    0    1    0    0    0
## 923      0    0    0    0    0    0    0    0    1    0    0
## 924      0    1    0    0    0    0    0    0    0    0    0
## 925      0    0    0    0    0    0    0    0    0    0    0
## 926      0    0    0    0    0    0    1    1    1    1    1
## 927      0    0    0    1    0    0    0    0    5    0    0
## 928      0    0    0    0    0    0    0    1    2    0    1
## 929      0    0    0    0    0    0    1    0    0    0    0
## 930      0    0    0    0    0    0    0    0    0    0    0
## 931      4    0    2    0    0    0    0    0    0    0    0
## 932      1    0    0    1    0    0    0    0    0    0    0
## 933      1    1    1   10    0    0    0    0    0    0    0
## 934      0    0    0    0    0    0    0    0    0    0    0
## 935      1    0    0    0    0    0    0    0    0    0    0
## 936      0    0    0    1    0    2    0    0    0    0    0
## 937      0    1    1    1    0    6    2    1    0    0    0
## 938      1    1    0    0    0    0    0    0    0    0    0
## 939      0    0    0    1    2    1    0    0    0    0    0
```

```
## 940      0    0    0    0    0    0    0    0    0    0    0
## 941      0    2    0    0    0    0    0    0    0    0    0
## 942      3    1    0    1    1    1    1    2    0    3   11
## 943      0    0    0    0    0    0    0    0    0    0    0
## 944      0    0    0    0    0    0    0    0    0    0    0
## 945      0    0    0    0    0    0    1    1    2    0    0
## 946      0    0    0    5    0    0    0    0    0    0    0
## 947      0    3    2    0    0    0    0    0    0    0    0
## 948      0    3    0    0    0    0    0    0    0    0    0
## 949      0    0    2    0    0    0    0    0    0    0    0
## 950      0    0    0    0    0    0    1    0    3    0    0
## 951      0    1    1    0    0    0    1    0    6    2    0
## 952      1    0    0    1    2    0    0    2    0    0    0
## 953      0    5    0    0    0    0    0    0    0    0    0
## 954      0    1    2    2    4    2    1    1    0    0    0
## 955      0    0    0    0    0    0    1    2    0    3    0
## 956      0    0    0    0    0    0    3    0    0    0    0
## 957      0    0    0    0    0    0    0    0    0    0    0
## 958      0    0    0    0    0    0    0    0    0    0    3
## 959      0    1    0    0    0    0    2    3    0    0    0
## 960      0    0    0    0    0    0    0    0    0    0    1
## 961      1    1   10    2    6    1    2    0    0    0    0
## 962      1    2    2    0    1    0    1    2    0    1    2
## 963      0    0    0    1    0    1    2    8    0    0    0
## 964      0    0    0    0    0    0    0    0    0    0    0
## 965      0    1    2    3    6    0    0    0    0    3    0
## 966      0    0    0    2    1    1    0    5    0    0    0
## 967      0    0    0    0    0    0    0    0    0    0    0
## 968      0    1    0    0    0    0    0    0    0    0    0
## 969      0    0    1    0    0    0    0    0    0    0    0
## 970      0    0    0    1    0    1    0    0    0    0    0
## 971      0    0    0    0    0    0    0    1    0    2    0
## 972      0    0    0    0    0    0    0    0    3    1    0
## 973      0    3    0    0    4    0    2    1    0    2    0
## 974      0    0    0    5    0    0    1    0    0    0    0
## 975      0    0    0    0    0    4    0    0    0    1    0
## 976      0    0    0    2    0    1    1    0    0    0    0
## 977      0    0    0    0    0    0    0    0    0    0    0
## 978      0    0    0    0    0    0    0    0    0    0    0
## 979      0    0    0    4    0    0    7    0    0    0    0
## 980      0    1    0    2    0    0    0    1    0    0    0
## 981      0    0    0    1    0    0    1    0    0    0    0
## 982      3    0    3    0    0    0    0    0    0    0    0
## 983      0    0    0    1    0    0    0    0    0    0    0
## 984      0    0    0    0    0    0    0    0    1    0    0
## 985      0    0    0    0    0    0    0    0    3    3    1
## 986      0    0    0    0    1    0    0    0    3    0    0
## 987      0    0    0    0    0    0    0    0    0    0    0
## 988      0    0    0    1    1    2    0    0    0    0    0
## 989      0    2    0    0    0    0    0    0    0    2    3
## 990      0    0    0    0    0    0    0    0    3    0    0
## 991      0    0    0    0    0    0    0    0    0    0    0
## 992      0    0    0    0    0    0    0    0    1    0    0
## 993      0    0    0    0    7    2    1    0    0    0    0
```

```
## 994    0    0    0    0    0    0    1    0    4    0    0
## 995    0    0    0    0    2    0    2    0    3    0    0
## 996    3    4    7    0    0    0    1    0    0    1    0
## 997    0    0    0    0    1    1    0    0    0    0    0
## 998    0    2    0    0    0    3    0    0    0    0    0
## 999    0    0    0    0    0    1    0    2    0    0    0
## 1000   1    1    1    3    0    2    0    0    0    2    1
## 1001   0    0    0    0    3    2    0    0    0    0    0
## 1002   0    1    0    0    6    1    5    1    0    0    0
## 1003   2    1    0    0    0    0    0    0    0    0    0
## 1004   3    1    1    0    0    0    0    0    0    0    0
## 1005   1    1    3    0    0    0    0    1    0    0    0
## 1006   1    3    0    0    1    0    0    0    0    0    0
## 1007   0    0    0    0    0    0    0    0    0    0    0
## 1008   0    0    0    0    2    0    0    0    4    1    0
## 1009   0    0    0    0    0    0    0    0    0    0    0
## 1010   0    0    0    1    0    0    0    0    0    0    0
## 1011   0    0    0    0    0    0    0    0    3    0    0
## 1012   1    2    0    0    0    0    0    0    0    0    0
## 1013   0    0    0    0    0    0    0    0    0    0    0
## 1014   0    0    0    0    0    0    0    3    0    0    0
## 1015   0    0    0    0    0    0    2    2    0    0    0
## 1016   0    0    0    0    0    0    5    0    0    0    0
## 1017   0    0    0    0    0    0    0    0    0    0    0
## 1018   3    0    3    0    0    0    0    0    0    0    0
## 1019   0    0    0    0    0    0    0    0    6    0    0
## 1020   0    0    0    1    1    0    0    0    0    0    0
## 1021   0    0    0    0    1    3    0    0    0    0    0
## 1022   0    0    0    0    0    0    0    0    0    0    0
## 1023   0    0    0    0    0    0    0    0    0    0    0
## 1024   2    1    2    0    0    0    0    0    0    0    0
## 1025   0    0    0    0    2    1    1    0    0    0    0
## 1026   0    0    0    0    0    0    0    0    2    0    0
## 1027   0    0    0    0    0    0    0    0    0    0    0
## 1028   0    0    0    0    1    0    0    1    0    1    0
## 1029   0    0    0    2    1    2    0    0    0    0    0
## 1030   0    1    0    0    0    0    0    0    0    0    0
## 1031   3    1    0    0    0    0    0    0    0    1    0
## 1032   0    1    0    0    0    0    0    0    0    0    0
## 1033   0    0    0    0    0    0    2    2    0    0    0
## 1034   0    0    0    1    3    1    3    0    3    3    0
## 1035   0    0    0    0    0    0    0    0    0    0    0
## 1036   0    0    0    0    0    0    2    1    0    0    0
## 1037   2   11    4    0    2    6    2    2    0    4    1
## 1038   0    0    0    0    0    5    0    0    0    0    0
## 1039   0    0    0    0    0    0    0    0    0    0    0
## 1040   0    0    0    0    0    0    0    0    0    0    0
## 1041   0    0    0    3    1    3    1    3    1    0    1
## 1042   0    0    0    3    0    1    0    0    0    1    0
## 1043   0    0    0    0    0    0    0    1    0    0    0
## 1044   0    0    0    0    0    0    0    0    0    0    0
## 1045   0    0    0    0    0    0    0    0    1    0    0
## 1046   0    0    0    0    0    0    0    0    0    0    0
## 1047   0    0    5    0    0    0    0    0    0    0    0
```

```
## 1048    0    0    0    0    0    5    0    0    0    0    0
## 1049    0    4    0    0    0    0    0    0    0    0    0
## 1050    1    1    0    2    0    3    3    3    0    0    0
## 1051    0    0    0    1    2    5    1    2    0    0    0
## 1052    0    0    0    0    0    0    0    0    0    0    0
## 1053    0    0    0    0    0    0    1    2    1    0    0
## 1054    0    0    0    1    2    1    1    0    0    0    0
## 1055    1    0    1    0    0    0    0    0    0    0    0
## 1056    0    2    0    0    0    0    0    0    0    0    0
## 1057    0    0    2    0    1    5    0    0    2    3    0
## 1058    0    1    1    0    2    4    9    8    0    2    0
## 1059    1    0    0    0    0    3    0    1    0    0    1
## 1060    0    0    0    0    0    0    1    4    0    1    0
## 1061    0    0    0    0    0    0    0    5    0    3    0
## 1062    0    0    0    0    0    0    0    0    0    0    0
## 1063    0    0    0    1    0    0    0    1    1    2    0
## 1064    0    0    0    0    0    0    2    0    0    0    0
## 1065    0    0    0    0    0    0    0    0    0    0    0
## 1066    0    0    0    0    0    0    0    0    0    0    0
## 1067    4    1    2    0    0    1    0    0    0    0    0
## 1068    0    0    0    0    0    0    0    0    0    0    0
## 1069    0    0    0    0    0    0    0    0    0    0    0
## 1070    0    1    3    0    1    0    0    0    0    0    0
## 1071    0    0    0    0    1    0    0    0    0    0    0
## 1072    0    0    0    0    0    0    0    1    0    0    0
## 1073    0    0    0    0    0    0    0    0    0    0    0
## 1074    0    0    0    0    0    0    0    0    0    0    0
## 1075    0    0    0    0    0    0    0    0    0    0    0
## 1076    0    0    0    0    0    0    0    0    0    0    0
## 1077    3    1    0    0    1    0    1    0    0    0    0
## 1078    0    0    0    0    0    0    0    0    2    0    0
## 1079    0    0    0    0    0    0    5    0    0    0    0
## 1080    0    1    0    0    0    0    0    0    0    0    0
## 1081    0    2    0    0    0    0    0    0    0    0    0
## 1082    0    0    0    1    2    2    0    0    0    0    0
## 1083    0    0    0    0    0    0    0    5    0    0    0
## 1084    0    1    0    0    0    0    0    1    1    1    4
## 1085    0    0    0    0    0    0    0    0    0    0    0
## 1086    0    0    0    1    1    1    0    0    0    0    0
## 1087    0    0    0    0    0    0    0    0    1    0    1
## 1088    0    0    1    3    0    1    0    0    0    0    0
## 1089    0    0    0    0    0    0    0    0    0    0    0
## 1090    0    0    0    0    1    3    0    0    2    1    0
## 1091    0    0    0    0    0    0    0    0    0    1    0
## 1092    0    0    0    1    0    1    0    2    0    0    1
## 1093    1    0    1    0    0    0    0    0    0    0    0
## 1094    1    3    0    0    0    0    0    0    0    0    0
## 1095    0    0    0    0    0    0    0    0    0    0    0
## 1096    0    0    2    0    1    0    0    0    0    0    0
## 1097    0    0    0    0    6    0    3    2    1    0    5
## 1098    0    0    0    0    0    0    3    2    0    3    0
## 1099    0    0    0    0    0    0    0    0    2    0    0
## 1100    0    0    0    0    0    3    3    0    0    0    0
## 1101    1    1    0    2    2    2    2    1    0    0    0
```

```
## 1102     0    0    0    0    0    0    0    2    0    0    0
## 1103     0    0    0    0    0    0    3    0    0    1    0
## 1104     0    0    0    0    2    1    1    0    0    0    0
## 1105     0    0    0    0    0    0    0    0    0    0    0
## 1106     0    0    0    0    0    5    0    0    0    0    0
## 1107     0    0    0    0    0    0    2    0    0    0    0
## 1108     0    2    0    1    1    0    0    0    0    0    0
## 1109     0    0    5    0    0    0    0    0    0    0    0
## 1110     0    0    0    1    0    0    1    3    0    0    0
## 1111     0    0    0    0    0    0    0    0    0    0    0
## 1112     0    0    0    0    0    0    0    0    0    0    0
## 1113     0    0    1    0    0    3    0    0    1    0    0
## 1114     0    0    0    0    0    0    0    0    3    0    7
## 1115     0    0    0    0    0    0    0    0    0    2    0
## 1116     0    0    0    0    0    0    1    0    0    0    0
## 1117     5    1    0    0    0    0    0    0    0    0    0
## 1118     2    1    0    0    0    0    0    0    0    0    0
## 1119     0    0    0    0    0    0    2    2    0    0    0
## 1120     0    3    1    0    0    1    2    7    0    1    0
## 1121     0    2    0    0    0    0    0    0    0    0    0
## 1122     1    1    0    0    0    0    0    0    0    0    0
## 1123     1    1    1    1    1    0    0    0    0    0    0
## 1124     0    0    0    0    0    0    0    0    3    0    0
## 1125     0    0    0    0    1    0    1    2    0    0    1
## 1126     0    0    0    0    0    0    0    0    4    0    1
## 1127     1    0    1    3    0    3    4    0    0    0    0
## 1128     0    0    0    0    0    0    0    0    0    0    5
## 1129     3    3    0    0    0    0    0    0    0    0    0
## 1130     1    2    0    0    0    0    0    0    2    0    1
## 1131     0    1    1    1    2    3    0    0    0    0    0
## 1132     0    0    0    0    0    0    1    0    2    0    0
## 1133     2    1    1    2    0    4    0    0    0    0    0
## 1134     0    0    0    0    3    0    0    0    1    0    0
## 1135     0    5    0    0    0    0    0    0    0    0    0
## 1136     0    0    0    0    0    1    0    0    0    0    0
## 1137     0    0    0    5    1    0    1    0    0    1    0
## 1138     0    0    0    1    0    0    2    0    0    1    0
## 1139     0    0    2    1    0    3    0    3    0    0    0
## 1140     0    0    0    0    1    0    1    2    0    0    0
## 1141     1    1    0    0    0    0    0    0    0    0    0
## 1142     0    0    0    0    0    0    0    1    0    0    0
## 1143     0    0    0    0    0    0    0    0    0    0    0
## 1144     0    0    0    0    4    3    0    0    0    0    0
## 1145     0    0    0    0    1    5    1    0    4    3    0
## 1146     0    0    0    0    0    0    0    0    0    0    0
## 1147     0    0    1    0    0    0    0    0    0    0    0
## 1148     0    0    0    0    0    0    1    0    0    0    0
## 1149     1    0    0    0    1    1    0    1    0    0    0
## 1150     0    1    0    0    0    0    0    0    0    0    0
## 1151     0    1    0    0    0    0    0    0    3    4    2
## 1152     0    3    2    1    0    1    0    3    0    0    0
## 1153     1    2    0    2    0    0    0    0    0    0    0
## 1154     3    2    2    0    0    0    0    0    0    0    0
## 1155     0    1    1    0    0    0    0    0    0    0    0
```

```
## 1156    0    0    0    0    0    0    0    0    0    0    0
## 1157    0    1    0    0    0    0    0    0    0    2    0
## 1158    0    0    0    0    1    0    0    0    0    0    1
## 1159    0    1    0    5    1    3    2    0    0    0    2
## 1160    0    0    0    1    0    2    0    2    2    0    3
## 1161    0    2    0    0    0    0    0    0    0    0    0
## 1162    0    0    0    1    1    2    2    1    0    0    0
## 1163    0    0    0    0    0    0    0    0    1    3    0
## 1164    0    0    1    1    0    0    1    0    0    0    0
## 1165    1    1    1    0    0    0    0    0    0    0    0
## 1166    0    0    0    0    2    0    0    0    0    1    0
## 1167    0    0    1    0    0    0    0    0    0    0    1
## 1168    1    2    0    1    0    2    0    0    1    0    0
## 1169    0    0    0    0    1    0    0    6    0    0    0
## 1170    0    3    0    1    1    3    1    4    0    1    0
## 1171    1    0    0    1    0    0    1    0    0    0    0
## 1172    0    1    4    0    1    0    0    1    0    0    0
## 1173    0    0    0    0    0    0    0    0    0    0    0
## 1174    0    0    0    0    2    2    0    1    0    1    0
## 1175    0    0    0    0    0    0    0    0    0    0    0
## 1176    0    2    1    0    0    0    0    0    0    0    0
## 1177    0    0    1    0    1    1    1    0    0    0    0
## 1178    0    0    0    0    0    1    1    1    0    0    0
## 1179    0    1    0    0    3    0    0    0    0    0    0
## 1180    0    0    0    0    0    1    0    0    0    0    0
## 1181    0    0    0    0    0    5    0    0    0    0    0
## 1182    1    0    0    0    0    0    0    0    0    0    0
## 1183    0    0    0    0    0    0    0    0    0    0    0
## 1184    0    1    4    0    0    0    0    0    0    0    0
## 1185    0    0    0    1    1    0    0    0    0    0    0
## 1186    0    1    0    1    0    0    1    0    0    0    1
## 1187    0    0    0    1    0    0    1    1    0    0    0
## 1188    0    1    0    0    1    3    0    0    0    0    0
## 1189    0    0    0    0    0    0    0    0    0    0    0
## 1190    1    0    0    0    0    0    0    0    0    0    0
## 1191    0    0    0    0    0    0    0    0    0    0    0
## 1192    0    0    0    0    0    0    1    1    0    0    2
## 1193    0    0    1    0    2    0    2    2    0    0    0
## 1194    0    0    0    0    0    0    0    0    0    0    0
## 1195    0    2    0    0    3    0    0    0    0    0    0
## 1196    0    0    0    0    0    0    1    2    0    0    0
## 1197    1    1    0    0    0    0    0    0    0    0    0
## 1198    1    0    0    0    0    0    0    0    0    0    0
## 1199    0    0    0    0    0    0    0    0    0    0    0
## 1200    0    0    0    0    3    0    1    0    0    0    0
## 1201    0    0    0    0    0    0    0    0    0    0    0
## 1202    0    0    0    4    0    2    0    0    0    0    0
## 1203    2    0    0    0    0    0    0    0    0    0    0
## 1204    1    0    1    0    0    1    0    0    0    0    0
## 1205    0    0    0    0    0    4    0    0    0    0    0
## 1206    1    1    0    0    0    0    0    0    0    0    0
## 1207    3    1    0    0    0    0    0    0    0    0    0
## 1208    0    0    0    0    0    0    0    0    0    0    0
## 1209    4    0    1    0    0    0    0    0    0    0    0
```

```
## 1210    0    0    0    0    0    0    0    0    0    0    0
## 1211    0    0    0    0    0    0    0    0    0    0    0
## 1212    1    6    0    0    0    0    0    0    0    0    0
## 1213    0    0    0    0    0    0    0    0    0    1    0
## 1214    0    0    0    0    0    1    1    0    0    0    0
## 1215    0    1    0    0    1    3    0    0    0    0    0
## 1216    0    0    0    0    0    0    0    0    0    0    0
## 1217    0    0    0    0    1    2    0    0    0    0    0
## 1218    0    4    0    0    0    0    0    0    0    0    0
## 1219    0    0    0    0    0    0    0    0    0    0    0
## 1220    0    0    0    0    0    2    0    0    0    0    0
## 1221    0    0    0    0    0    0    0    0    0    0    0
## 1222    0    0    0    0    0    0    0    0    0    0    0
## 1223    0    1    1    0    0    0    0    0    0    0    0
## 1224    0    0    0    0    0    1    0    0    0    2    1
## 1225    0    0    0    0    0    0    0    2    0    0    0
## 1226    1    0    0    0    0    0    0    0    0    0    0
## 1227    0    0    0    0    0    0    0    0    0    0    0
## 1228    0    0    0    0    0    0    0    0    0    0    0
## 1229    1    0    2    0    0    0    0    0    0    0    0
## 1230    0    0    0    0    1    0    0    0    3    1    0
## 1231    0    1    0    0    0    0    0    0    0    0    0
## 1232    0    0    0    0    4    2    1    0    0    0    0
## 1233    0    0    0    2    0    0    0    0    0    0    0
## 1234    0    0    0    0    0    0    0    0    0    1    0
## 1235    0    0    0    0    1    1    2    0    0    0    0
## 1236    1    1    0    0    0    0    0    0    0    0    0
## 1237    0    1    0    0    0    0    0    0    0    0    0
## 1238    0    0    0    0    0    0    0    0    0    0    0
## 1239    0    0    0    0    0    0    0    0    0    0    0
## 1240    0    2    0    0    0    0    0    0    0    0    0
## 1241    0    0    2    0    1    0    0    0    1    0    0
## 1242    2    3    2    1    2    0    0    1    0    1    1
## 1243    1    4    0    2    2    0    3    0    0    0    0
## 1244    0    0    0    0    0    0    0    0    0    0    0
## 1245    1    0    0    0    0    0    0    0    0    0    0
## 1246    0    0    0    0    0    0    0    0    0    0    0
## 1247    0    0    0    0    0    0    0    0    0    0    0
## 1248    0    0    1    0    0    0    0    0    0    0    0
## 1249    1    3    0    0    0    0    0    0    0    0    0
## 1250    0    0    0    0    0    0    0    0    0    0    0
## 1251    0    2    0    0    0    0    0    0    0    0    0
## 1252    0    0    0    0    1    0    1    3    0    0    0
## 1253    0    1    0    0    0    0    2    0    4    2    1
## 1254    0    0    0    0    0    2    0    0    0    0    0
## 1255    0    0    0    2    1    0    0    1    0    0    0
## 1256    3    2    2    0    0    0    0    0    0    0    0
## 1257    0    0    1    1    0    0    0    0    0    0    0
## 1258    0    4    0    0    0    0    0    0    0    0    0
## 1259    1    0    1    0    1    0    0    0    0    0    0
## 1260    0    0    0    0    0    0    0    0    0    1    0
## 1261    0    0    0    0    0    0    1    0    0    0    0
## 1262    0    0    0    0    0    0    0    0    0    0    0
## 1263    0    0    0    4    0    0    0    0    0    0    0
```

```
## 1264    0    1    0    0    0    0    0    0    0    0    0
## 1265    0    0    0    0    0    0    0    0    0    0    0
## 1266    0    0    0    0    0    1    2    0    0    0    0
## 1267    0    0    0    0    0    0    0    1    0    0    0
## 1268    0    0    0    2    0    1    0    0    0    0    0
## 1269    0    0    0    0    4    1    2    0    0    0    0
## 1270    0    0    0    0    0    0    0    0    1    0    0
## 1271    0    0    0    0    0    0    1    0    1    0    0
## 1272    1    0    0    0    1    0    1    0    0    0    1
## 1273    0    0    0    1    0    0    0    1    0    0    0
## 1274    0    0    0    4    1    2    1    0    0    1    0
## 1275    1    0    0    0    0    1    0    0    0    0    0
## 1276    0    0    0    0    0    0    1    3    0    0    0
## 1277    0    0    0    0    0    0    0    0    0    0    0
## 1278    0    0    0    0    0    4    0    0    0    0    0
## 1279    0    0    0    0    2    0    0    0    0    0    0
## 1280    0    0    0    0    2    2    0    0    0    0    0
## 1281    0    0    0    0    0    0    2    1    0    0    0
## 1282    0    0    0    0    0    0    0    0    0    0    0
## 1283    0    0    0    0    0    0    0    0    0    0    0
## 1284    1    2    2    1    2    0    0    0    0    0    0
## 1285    0    0    0    1    1    2    0    0    0    0    0
## 1286    1    1    0    0    0    0    3    0    0    0    0
## 1287    0    0    0    0    2    0    0    0    0    0    0
## 1288    0    2    0    0    1    0    0    0    0    0    0
## 1289    0    0    1    1    0    0    0    0    0    0    0
## 1290    0    0    0    0    0    0    0    0    0    0    0
## 1291    0    3    0    0    1    0    1    0    2    0    0
## 1292    0    2    3    0    0    0    0    0    0    0    0
## 1293    0    0    0    0    0    0    0    0    0    0    0
## 1294    0    0    0    0    1    0    0    0    0    1    0
## 1295    0    0    0    0    0    0    0    0    4    0    0
## 1296    2    0    0    0    2    1    1    3    0    0    0
## 1297    0    0    0    0    1    0    2    0    0    0    0
## 1298    0    0    0    0    0    0    1    0    0    0    0
## 1299    0    0    0    0    0    0    0    0    0    0    0
## 1300    4    0    0    0    0    0    0    0    0    0    0
## 1301    0    0    0    0    0    0    3    1    0    0    0
## 1302    0    0    0    0    0    0    0    0    0    0    0
## 1303    0    0    0    0    0    0    0    0    0    1    1
## 1304    0    0    0    0    0    0    0    0    1    0    0
## 1305    0    0    0    0    0    0    0    0    0    0    0
## 1306    0    0    0    0    0    0    0    1    0    1    0
## 1307    0    0    0    0    0    0    0    0    1    0    2
## 1308    0    4    0    0    0    0    0    0    0    0    0
## 1309    0    0    0    4    0    0    0    0    0    0    0
## 1310    0    0    4    0    0    0    0    0    0    0    0
## 1311    0    0    0    0    0    0    0    0    0    0    0
## 1312    0    1    0    0    0    0    0    0    0    0    0
## 1313    0    0    0    0    0    0    0    0    4    0    0
## 1314    0    0    0    1    0    0    1    0    2    1    0
## 1315    2    1    3    0    0    0    0    0    0    0    0
## 1316    0    1    0    3    0    5    0    0    0    0    0
## 1317    2    1    0    1    1    1    0    4    0    0    0
```

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## 1318     0     0     1     0     0     0     0     0     0     0     0
## 1319     0     1     1     0     0     1     0     0     0     0     0
## 1320     0     0     0     0     0     0     0     4     0     0     0
## 1321     2     0     0     0     0     0     0     0     0     0     0
## 1322     0     0     0     0     0     0     3     0     1     0     0
## 1323     0     0     0     0     0     0     0     2     3     0     0
## 1324     0     0     0     0     0     0     0     0     0     6     1
## 1325     0     0     0     6     2     1     6     0     0     1     0
## 1326     1     2     5     0     0     0     0     0     0     0     0
## 1327     0     0     0     0     0     0     2     0     0     0     5
## 1328     2     0     0     0     0     0     0     0     0     0     0
## 1329     0     0     0     0     0     0     0     4     0     0     0
## 1330     0     0     0     0     0     0     0     2     0     1     0
## 1331     0     0     0     0     0     0     4     0     0     0     0
## 1332     0     0     2     0     1     0     0     0     0     2     0
## 1333     0     0     0     1     0     0     2     0     4     7     0
## 1334     0     2     2     1     0     0     0     0     0     0     0
## 1335     1     2     3     0     3     0     0     0     1     0     0
## 1336     0     0     0     0     0     0     0     0     1     0     0
## 1337     0     0     0     0     0     0     0     0     0     0     2
## 1338     5     2     3     0     0     0     0     0     0     0     0
## 1339     0     0     0     0     0     0     0     1     2     3     0
## 1340     0     0     1     0     3     0     0     0     0     0     0
## 1341     0     0     0     0     0     0     0     0     1     0     0
## 1342     0     0     0     0     0     0     0     0     0     0     3
## 1343     0     0     0     0     0     0     0     0     4     0     1
## 1344     0     0     0     0     1     0     0     0     0     0     0
## 1345     1     0     0     1     0     0     1     3     0     0     0
## 1346     0     0     0     0     0     0     0     0     0     0     0
## 1347     0     0     0     0     0     0     3     0     4    11     3
## 1348     0     0     0     0     5     0     0     0     0     0     0
## 1349     0     0     0     0     0     0     0     0     0     1     0
## 1350     0     0     1     1     2     1     0     5     0     0     0
## 1351     0     0     0     0     2     1     2     1     0     0     0
## 1352     0     1     0     0     0     0     0     0     0     0     0
## 1353     2     0     0     0     2     0     0     0     0     0     0
## 1354     0     0     0     1     0     1     1     0     0     0     0
## 1355     0     0     0     0     3     2     4     1     0     1     1
## 1356     3     0     0     0     0     0     0     0     0     0     0
## 1357     1     0     1     0     0     0     0     0     0     1     0
## 1358     0     0     0     0     0     0     1     0     0     3     1
## 1359     0     4     0     0     0     0     0     0     1     0     1
## 1360     0     0     0     0     3     0     0     0     0     0     0
## 1361     0     0     0     0     1     0     0     1     0     2     0
## 1362     0     0     0     0     0     0     0     2     0     0     0
## 1363     0     0     0     0     0     2     0     0     0     0     0
## 1364     0     0     0     0     0     0     1     0     3     6     1
## 1365     0     1     1     3     4     4     8     3     0     0     0
## 1366     0     0     0     0     0     0     0     0     0     0     0
## 1367     0     0     0     0     0     0     0     0     3     0     0
## 1368     0     0     0     0     0     0     2     3     0     0     0
## 1369     0     0     0     0     0     0     0     0     1     1     0
## 1370     0     0     0     0     2     0     0     0     0     1     0
## 1371     0     0     0     0     3     0     0     0     0     0     0
```

```
## 1372    0    0    0    0    0    0    0    0    0    0    3
## 1373    0    0    0    0    0    1    0    0    0    0    0
## 1374    0    0    0    0    2    0    0    0    0    0    0
## 1375    0    0    0    0    4    0    0    0    0    0    0
## 1376    2    1    1    0    0    0    0    0    0    0    0
## 1377    0    0    0    2    1    0    0    1    0    0    0
## 1378    0    0    0    0    0    0    0    0    0    0    0
## 1379    0    0    0    1    0    0    1    0    0    0    0
## 1380    0    2    2    1    0    1    0    1    0    0    0
## 1381    0    0    0    0    0    0    0    0    0    2    0
## 1382    0    0    0    0    0    4    0    0    2    0    0
## 1383    0    0    0    0    0    0    0    0    2    0    0
## 1384    2    0    0    0    0    0    0    0    0    0    0
## 1385    1    0    1    0    7    4    0    0    0    1    0
## 1386    0    0    0    1    0    0    0    0    0    0    0
## 1387    0    0    0    1    0    0    0    1    0    0    1
## 1388    0    0    0    0    1    2    1    0    0    0    0
## 1389    0    0    0    0    0    0    0    0    0    0    0
## 1390    0    0    0    0    0    0    0    0    0    0    0
## 1391    1    1    0    0    0    0    0    0    0    0    0
## 1392    0    0    0    3    0    2    0    1    0    0    0
## 1393    1    0    0    5    1    8    7    1    0    0    0
## 1394    0    0    0    0    0    0    0    0    0    0    0
## 1395    0    0    0    0    4    0    0    0    0    0    0
## 1396    1    0    1    0    0    0    2    5    0    0    1
## 1397    0    0    0    0    0    0    0    0    0    0    2
## 1398    0    0    0    2    1    0    0    0    0    0    0
## 1399    0    0    0    0    0    0    0    0    0    0    0
## 1400    1    0    0    0    0    0    0    0    0    0    0
## 1401    0    0    0    1    2    0    0    2    0    0    0
## 1402    0    0    0    0    0    4    0    0    0    0    0
## 1403    0    0    0    0    0    0    0    0    0    0    0
## 1404    0    0    0    0    0    0    0    0    0    0    0
## 1405    0    0    0    0    0    0    0    0    0    0    0
## 1406    0    0    0    2    0    0    0    0    0    0    0
## 1407    0    0    0    0    0    0    0    0    0    0    0
## 1408    0    0    0    0    0    0    0    0    0    0    3
## 1409    0    0    0    0    0    0    0    0    0    0    0
## 1410    0    1    0    3    0    0    0    0    0    1    0
## 1411    0    0    0    0    4    0    0    0    0    0    0
## 1412    0    0    0    0    3    0    0    0    0    0    0
## 1413    1    0    1    0    0    0    0    0    0    0    0
## 1414    0    0    0    0    4    0    0    0    0    0    0
## 1415    0    0    0    1    0    5    2    1    0    0    0
## 1416    0    0    0    0    0    0    0    0    0    0    0
## 1417    0    0    0    0    0    0    0    2    0    1    0
## 1418    0    0    0    0    0    0    0    0    0    0    3
## 1419    0    0    0    5    0    0    0    1    0    0    0
## 1420    0    4    1    0    0    0    0    0    0    0    0
## 1421    1    3    0    0    0    0    0    2    0    0    0
## 1422    0    0    0    0    0    0    0    0    0    0    0
## 1423    0    0    0    0    0    0    0    0    0    1    4
## 1424    5    0    2    0    0    0    0    0    0    0    0
## 1425    0    0    1    1    0    0    0    0    0    1    2
```

```
## 1426    0    0    0    0    0    0    0    0    3    1    6
## 1427    0    3    0    1    0    0    0    0    0    0    0
## 1428    0    0    0    0    0    0    0    0    0    0    0
## 1429    1    0    0    2    1    0    0    0    0    0    7
## 1430    0    0    0    0    0    0    0    0    1    0    0
## 1431    0    0    0    0    0    0    4    0    0    0    0
## 1432    0    0    0    0    0    0    0    6    0    0    0
## 1433    0    0    0    0    0    0    0    0    0    0    0
## 1434    0    0    0    2    0    0    0    0    0    1    0
## 1435    0    0    0    0    0    0    0    0    0    0    0
## 1436    1    1    0    1    0    0    0    2    0    0    0
## 1437    0    2    2    3    0    0    0    0    0    0    0
## 1438    0    0    0    0    0    3    0    0    0    0    0
## 1439    0    0    0    0    0    0    0    0    0    0    0
## 1440    0    0    0    0    4    0    0    0    0    0    0
## 1441    0    0    0    1    1    1    1    9    0    1    0
## 1442    0    0    0    5    0    0    0    0    0    1    3
## 1443    0    0    0    0    0    0    0    0    0    0    0
## 1444    0    0    0    0    0    0    4    1    0    0    0
## 1445    0    0    0    0    4    0    0    0    0    0    0
## 1446    0    0    2    0    0    0    0    0    0    0    0
## 1447    0    0    0    0    0    0    6    2    0    0    3
## 1448    0    0    0    0    0    0    0    0    3    0    1
## 1449    1    1    0    3    2    0    2    0    0    0    0
## 1450    0    0    1    0    0    1    0    0    0    0    0
## 1451    0    0    0    0    4    0    0    0    0    0    0
## 1452    0    0    0    0    0    0    1    0    0    1    1
## 1453    0    0    0    0    0    0    0    0    0    0    0
## 1454    0    0    0    0    0    0    0    0    0    0    0
## 1455    0    0    0    0    0    0    0    0    0    0    0
## 1456    0    0    0    1    1    2    0    1    0    0    0
## 1457    0    0    0    0    0    0    0    0    0    1    3
## 1458    0    0    0    0    0    4    0    0    0    0    0
## 1459    2    2    0    1   14    0    0    0    0    0    0
## 1460    0    0    0    0    0    0    2    1    0    0    0
## 1461    0    0    0    5    0    0    0    1    0    0    0
## 1462    1    1    0    0    0    0    0    0    0    0    0
## 1463    0    0    0    0    0    0    0    0    3    0    0
## 1464    0    0    0    1    1    1    2    2    0    0    0
## 1465    0    0    0    0    0    0    0    0    0    0    0
## 1466    1    0    0    0    0    0    0    0    0    0    0
## 1467    0    0    0    0    1    0    0    0    0    0    0
## 1468    2    0    4    0    0    0    0    0    0    0    0
## 1469    2    1    0    0    1    0    0    0    0    0    0
## 1470    1    0    0    1    0    0    0    0    0    0    0
## 1471    0    1    0    0    3    0    1    1    0    1    0
## 1472    1    1    1    0    1    0    5    2    0    0    1
## 1473    0    0    0    0    0    0    0    0    0    1    1
## 1474    0    0    0    0    0    0    0    1    0    0    0
## 1475    4    1    0    0    0    0    0    0    0    0    0
## 1476    0    0    0    0    1    1    0    0    0    0    0
## 1477    0    0    0    0    0    0    1    2    0    0    0
## 1478    0    2    0    1    0    1    0    0    0    0    0
## 1479    0    0    0    0    0    0    3    0    0    0    0
```

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```
## 1480    0    0    0    0    0    0    1    0    0    0    0
## 1481    0    0    0    0    1    0    0    0    0    0    0
## 1482    0    0    0    0    0    0    1    0    0    0    0
## 1483    0    0    0    4    0    0    1    1    0    0    0
## 1484    0    0    0    0    5    0    0    0    0    0    0
## 1485    1    0    0    0    1    0    0    0    0    0    0
## 1486    1    1    0    1    0    0    0    0    0    0    0
## 1487    0    0    0    0    0    0    0    0    1    0    0
## 1488    0    5    0    0    0    0    0    1    0    1    0
## 1489    0    0    0    0    4    4    1    0    0    0    0
## 1490    1    0    0    0    0    0    0    0    0    0    0
## 1491    0    0    0    0    0    0    0    0    0    0    0
## 1492    0    0    0    0    0    0    1    0    0    0    0
## 1493    0    0    0    0    0    0    8    2    0    1    0
## 1494    0    0    0    2    1    1    2    0    0    0    0
## 1495    1    4    2    3    4    0    0    0    0    0    0
## 1496    0    0    0    0    0    2    0    0    1    0    2
## 1497    0    0    0    0    0    0    1    2    0    0    0
## 1498    0    0    0    0    0    0    0    0    0    0    0
## 1499    0    1    0    4    0    1    0    3    0    0    0
## 1500    1    0    0    0    0    0    0    0    0    0    0
## 1501    0    0    0    0    3    0    0    1    0    2    0
## 1502    0    0    0    0    0    4    0    0    0    0    0
## 1503    0    0    0    0    0    0    0    0    5    0    0
## 1504    1    0    0    0    0    0    0    0    0    0    0
## 1505    0    0    0    0    0    4    0    0    0    0    0
## 1506    0    0    0    0    1    0    0    0    0    0    0
## 1507    0    0    0    0    0    1    0    0    0    0    0
## 1508    0    2    1    0    0    0    0    0    0    0    0
## 1509    0    0    0    0    0    0    0    0    0    0    0
## 1510    0    0    0    0    0    0    1    1    0    0    0
## 1511    0    0    0    0    0    0    0    0    0    0    1
## 1512    0    0    0    0    0    0    0    0    1    0    0
## 1513    0    0    0    0    0    0    0    0    0    0    2
## 1514    0    0    0    0    0    0    0    0    4    0    0
## 1515    0    0    0    0    0    5    0    0    0    0    0
## 1516    0    0    0    0    3    2    1    0    0    0    0
## 1517    0    3    2    1    1    0    0    0    0    0    0
## 1518    0    0    0    0    0    4    0    0    0    0    0
## 1519    0    0    0    1    1    0    0    1    0    0    0
## 1520    0    0    0    1    0    3    0    1    0    0    0
## 1521    0    0    0    0    0    0    0    0    0    0    0
## 1522    0    0    0    0    3    0    0    0    0    0    0
## 1523    0    2    0    0    0    1    1    0    0    0    0
## 1524    0    0    0    0    0    0    0    1    2    3    0
## 1525    0    0    0    0    0    0    0    0    0    0    0
## 1526    0    0    0    0    0    0    1    0    0    0    0
## 1527    0    0    0    0    0    0    3    0    0    0    0
## 1528    0    0    0    0    0    0    3    0    0    0    0
## 1529    1    0    0    5    2    1    2    0    1    0    0
## 1530    0    0    1    0    0    4    0    0    0    0    1
## 1531    0    0    0    0    0    0    0    0    0    0    0
## 1532    0    0    0    0    0    0    0    0    0    0    0
## 1533    0    0    0    0    0    0    0    0    0    0    0
```

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```
## 1534    0    0    0    0    0    0    0    0    0    0    0
## 1535    0    0    0    0    0    3    0    0    0    0    0
## 1536    0    0    1    0    4    3    0    0    0    0    0
## 1537    0    0    0    0    0    0    0    0    1    0    0
## 1538    0    0    0    0    0    0    0    0    0    0    0
## 1539    0    0    0    0    0    0    0    1    0    1    0
## 1540    0    0    0    0    0    0    0    4    0    0    1
## 1541    0    0    0    0    0    2    0    0    0    0    0
## 1542    0    0    0    0    0    0    1    0    0    0    0
## 1543    0    0    0    0    4    0    0    0    0    0    0
## 1544    0    0    0    0    0    0    0    0    0    0    0
## 1545    0    0    0    0    0    0    1    3    1    0    0
## 1546    0    1    3    0    0    0    0    0    0    0    0
## 1547    0    0    0    0    0    0    0    0    5    0    0
## 1548    0    0    0    0    0    0    0    0    0    2    3
## 1549    1    1    2    0    0    0    0    0    0    0    0
## 1550    0    0    0    0    0    0    0    4    0    0    0
## 1551    1    2    0    0    0    0    0    0    0    0    0
## 1552    0    1    0    1    2    0    2    0    0    0    0
## 1553    0    0    0    0    0    0    0    0    0    0    0
## 1554    0    0    0    0    0    0    0    0    1    0    2
## 1555    0    0    0    0    1    1    1    0    0    0    0
## 1556    0    0    0    0    0    0    0    1    4    0    1
## 1557    0    1    0    0    0    2    0    0    0    0    0
## 1558    0    0    0    0    0    0    0    0    0    0    0
## 1559    0    0    1    0    2    1    0    0    0    0    0
## 1560    0    0    0    0    0    0    0    0    0    0    0
## 1561    0    0    0    0    5    0    0    0    0    2    0
## 1562    0    4    1    1    0    0    0    1    0    1    0
## 1563    0    0    0    1    0    0    0    0    0    0    1
## 1564    1    4    0    0    0    0    0    0    0    0    0
## 1565    0    4    0    1    0    0    0    0    0    0    0
## 1566    0    0    0    0    0    0    0    0    2    3    2
## 1567    0    4    0    0    0    0    0    0    0    0    0
## 1568    1    1    2    0    0    1    1    3    0    0    0
## 1569    0    0    0    0    0    0    0    0    3    1    1
## 1570    0    0    0    0    0    1    0    0    0    0    0
## 1571    0    0    0    4    3    3    2    2    0    0    0
## 1572    0    0    0    2    0    0    0    1    0    1    3
## 1573    0    1    0    1    2    1    2    0    0    0    0
## 1574    0    0    0    0    0    0    2    4    0    0    0
## 1575    0    0    0    0    0    0    2    0    0    0    0
## 1576    1    0    3    0    0    0    0    0    0    0    0
## 1577    0    0    0    0    4    0    0    0    0    0    0
## 1578    0    0    0    0    0    0    0    0    0    0    0
## 1579    0    0    0    0    0    1    0    0    0    0    0
## 1580    0    0    0    0    0    0    4    0    3    1    0
## 1581    0    0    0    0    0    0    0    0    0    0    0
## 1582    0    0    0    0    0    0    0    1    0    0    0
## 1583    0    2    0    0    0    0    0    0    0    0    0
## 1584    0    0    0    0    0    0    0    0    0    2    0
## 1585    0    1    3    2    0    0    0    0    0    0    0
## 1586    0    0    0    0    0    0    0    0    0    0    3
## 1587    0    0    0    0    0    0    0    0    0    0    0
```

```
## 1588    0    3    0    0    0    0    1    0    0    1    0
## 1589    0    1    1    0    0    0    0    0    0    0    0
## 1590    0    0    0    0    0    0    0    0    2    0    0
## 1591    0    0    0    0    0    0    0    0    0    0    0
## 1592    0    0    1    0    4    2    0    0    0    0    0
## 1593    0    0    0    0    0    0    0    0    0    0    0
## 1594    0    3    0    0    0    0    0    0    0    0    0
## 1595    0    0    0    0    0    0    0    0    0    0    0
## 1596    0    0    0    4    0    0    0    0    0    0    0
## 1597    1    0    0    0    0    3    0    0    2    0    0
## 1598    0    0    0    1    0    0    0    1    0    0    0
## 1599    0    0    0    0    0    0    0    0    0    0    0
## 1600    0    0    0    0    0    0    0    0    0    0    0
## 1601    0    0    0    0    0    1    0    0    0    0    0
## 1602    0    0    0    2    0    0    3    0    0    0    0
## 1603    0    0    0    0    0    0    0    0    0    0    0
## 1604    0    0    0    0    1    0    0    0    0    1    0
## 1605    0    1    0    0    1    0    0    0    0    0    0
## 1606    1    0    0    0    0    0    0    0    0    0    0
## 1607    0    0    1    0    0    0    0    0    0    0    0
## 1608    0    0    0    0    0    0    0    0    0    0    0
## 1609    0    0    0    0    1    0    0    0    0    0    0
## 1610    0    0    3    0    0    0    0    0    0    0    0
## 1611    0    0    0    4    0    1    1    0    0    0    0
## 1612    0    0    0    0    0    0    0    0    0    0    0
## 1613    0    0    0    0    0    0    0    0    0    0    0
## 1614    2    2    2    0    0    0    2    0    1    0    1
## 1615    0    0    0    0    0    2    0    0    0    0    0
## 1616    0    0    0    0    0    3    0    0    0    0    0
## 1617    0    0    0    0    0    0    0    0    0    0    0
## 1618    0    0    0    0    0    0    0    0    0    0    0
## 1619    0    0    0    0    0    0    0    0    0    0    3
## 1620    0    0    0    0    0    0    0    0    0    0    3
## 1621    0    0    0    0    0    0    0    0    0    0    0
## 1622    0    0    0    0    0    0    1    0    0    0    0
## 1623    0    0    0    0    2    0    0    0    0    0    0
## 1624    0    0    0    0    0    0    0    3    0    0    0
## 1625    0    0    0    0    0    0    0    0    0    0    0
## 1626    1    1    0    0    0    0    0    0    0    0    0
## 1627    0    0    0    0    0    0    0    0    0    1    0
## 1628    0    1    0    0    0    0    0    0    0    0    0
## 1629    0    0    0    0    0    0    0    0    0    0    0
## 1630    0    0    0    0    0    0    0    0    0    0    0
## 1631    3    0    0    0    0    0    0    0    0    0    0
## 1632    1    0    0    0    3    0    0    0    0    0    0
## 1633    0    1    0    0    0    0    0    0    2    0    0
## 1634    0    0    0    0    0    0    0    0    0    0    0
## 1635    0    1    0    0    0    0    0    0    0    0    0
## 1636    0    0    0    1    0    4    0    0    0    0    0
## 1637    0    0    0    1    0    2    0    0    0    0    0
## 1638    0    0    0    0    0    0    0    0    0    0    0
## 1639    0    0    0    0    0    0    0    0    0    0    0
## 1640    0    0    0    0    0    0    0    0    0    0    0
## 1641    0    0    0    0    1    0    0    0    0    0    0
```

```
## 1642    0   0   0   0   0   0   0   0   0   0   0
## 1643    0   0   0   0   0   0   0   0   0   0   0
## 1644    0   0   0   0   0   0   3   0   0   0   0
## 1645    0   1   0   0   0   1   0   0   0   0   0
## 1646    0   0   0   0   0   0   0   0   0   0   0
## 1647    2   1   1   1   1   1   1   0   0   0   0
## 1648    0   0   0   0   0   0   2   0   0   0   0
## 1649    2   2   0   0   0   0   0   0   0   0   0
## 1650    0   0   0   0   0   3   0   0   0   0   0
## 1651    0   0   0   1   0   2   1   1   0   1   0
## 1652    2   0   1   0   0   0   0   0   0   0   0
## 1653    0   0   0   0   0   0   2   0   2   1   0
## 1654    0   0   0   0   0   0   1   0   0   0   0
## 1655    0   0   0   1   0   1   0   0   0   0   0
## 1656    0   0   0   0   0   0   0   0   2   0   0
## 1657    0   0   0   0   0   0   0   0   0   0   0
## 1658    0   0   0   3   0   0   0   0   0   0   0
## 1659    0   0   0   0   0   1   3   1   0   1   0
## 1660    0   0   0   0   0   0   0   0   0   0   0
## 1661    0   0   0   0   0   0   0   0   0   0   0
## 1662    0   0   0   0   0   0   0   0   0   0   0
## 1663    0   0   0   0   2   0   0   0   0   0   0
## 1664    1   1   2   0   0   0   0   0   0   0   0
## 1665    0   0   0   0   0   0   0   0   0   0   0
## 1666    0   0   0   2   0   0   0   0   0   0   0
## 1667    0   0   0   0   0   0   0   0   5   0   2
## 1668    0   0   0   0   0   0   0   0   0   0   0
## 1669    0   0   0   1   0   0   0   0   0   0   0
## 1670    0   0   0   1   1   0   0   0   0   0   0
## 1671    0   0   1   0   0   0   0   0   0   0   0
## 1672    0   0   0   0   0   0   0   0   0   0   0
## 1673    0   0   0   0   3   3   2   0   1   0   0
## 1674    0   0   0   0   2   2   1   2   0   0   0
## 1675    0   0   0   0   0   0   0   0   0   0   0
## 1676    1   0   0   1   2   1   0   0   0   0   0
## 1677    0   0   0   0   0   0   0   1   0   2   0
## 1678    0   0   1   0   0   0   0   0   0   0   0
## 1679    0   0   0   0   0   0   0   4   0   0   0
## 1680    0   0   0   0   0   0   0   0   0   0   0
## 1681    0   0   0   3   0   0   0   0   0   0   0
## 1682    0   0   0   0   0   0   2   0   0   0   0
## 1683    2   0   0   0   0   0   0   0   0   0   0
## 1684    0   0   0   3   0   0   0   0   0   0   0
## 1685    0   0   0   0   0   0   0   0   0   0   2
## 1686    0   0   0   0   0   0   0   3   0   0   0
## 1687    0   0   0   0   0   0   0   3   2   1   0
## 1688    0   0   0   3   0   0   0   0   0   0   0
## 1689    0   3   0   0   0   0   0   0   0   0   0
## 1690    0   0   0   1   0   0   2   1   0   0   0
## 1691    0   3   0   0   0   0   0   0   0   0   0
## 1692    0   0   0   0   0   0   0   1   0   0   0
## 1693    0   0   0   0   0   0   0   0   0   0   0
## 1694    0   0   0   3   0   0   0   0   0   0   0
## 1695    0   3   0   0   0   0   0   0   0   0   0
```

```
## 1696    0    0    0    1    0    0    1    0    0    0    0
## 1697    0    0    0    0    0    3    0    0    0    0    0
## 1698    0    0    0    0    0    0    0    0    0    0    0
## 1699    0    0    0    0    0    0    0    0    2    0    0
## 1700    1    1    2    0    0    0    0    0    0    0    1
## 1701    0    0    0    0    1    0    0    0    0    0    0
## 1702    0    1    0    0    0    0    1    0    3    3    1
## 1703    0    0    0    0    0    0    0    0    2    0    0
## 1704    0    0    0    0    0    0    4    0    0    0    0
## 1705    0    0    0    1    0    0    3    7    0    0    0
## 1706    0    0    0    0    0    0    0    0    0    0    0
## 1707    0    0    0    1    0    0    0    0    1    0    0
## 1708    0    0    0    0    0    0    0    0    0    0    0
## 1709    0    0    0    0    0    1    0    0    0    0    0
## 1710    0    0    0    0    0    0    0    0    0    0    0
## 1711    1    1    1    0    4    0    0    0    0    0    0
## 1712    1    0    0    0    0    0    0    0    0    0    0
## 1713    0    0    1    0    0    0    0    0    0    0    0
## 1714    0    0    0    0    0    0    0    0    0    0    0
## 1715    0    0    0    0    0    0    1    0    0    0    0
## 1716    0    0    0    0    0    0    0    0    0    1    1
## 1717    0    0    0    0    0    0    0    1    3    0    1
## 1718    0    0    0    0    0    0    0    3    0    0    0
## 1719    0    0    0    0    0    0    0    4    0    0    0
## 1720    0    1    0    0    0    0    1    0    0    1    0
## 1721    0    0    0    0    0    0    0    0    0    0    0
## 1722    0    0    0    0    0    0    0    0    0    0    0
## 1723    0    0    0    0    0    0    0    0    0    0    0
## 1724    0    0    1    1    0    0    0    0    0    0    0
## 1725    0    0    0    0    6    0    0    0    0    0    0
## 1726    0    0    0    0    3    0    0    5    1    0    2
## 1727    0    0    0    0    2    1    4    0    0    0    0
## 1728    0    0    0    0    0    0    0    0    0    0    0
## 1729    0    0    0    2    0    0    0    0    0    0    0
## 1730    0    0    0    0    0    0    0    0    0    0    0
## 1731    0    0    0    0    0    0    0    0    0    0    0
## 1732    0    0    0    0    1    0    0    1    0    0    0
## 1733    0    0    0    0    3    0    0    0    0    0    0
## 1734    0    0    0    0    2    2    0    0    0    0    0
## 1735    1    0    0    0    0    0    0    0    0    0    0
## 1736    0    0    0    0    0    0    0    0    0    0    0
## 1737    0    0    0    0    0    3    0    0    0    0    0
## 1738    0    0    0    0    0    0    0    0    3    0    0
## 1739    0    0    0    1    0    0    0    1    0    0    1
## 1740    0    0    1    0    0    2    0    0    0    0    0
## 1741    0    0    0    1    1    2    0    0    0    0    0
## 1742    0    0    0    0    0    0    0    0    0    2    0
## 1743    0    0    0    0    0    0    0    0    0    0    0
## 1744    0    0    0    0    0    0    2    0    4    0    0
## 1745    0    0    0    0    0    2    0    0    0    0    0
## 1746    2    2    1    0    0    1    1    1    0    0    0
## 1747    0    0    1    0    0    0    0    0    0    0    0
## 1748    0    0    0    0    0    0    0    0    0    0    0
## 1749    0    0    0    0    0    0    0    0    1    0    0
```

```
## 1750     0    1    0    0    0    0    0    0    2    0    0
## 1751     0    1    1    0    0    0    0    3    0    0    0
## 1752     0    0    0    0    0    0    0    0    0    0    0
## 1753     0    0    0    0    0    0    0    0    0    0    1
## 1754     0    0    0    3    0    0    0    2    0    0    0
## 1755     0    0    0    0    0    0    0    0    0    0    0
## 1756     0    0    0    0    0    0    0    0    0    0    0
## 1757     0    0    0    0    0    0    0    0    0    0    0
## 1758     0    0    0    0    0    0    0    0    0    0    0
## 1759     0    0    0    0    0    0    0    0    0    0    3
## 1760     0    0    0    0    2    0    0    0    0    0    0
## 1761    10    1    0    0    0    0    0    0    0    0    0
## 1762     0    0    0    0    0    0    0    0    0    0    0
## 1763     0    1    1    0    0    0    0    0    0    0    0
## 1764     0    0    0    0    0    0    0    0    3    0    0
## 1765     1    0    0    1    2    0    0    0    0    0    0
## 1766     0    0    0    1    2    0    1    0    0    0    0
## 1767     0    0    0    0    0    0    0    0    0    0    0
## 1768     0    0    0    0    0    0    0    0    0    0    0
## 1769     0    0    0    3    0    0    0    0    0    0    0
## 1770     0    0    0    0    1    1    0    2    0    0    0
## 1771     0    0    0    0    0    0    0    0    4    0    1
## 1772     0    2    0    0    0    0    0    0    0    0    0
## 1773     0    0    0    4    0    0    1    0    0    0    1
## 1774     0    0    0    0    3    0    0    0    0    0    0
## 1775     1    0    0    0    0    0    0    0    0    0    0
## 1776     0    0    0    0    0    4    0    0    0    0    0
## 1777     0    0    0    0    0    0    0    0    0    0    0
## 1778     0    0    0    0    0    0    0    0    0    1    0
## 1779     0    0    0    0    0    0    0    0    0    0    0
## 1780     0    0    0    0    0    0    0    0    0    0    3
## 1781     0    0    0    0    1    1    0    0    0    0    0
## 1782     0    0    0    0    0    0    0    1    0    0    0
## 1783     0    0    0    0    0    0    0    0    0    0    1
## 1784     0    0    0    0    0    1    0    0    0    0    0
## 1785     0    0    0    0    0    1    0    0    0    0    0
## 1786     0    0    0    0    0    0    0    0    0    0    0
## 1787     0    0    0    0    0    0    2    1    0    0    0
## 1788     0    0    0    1    0    0    0    0    0    0    0
## 1789     0    0    0    0    0    0    0    0    0    0    0
## 1790     0    0    0    0    0    0    0    0    0    0    0
## 1791     0    0    0    1    0    0    3    0    0    0    0
## 1792     0    0    0    6    2    0    0    0    0    0    0
## 1793     0    0    0    0    0    0    0    0    0    0    0
## 1794     0    0    0    0    0    0    0    3    1    0    0
## 1795     0    0    0    1    0    0    2    0    1    0    0
## 1796     0    0    0    0    0    1    0    0    0    0    2
## 1797     0    0    0    0    0    0    1    0    0    0    0
## 1798     0    0    0    0    0    0    0    0    0    0    0
## 1799     0    0    0    0    0    0    0    0    0    0    0
## 1800     0    0    0    0    0    0    0    0    0    0    0
## 1801     0    0    0    0    0    0    0    0    0    0    0
## 1802     0    0    0    0    0    0    0    0    0    0    0
## 1803     0    0    0    0    2    0    0    0    0    1    0
```

```
## 1804    0    0    0    0    0    0    0    0    0    1    0
## 1805    0    0    0    0    0    0    0    0    0    0    0
## 1806    0    0    0    0    0    0    0    4    0    0    0
## 1807    0    0    0    0    4    0    0    0    0    0    0
## 1808    0    0    0    0    0    0    1    0    3    0    0
## 1809    0    2    2    0    0    0    0    0    0    0    0
## 1810    0    0    0    0    0    0    0    2    0    1    0
## 1811    0    1    0    0    0    0    0    0    0    0    0
## 1812    0    0    0    0    0    0    0    0    0    0    0
## 1813    0    0    0    0    0    0    0    0    0    0    0
## 1814    0    0    1    0    0    0    0    0    0    0    0
## 1815    0    0    0    0    4    0    2    0    0    0    0
## 1816    0    0    0    0    0    2    0    0    0    0    0
## 1817    0    0    0    0    0    0    0    0    3    0    0
## 1818    0    1    0    0    0    0    0    0    0    0    0
## 1819    0    3    0    0    0    0    0    0    0    0    0
## 1820    0    1    1    0    1    0    0    0    0    1    0
## 1821    0    0    1    3    0    0    1    0    0    0    0
## 1822    0    0    0    0    0    0    0    0    0    0    0
## 1823    0    0    0    0    0    0    0    0    0    0    0
## 1824    3    2    0    0    0    0    0    0    0    0    0
## 1825    0    0    0    1    1    0    0    0    0    0    0
## 1826    0    0    0    1    0    3    0    0    0    0    0
## 1827    0    0    0    0    0    0    0    0    0    0    0
## 1828    0    2    0    0    0    0    0    0    0    0    0
## 1829    0    0    0    0    0    0    0    0    0    0    0
## 1830    0    0    0    0    1    0    1    1    0    0    0
## 1831    0    0    0    0    0    0    0    0    0    0    0
## 1832    0    0    0    1    0    0    0    0    0    0    0
## 1833    0    0    0    0    0    3    0    0    0    0    0
## 1834    0    0    0    0    0    0    0    0    0    0    0
## 1835    0    0    0    0    0    0    0    0    0    0    0
## 1836    0    0    0    0    0    0    0    0    0    0    0
## 1837    0    0    0    0    0    0    0    0    0    0    0
## 1838    0    0    0    3    0    0    0    0    0    0    0
## 1839    0    3    0    0    0    0    0    0    0    0    0
## 1840    0    0    0    0    0    5    0    0    0    0    0
## 1841    0    0    0    0    0    3    0    0    0    0    0
## 1842    0    0    0    0    0    0    0    0    0    0    0
## 1843    0    0    0    0    0    0    0    0    0    0    0
## 1844    0    0    0    0    1    2    1    1    0    0    0
## 1845    0    0    0    0    0    0    0    0    0    0    0
## 1846    0    0    0    0    0    0    0    0    0    0    0
## 1847    0    0    0    0    0    0    0    0    0    0    0
## 1848    0    0    0    0    0    0    0    0    0    0    0
## 1849    0    0    0    0    0    0    0    1    0    0    0
## 1850    0    0    0    0    0    2    0    0    0    0    0
## 1851    0    0    0    0    0    0    0    0    0    0    0
## 1852    0    0    0    0    0    0    0    1    0    1    0
## 1853    0    0    0    0    0    0    0    0    1    0    0
## 1854    0    0    0    0    0    0    0    0    0    0    0
## 1855    0    0    0    0    0    0    0    0    0    0    0
## 1856    0    0    0    0    0    0    0    4    0    0    0
## 1857    3    1    0    0    0    0    0    0    0    0    0
```

```
## 1858      0    0    0    0    0    0    0    0    0    0    0
## 1859      0    0    0    0    0    0    1    3    0    0    0
## 1860      0    0    0    0    0    0    0    0    0    0    0
## 1861      1    0    0    0    0    0    0    0    0    0    0
## 1862      0    0    0    0    0    3    0    0    0    0    1
## 1863      0    1    0    0    2    0    1    0    0    0    0
## 1864      0    0    0    0    3    0    0    0    0    0    0
## 1865      0    0    0    0    2    0    1    0    0    0    0
## 1866      0    0    0    0    0    0    0    0    3    0    0
## 1867      0    0    0    0    0    0    0    0    0    0    0
## 1868      0    0    0    0    0    0    4    3    0    1    0
## 1869      0    0    0    3    0    0    0    0    0    0    0
## 1870      0    0    0    0    0    1    0    0    0    0    0
## 1871      0    0    0    0    1    1    1    0    0    0    0
## 1872      0    0    0    0    0    0    0    0    0    0    0
## 1873      0    0    0    0    0    0    0    0    0    0    0
## 1874      0    0    3    0    0    0    0    0    0    0    0
## 1875      0    0    0    0    0    0    0    0    1    0    5
## 1876      0    0    1    0    0    0    0    0    0    0    0
## 1877      0    0    0    0    0    0    0    0    0    0    0
## 1878      1    0    0    0    0    0    0    0    0    0    0
## 1879      0    0    0    0    2    0    0    0    0    0    0
## 1880      0    0    0    0    0    0    0    2    0    0    0
## 1881      2    0    3    0    0    2    2    0    0    0    0
## 1882      0    0    0    8    0    0    1    0    0    0    0
## 1883      1    0    1    0    0    0    0    0    0    0    0
## 1884      0    0    0    0    0    0    0    0    0    0    0
## 1885      0    0    0    1    1    0    0    1    0    0    1
## 1886      0    0    0    0    0    0    0    0    3    0    0
## 1887      0    0    0    0    0    0    0    0    0    0    0
## 1888      0    0    0    1    2    0    0    0    0    0    0
## 1889      0    0    0    3    0    0    0    0    0    0    0
## 1890      0    0    0    0    0    0    0    2    0    0    0
## 1891      0    0    0    0    2    1    0    0    0    0    0
## 1892      0    0    0    0    0    0    0    0    0    0    0
## 1893      0    0    0    0    0    0    1    0    0    0    0
## 1894      0    0    0    0    0    0    0    0    0    0    0
## 1895      0    0    0    2    0    0    0    0    0    0    1
## 1896      0    0    0    0    0    0    0    0    0    0    0
## 1897      0    0    0    0    0    0    0    0    0    0    0
## 1898      0    1    0    0    0    0    0    0    0    0    0
## 1899      0    3    1    0    0    0    0    0    0    0    0
## 1900      0    0    0    0    3    0    0    0    0    0    0
## 1901      0    0    0    0    0    0    0    0    4    0    0
## 1902      0    1    0    0    0    0    0    0    0    0    0
## 1903      2    0    2    0    0    0    0    0    0    0    0
## 1904      0    0    0    0    3    0    0    0    0    0    0
## 1905      0    0    0    0    0    0    0    0    0    0    0
## 1906      0    0    0    0    0    0    0    0    0    0    0
## 1907      0    0    0    1    0    3    0    0    0    0    0
## 1908      0    0    0    0    0    0    0    0    0    0    0
## 1909      0    0    0    0    0    3    0    0    0    0    0
## 1910      0    0    0    0    0    0    0    0    0    0    0
## 1911      0    0    0    0    0    0    1    0    0    0    0
```

```
## 1912    0    0    0    0    0    4    0    0    0    0    0
## 1913    0    0    0    0    0    0    0    0    0    0    0
## 1914    1    1    1    1    1    1    0    1    2    0    0
## 1915    0    0    0    0    0    2    0    0    0    0    0
## 1916    0    0    0    0    1    0    0    0    0    0    0
## 1917    0    0    0    0    0    0    0    0    0    0    0
## 1918    3    0    0    0    0    0    0    0    0    0    0
## 1919    0    0    1    0    0    0    0    0    0    0    0
## 1920    0    0    0    0    0    0    0    0    3    0    0
## 1921    0    0    0    0    0    0    0    0    0    0    0
## 1922    1    0    0    0    0    0    2    0    0    0    0
## 1923    0    0    0    2    0    2    0    0    0    0    0
## 1924    0    0    0    0    0    0    2    0    0    0    0
## 1925    0    0    0    0    1    0    0    0    0    0    0
## 1926    0    0    0    0    0    1    0    3    0    0    0
## 1927    0    0    0    0    0    0    0    0    0    0    0
## 1928    0    2    1    0    1    1    0    1    0    0    0
## 1929    0    0    0    0    0    0    0    0    0    0    0
## 1930    0    0    1    1    0    1    0    0    0    0    0
## 1931    0    0    0    2    0    1    0    0    0    0    0
## 1932    0    0    0    0    0    0    1    0    0    0    0
## 1933    0    0    0    0    0    0    0    0    0    0    1
## 1934    0    0    0    0    0    0    0    0    0    0    0
## 1935    0    0    0    0    0    1    0    0    0    0    0
## 1936    0    0    0    0    0    0    0    0    0    0    0
## 1937    0    0    0    0    0    0    0    0    0    0    0
## 1938    0    0    0    0    0    0    0    0    0    0    0
## 1939    2    1    1    0    0    0    0    0    0    0    0
## 1940    0    0    0    0    0    2    0    0    0    0    0
## 1941    1    0    0    0    0    0    0    0    0    1    0
## 1942    1    0    0    0    0    0    0    0    0    0    0
## 1943    0    0    0    0    0    0    0    0    0    1    0
## 1944    0    0    0    0    3    2    0    0    0    0    0
## 1945    0    0    0    0    0    0    3    0    0    1    0
## 1946    0    0    0    2    2    4    2    4    0    0    0
## 1947    0    0    0    0    2    3    0    0    0    1    0
## 1948    0    0    0    0    0    0    1    3    0    1    2
## 1949    0    0    0    0    0    0    0    0    0    0    0
## 1950    0    0    0    0    2    4    0    0    0    2    0
## 1951    0    0    0    0    0    0    0    0    0    0    0
## 1952    0    0    0    0    0    0    0    0    0    0    0
## 1953    0    0    0    0    0    0    0    0    0    0    0
## 1954    0    0    0    0    0    0    0    0    0    0    0
## 1955    0    0    0    0    0    0    1    0    1    0    0
## 1956    0    0    0    0    2    0    0    0    0    0    0
## 1957    0    0    0    0    3    0    0    0    0    0    0
## 1958    1    1    0    1    0    0    0    1    0    0    0
## 1959    0    0    0    0    2    0    0    0    0    0    0
## 1960    0    0    0    0    0    0    0    0    0    0    0
## 1961    0    0    0    0    0    0    0    3    0    0    0
## 1962    0    1    1    0    0    0    0    0    0    0    0
## 1963    0    0    1    0    0    0    0    0    0    0    0
## 1964    0    0    0    0    0    0    0    0    0    0    0
## 1965    0    1    0    0    0    0    0    0    0    0    0
```

```
## 1966    2    1    1    1    0    0    0    0    0    0    0
## 1967    0    2    0    1    0    0    0    0    0    0    0
## 1968    0    0    0    2    0    0    0    0    0    0    0
## 1969    0    0    0    0    0    0    0    0    0    0    0
## 1970    0    0    0    0    0    0    0    0    0    0    0
## 1971    0    0    0    0    0    3    0    0    0    0    0
## 1972    0    0    0    0    0    0    3    0    0    0    0
## 1973    0    0    0    0    3    0    0    0    0    0    0
## 1974    0    0    0    1    3    0    1    0    0    0    0
## 1975    0    0    0    0    0    0    0    0    0    0    0
## 1976    0    0    0    0    0    0    0    0    0    0    0
## 1977    0    0    0    0    0    0    0    0    0    0    0
## 1978    0    0    0    0    0    4    0    0    0    0    0
## 1979    0    0    0    1    0    2    0    0    0    0    0
## 1980    0    0    0    0    0    0    0    0    0    0    1
## 1981    0    0    0    0    0    0    0    3    0    0    0
## 1982    0    0    0    0    0    6    0    0    0    0    0
## 1983    0    0    0    0    0    0    2    1    0    1    0
## 1984    0    0    0    0    0    0    0    0    0    0    0
## 1985    0    0    0    0    0    3    0    0    0    0    0
## 1986    2    0    0    0    0    0    0    0    2    1    0
## 1987    0    0    0    0    0    3    0    0    0    0    0
## 1988    0    0    0    0    0    0    0    0    0    0    1
## 1989    0    0    0    0    0    0    0    1    0    0    1
## 1990    0    0    0    0    0    0    0    0    0    0    0
## 1991    0    0    0    0    0    0    0    0    5    0    0
## 1992    0    0    0    0    0    2    0    0    0    0    0
## 1993    0    0    0    0    0    0    0    0    0    0    0
## 1994    0    0    0    0    0    0    0    0    0    0    0
## 1995    0    0    0    0    0    2    1    0    0    0    0
## 1996    0    0    0    0    0    0    0    1    0    0    0
## 1997    3    0    1    0    0    0    0    0    0    0    0
## 1998    0    1    0    0    0    0    0    0    0    0    0
## 1999    0    0    0    0    0    0    0    0    0    0    0
## 2000    0    0    0    0    0    0    0    0    0    0    0
## 2001    0    0    0    0    0    0    0    0    0    0    0
## 2002    0    0    0    0    0    0    0    0    0    0    0
## 2003    0    3    0    0    0    0    0    0    0    0    0
## 2004    1    0    0    0    0    0    0    0    0    0    0
## 2005    1    0    0    0    0    0    0    0    0    0    0
## 2006    0    0    0    0    2    0    0    0    0    0    0
## 2007    0    0    0    0    0    0    3    0    1    0    0
## 2008    0    1    0    0    2    3    0    0    0    0    0
## 2009    0    0    0    0    0    4    0    0    0    0    0
## 2010    0    0    0    0    0    0    0    0    0    2    0
## 2011    0    0    0    0    0    0    0    0    3    0    0
## 2012    0    0    0    0    0    0    0    0    0    3    0
## 2013    0    0    0    1    1    0    2    1    1    0    1
## 2014    0    0    0    0    0    0    0    0    0    0    0
## 2015    4    1    1    0    0    1    0    0    0    0    0
## 2016    0    0    0    0    0    0    3    3    0    0    0
## 2017    0    0    0    0    0    0    0    0    0    0    0
## 2018    0    0    0    2    0    1    2    1    0    0    0
## 2019    0    0    0    0    0    1    0    0    0    0    0
```

```
## 2020      0    0    0    0    3    0    0    0    0    0    0
## 2021      0    0    0    0    0    0    0    0    0    0    0
## 2022      0    3    0    0    0    0    0    0    0    0    0
## 2023      0    0    0    0    2    0    0    0    0    0    0
## 2024      0    0    0    0    0    0    0    0    0    0    0
## 2025      0    0    0    0    0    3    0    0    0    0    0
## 2026      0    0    0    0    0    0    0    0    0    0    0
## 2027      0    0    0    0    3    0    0    0    0    0    0
## 2028      0    0    0    0    1    1    0    0    0    0    0
## 2029      0    0    0    0    0    0    0    0    0    0    0
## 2030      0    0    0    0    0    0    2    0    2    0    0
## 2031      2    1    3    0    0    0    0    0    0    0    0
## 2032      0    0    0    0    0    0    0    0    0    0    0
## 2033      0    0    0    0    1    0    0    0    0    0    0
## 2034      0    0    1    0    1    0    1    0    0    3    0
## 2035      0    0    0    0    0    0    0    0    0    2    0
## 2036      0    0    0    0    1    0    0    0    0    0    0
## 2037      0    0    0    0    1    0    1    2    0    0    0
## 2038      0    0    0    0    0    0    0    0    0    0    0
## 2039      0    0    0    0    0    0    0    0    0    0    0
## 2040      0    0    0    0    0    0    2    0    0    0    0
## 2041      0    0    0    0    0    0    0    0    0    0    0
## 2042      2    1    0    0    0    0    0    0    0    0    0
## 2043      0    0    0    0    0    0    0    0    0    0    0
## 2044      2    1    1    0    0    0    0    0    0    0    0
## 2045      0    0    0    0    0    0    0    0    0    0    0
## 2046      0    0    0    0    3    0    0    0    0    0    0
## 2047      0    0    0    0    0    0    0    0    0    0    0
## 2048      0    0    0    0    0    0    0    0    0    0    3
## 2049      1    0    0    0    0    0    0    0    0    0    0
## 2050      0    0    0    0    0    0    0    0    0    0    0
## 2051      0    0    0    0    1    0    0    0    0    0    0
## 2052      0    0    0    0    0    0    2    0    0    0    0
## 2053      0    0    0    0    1    0    0    0    0    0    0
## 2054      0    0    0    0    0    0    0    0    0    4    0
## 2055      0    0    0    0    1    0    0    0    0    1    0
## 2056      0    0    0    0    0    2    0    0    0    0    0
## 2057      0    0    0    0    1    0    0    0    0    0    0
## 2058      0    0    0    0    0    0    0    0    0    0    0
## 2059      1    0    0    0    0    0    0    0    0    0    0
## 2060      1    0    1    0    1    0    0    0    0    0    0
## 2061      0    0    0    3    0    0    0    0    0    0    0
## 2062      0    0    0    1    0    0    0    0    0    0    0
## 2063      0    0    0    0    0    0    3    0    0    0    0
## 2064      0    0    0    2    1    0    0    0    0    0    0
## 2065      0    0    0    0    0    3    0    0    0    0    0
## 2066      0    0    0    0    0    0    0    0    0    0    0
## 2067      0    0    0    0    0    0    0    0    3    0    0
## 2068      1    0    2    0    0    0    0    0    0    0    0
## 2069      0    0    0    0    0    0    0    0    0    0    0
## 2070      0    0    0    0    0    0    0    0    3    0    0
## 2071      0    0    1    0    0    0    0    0    0    0    0
## 2072      0    0    0    0    0    2    0    0    0    0    0
## 2073      1    0    0    0    0    2    0    0    0    1    0
```

```
## 2074    0    0    0    1    0    0    0    0    0    0    0
## 2075    0    0    0    0    0    0    0    0    0    0    0
## 2076    0    0    0    0    0    0    0    0    0    0    0
## 2077    0    0    0    0    0    0    1    0    0    0    0
## 2078    0    0    0    0    0    0    0    0    0    0    0
## 2079    0    0    0    0    0    0    0    0    3    0    0
## 2080    0    0    0    0    1    0    0    0    0    3    0
## 2081    0    0    2    0    0    0    0    0    0    0    0
## 2082    0    0    0    0    0    0    0    0    0    0    0
## 2083    0    0    3    0    0    0    0    0    0    0    0
## 2084    1    0    4    0    0    0    0    0    0    0    0
## 2085    0    0    0    0    6    0    0    1    0    0    0
## 2086    1    1    0    0    0    0    0    0    0    0    0
## 2087    0    0    0    3    0    0    2    0    0    1    1
## 2088    0    0    0    0    0    0    0    0    0    0    0
## 2089    0    0    0    1    0    0    0    0    0    0    0
## 2090    0    0    2    0    0    0    0    0    0    0    0
## 2091    0    0    0    0    0    0    0    0    0    0    0
## 2092    0    0    0    0    0    0    0    0    1    0    1
## 2093    0    0    0    3    1    0    0    0    0    0    0
## 2094    0    0    0    0    0    0    0    0    0    0    0
## 2095    0    2    0    0    2    0    0    0    0    1    1
## 2096    0    0    0    0    0    0    0    0    0    0    0
## 2097    0    0    0    0    0    0    0    0    0    0    0
## 2098    0    0    0    0    0    0    0    0    0    0    0
## 2099    0    0    0    1    2    0    0    0    0    0    0
## 2100    0    0    0    0    0    0    0    0    0    0    0
## 2101    0    0    0    0    3    0    0    0    0    0    0
## 2102    0    0    0    0    0    0    0    0    0    0    0
## 2103    0    1    1    0    1    0    0    0    0    1    0
## 2104    0    0    0    0    3    0    0    0    0    0    0
## 2105    0    0    0    0    0    0    0    4    0    0    0
## 2106    0    0    0    0    0    0    0    0    3    0    0
## 2107    1    0    1    0    0    0    0    0    0    0    0
## 2108    0    0    0    0    0    0    0    0    0    0    1
## 2109    0    1    0    0    0    0    0    0    0    0    0
## 2110    0    0    0    0    0    0    0    3    0    0    0
## 2111    0    0    0    0    0    0    0    0    0    3    0
## 2112    0    0    0    0    1    0    1    0    0    0    0
## 2113    0    0    0    0    0    0    0    0    0    0    0
## 2114    0    0    0    0    0    0    0    0    1    0    0
## 2115    0    0    0    0    0    0    3    0    0    0    0
## 2116    0    0    0    0    1    0    0    4    0    0    0
## 2117    0    0    0    0    0    0    1    1    0    0    1
## 2118    0    1    0    0    0    0    0    0    0    0    0
## 2119    3    0    0    0    0    0    0    3    0    0    0
## 2120    0    0    0    0    0    0    0    0    0    0    0
## 2121    0    5    0    0    0    0    0    0    0    0    0
## 2122    0    0    0    0    0    0    0    0    0    0    0
## 2123    0    0    0    0    1    0    0    0    0    0    0
## 2124    1    0    1    0    0    0    0    0    0    0    0
## 2125    0    0    0    0    0    0    0    0    0    0    0
## 2126    0    0    0    0    0    0    0    0    0    0    0
## 2127    0    0    0    0    0    0    0    0    0    0    0
```

```
## 2128      0    0    0    3    0    0    0    0    0    0    0
## 2129      0    0    0    0    0    0    0    0    0    0    0
## 2130      0    0    0    0    1    0    0    0    0    0    0
## 2131      0    0    0    0    0    0    0    0    6    0    3
## 2132      0    0    0    0    0    0    0    0    0    0    0
## 2133      0    0    0    1    0    0    0    0    0    0    0
## 2134      0    0    0    0    0    0    0    0    0    0    3
## 2135      2    1    0    0    0    0    0    0    0    0    0
## 2136      0    0    0    0    0    0    0    0    0    0    0
## 2137      0    0    0    0    3    0    0    0    0    0    0
## 2138      0    0    0    0    0    0    0    0    2    0    0
## 2139      0    0    0    0    0    0    0    0    0    0    0
## 2140      0    0    0    0    0    0    0    0    2    1    0
## 2141      1    5    1    0    0    1    3    0    0    0    0
## 2142      0    0    0    0    0    0    0    0    0    0    0
## 2143      0    0    0    0    0    0    0    0    0    0    1
## 2144      0    1    1    0    0    0    0    0    0    0    0
## 2145      0    0    0    0    0    0    0    0    0    0    0
## 2146      0    0    0    0    0    0    1    1    0    0    0
## 2147      0    0    0    0    0    0    0    0    0    0    0
## 2148      1    0    1    0    3    0    0    0    0    0    0
## 2149      0    0    0    0    0    0    0    0    0    0    0
## 2150      0    0    0    0    0    0    0    0    0    0    0
## 2151      0    0    0    0    0    0    0    3    0    1    0
## 2152      5    0    0    0    0    0    0    0    0    0    0
## 2153      0    0    0    2    0    0    0    1    0    0    0
## 2154      0    0    0    4    0    0    0    0    0    0    0
## 2155      0    0    0    0    0    0    0    0    0    0    0
## 2156      0    0    0    1    0    0    1    0    0    0    0
## 2157      0    0    0    0    0    0    1    0    0    0    3
## 2158      0    0    0    0    0    0    1    0    0    0    0
## 2159      0    0    0    0    0    2    0    0    0    0    0
## 2160      0    0    0    0    0    0    0    0    0    0    0
## 2161      0    0    1    0    0    0    0    0    0    0    2
## 2162      0    0    0    0    0    0    0    1    0    0    0
## 2163      0    0    3    0    0    0    0    0    0    0    0
## 2164      0    0    0    0    1    0    0    0    0    0    0
## 2165      0    0    0    0    0    0    1    0    3    0    0
## 2166      0    0    0    0    0    0    0    0    2    0    0
## 2167      1    0    3    0    0    0    0    0    0    0    0
## 2168      0    0    0    0    0    0    0    0    0    0    0
## 2169      0    0    1    0    2    0    0    0    0    0    0
## 2170      0    0    0    0    0    0    0    0    0    0    2
## 2171      0    0    0    0    0    0    0    0    0    0    0
## 2172      0    0    0    0    0    0    0    0    0    0    0
## 2173      0    0    0    0    0    0    0    0    0    0    0
## 2174      2    0    0    0    0    0    0    0    2    0    1
## 2175      0    0    0    0    0    0    0    0    3    0    0
## 2176      0    0    0    0    0    0    0    0    0    0    0
## 2177      0    1    0    4    0    0    0    0    0    0    0
## 2178      0    0    0    0    0    0    0    1    0    0    0
## 2179      0    1    0    1    0    0    1    0    0    2    0
## 2180      0    0    1    0    0    0    0    0    0    0    0
## 2181      0    1    0    0    0    0    0    0    0    0    0
```

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```
## 2182    0    2    0    1    0    0    0    0    0    0    0
## 2183    0    0    0    2    0    0    0    2    0    0    0
## 2184    0    0    0    1    0    0    1    0    0    0    1
## 2185    0    1    0    0    0    0    0    0    0    0    0
## 2186    0    0    0    0    0    0    0    1    0    0    0
## 2187    0    0    0    2    0    0    0    0    0    0    0
## 2188    0    0    0    0    0    0    0    0    0    0    0
## 2189    0    0    0    0    0    0    2    1    0    0    0
## 2190    0    0    0    1    0    0    0    0    0    0    0
## 2191    0    0    0    5    0    0    0    0    0    0    0
## 2192    0    0    0    0    0    0    0    0    0    0    0
## 2193    0    1    0    1    0    1    0    0    0    0    0
## 2194    0    0    0    0    0    0    0    3    0    0    0
## 2195    0    0    0    1    0    0    0    0    0    0    0
## 2196    0    0    0    1    2    2    0    0    0    0    0
## 2197    0    0    0    0    0    0    0    0    1    0    1
## 2198    0    0    0    0    0    0    0    0    0    0    0
## 2199    0    0    0    0    0    0    2    0    0    1    0
## 2200    0    0    0    3    0    0    0    0    2    1    0
## 2201    0    2    0    0    2    0    0    0    0    0    0
## 2202    0    0    0    0    0    1    0    0    0    0    0
## 2203    0    0    0    0    0    0    0    0    0    1    1
## 2204    0    0    0    0    0    0    0    1    0    3    1
## 2205    0    0    0    0    2    0    0    0    0    0    0
## 2206    0    0    0    0    0    0    0    0    0    0    0
## 2207    0    0    0    0    0    2    0    0    0    0    0
## 2208    0    0    0    0    0    0    3    0    0    0    0
## 2209    0    0    0    0    0    0    0    2    0    0    0
## 2210    0    0    0    0    0    3    0    0    0    0    0
## 2211    0    0    0    0    0    0    0    0    0    0    0
## 2212    0    0    0    0    0    0    0    0    0    0    0
## 2213    0    0    0    0    0    0    0    0    0    0    0
## 2214    0    0    0    0    0    0    1    0    0    1    0
## 2215    0    0    0    3    0    0    0    0    0    0    0
## 2216    0    0    2    0    1    0    0    0    0    0    0
## 2217    0    2    0    0    0    0    0    0    0    0    0
## 2218    0    0    0    0    0    0    0    0    0    2    1
## 2219    0    2    0    1    0    0    1    1    0    1    0
## 2220    0    0    0    1    0    1    0    0    0    0    2
## 2221    0    0    0    0    0    0    0    0    0    0    0
## 2222    0    0    0    0    2    1    0    0    0    0    0
## 2223    0    0    0    0    0    0    0    0    0    0    0
## 2224    0    0    0    0    1    2    0    0    0    0    0
## 2225    0    0    0    0    0    0    0    0    1    0    0
## 2226    0    0    0    0    0    0    0    0    0    0    0
## 2227    0    0    0    0    0    0    0    0    0    1    0
## 2228    0    0    0    1    0    3    0    0    0    0    0
## 2229    0    0    0    0    0    2    0    0    0    0    0
## 2230    0    0    0    0    0    0    3    0    0    0    0
## 2231    0    0    0    0    0    0    0    0    0    0    0
## 2232    0    0    1    2    0    1    0    1    0    0    0
## 2233    3    0    0    0    0    0    0    0    0    0    0
## 2234    0    0    0    0    0    1    0    0    0    0    0
## 2235    0    0    0    0    0    0    1    2    0    0    0
```

```
## 2236    0    0    0    0    0    3    0    0    1    1    1
## 2237    1    3    0    0    0    0    0    0    0    0    0
## 2238    0    1    0    0    0    0    0    0    0    0    0
## 2239    0    0    2    1    0    1    1    2    0    0    0
## 2240    0    0    0    0    0    0    0    0    0    0    0
## 2241    0    0    0    0    0    0    2    0    0    1    0
## 2242    0    0    0    0    0    0    2    0    0    0    0
## 2243    0    0    0    0    0    0    0    0    0    0    0
## 2244    0    1    0    0    0    0    0    0    0    0    0
## 2245    1    0    0    0    1    0    0    0    0    0    0
## 2246    0    0    0    0    0    3    0    0    0    0    0
## 2247    1    0    0    0    0    0    0    0    0    0    0
## 2248    0    0    0    0    0    0    1    2    0    0    0
## 2249    0    0    0    0    0    0    0    0    0    0    0
## 2250    0    0    0    1    0    2    0    1    0    0    0
## 2251    0    0    0    0    0    0    0    0    0    0    0
## 2252    0    0    0    0    0    0    0    0    0    0    0
## 2253    0    0    0    1    1    0    0    0    0    0    0
## 2254    0    0    2    4    0    1    2    0    0    0    0
## 2255    0    0    0    0    0    1    1    0    0    0    0
## 2256    0    0    0    0    0    0    1    0    0    0    0
## 2257    0    0    0    0    0    3    0    0    0    0    0
## 2258    0    0    0    0    0    0    0    1    0    0    0
## 2259    0    0    0    0    0    0    0    0    0    0    0
## 2260    0    0    1    0    0    0    0    0    0    0    0
## 2261    0    0    0    0    0    0    0    0    0    0    0
## 2262    0    0    0    0    0    0    1    0    0    0    0
## 2263    0    0    0    0    0    0    0    0    3    0    0
## 2264    0    0    0    0    0    0    0    0    0    0    0
## 2265    0    2    1    0    0    0    0    0    0    0    0
## 2266    0    0    0    0    1    0    0    0    0    0    0
## 2267    0    0    0    0    0    0    0    0    0    0    0
## 2268    0    0    0    0    0    0    0    0    0    0    0
## 2269    0    0    0    0    0    0    0    0    3    0    0
## 2270    0    0    0    0    0    0    0    0    0    0    0
## 2271    0    2    0    0    1    0    1    0    0    0    0
## 2272    0    0    0    0    0    0    0    0    0    0    0
## 2273    0    0    0    0    0    0    0    0    0    0    0
## 2274    0    0    0    0    0    2    0    0    0    0    0
## 2275    0    0    0    0    0    0    0    0    0    3    0
## 2276    0    0    0    0    0    0    0    0    2    0    0
## 2277    0    0    0    0    0    0    0    0    0    0    0
## 2278    2    1    0    0    0    0    0    0    0    0    0
## 2279    0    0    0    0    0    0    3    0    0    0    0
## 2280    0    0    0    0    0    0    0    0    0    0    0
## 2281    0    0    0    0    0    0    0    0    0    0    0
## 2282    0    0    0    1    0    0    0    0    0    0    0
## 2283    0    0    0    2    0    1    0    0    1    0    2
## 2284    0    0    0    0    0    0    0    0    0    0    3
## 2285    0    0    0    0    0    0    0    0    0    0    3
## 2286    1    0    0    1    0    0    1    2    0    0    0
## 2287    0    0    0    0    0    0    0    0    0    1    0
## 2288    0    0    0    0    0    0    0    0    0    0    0
## 2289    0    0    0    1    0    3    0    0    0    0    0
```

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```
## 2290      0     0     0     0     0     0     3     2     0     0     0
## 2291      0     0     1     2     0     0     0     0     0     0     0
## 2292      0     0     0     0     0     0     0     0     1     0     0
## 2293      0     0     0     0     0     0     0     0     0     0     0
## 2294      1     0     0     0     0     0     0     0     0     0     0
## 2295      0     0     0     0     0     0     0     0     0     0     0
## 2296      0     0     0     0     0     0     0     2     0     0     0
## 2297      0     0     0     0     0     0     0     0     0     0     0
## 2298      0     0     0     0     0     0     0     0     0     0     0
## 2299      0     0     0     1     0     1     0     0     0     0     0
## 2300      0     0     0     0     0     0     0     3     0     0     0
## 2301      0     0     0     1     0     0     0     0     0     0     0
## 2302      0     0     0     0     3     0     1     0     0     0     0
## 2303      0     0     0     0     0     0     0     0     0     0     0
## 2304      0     0     0     0     0     0     0     0     0     0     0
## 2305      0     1     0     1     0     0     0     0     0     0     0
## 2306      0     0     0     0     0     0     1     6     0     0     0
## 2307      0     0     0     0     0     0     0     0     4     0     0
## 2308      3     0     0     0     0     0     0     0     0     0     0
## 2309      0     0     0     2     1     0     0     0     0     0     0
## 2310      0     0     0     0     0     3     0     0     0     0     0
## 2311      0     0     0     0     0     0     0     3     0     0     0
## 2312      0     0     0     0     0     0     0     0     0     0     0
## 2313      0     0     0     0     0     0     0     0     0     0     1
## 2314      0     0     0     0     0     0     0     0     0     3     0
## 2315      0     0     0     0     0     0     0     3     0     0     0
## 2316      4     5     0     0     0     0     0     0     0     0     0
## 2317      0     0     0     0     0     0     0     0     0     1     0
## 2318      0     0     0     0     0     0     3     0     0     0     0
## 2319      0     0     0     3     0     0     4     0     0     0     0
## 2320      0     0     0     0     0     0     0     1     0     0     0
## 2321      0     0     0     0     0     0     1     1     0     1     0
## 2322      0     0     0     0     0     0     0     2     0     0     0
## 2323      0     0     0     0     0     2     1     0     0     0     0
## 2324      0     0     0     0     0     0     0     0     0     0     0
## 2325      0     0     0     0     0     0     0     0     0     0     0
## 2326      0     1     0     0     0     0     5     5     0     0     0
## 2327      0     0     0     0     0     0     2     0     0     0     0
## 2328      0     0     0     0     0     0     0     0     0     0     1
## 2329      0     0     0     0     0     0     0     0     0     0     0
## 2330      0     0     0     0     0     0     0     0     0     0     1
## 2331      0     0     0     0     0     0     0     0     0     0     0
## 2332      0     0     0     2     0     0     0     0     0     0     0
## 2333      0     0     0     0     0     0     0     0     4     0     0
## 2334      0     0     0     0     0     0     0     0     3     0     0
## 2335      0     0     0     1     0     0     0     0     0     0     0
## 2336      3     1     1     0     0     0     0     0     0     0     0
## 2337      0     0     0     0     0     1     0     0     0     1     0
## 2338      0     0     0     1     0     0     0     0     0     0     0
## 2339      0     0     0     0     0     0     0     0     0     2     1
## 2340      0     0     0     0     0     0     0     0     0     0     0
## 2341      0     0     0     2     0     0     0     0     0     0     0
## 2342      0     0     0     1     1     0     0     1     0     0     0
## 2343      0     0     0     0     0     0     0     0     0     0     0
```

```
## 2344      0    0    0    0    0    0    0    0    0    0    0
## 2345      0    3    0    0    0    0    0    0    0    0    0
## 2346      3    0    0    0    0    0    0    0    0    0    0
## 2347      0    0    0    0    0    0    0    0    2    0    1
## 2348      0    0    0    0    0    0    0    0    0    0    0
## 2349      2    1    0    0    0    0    0    0    0    0    0
## 2350      0    0    0    0    0    0    0    0    0    0    0
## 2351      0    0    0    0    0    0    0    0    2    3    0
## 2352      0    0    0    0    0    0    0    0    0    0    0
## 2353      0    0    0    0    0    0    0    0    0    0    0
## 2354      0    0    0    0    3    0    0    0    0    0    0
## 2355      0    1    0    0    0    0    0    0    0    0    0
## 2356      0    0    0    0    0    0    0    0    0    0    0
## 2357      2    0    3    0    0    0    0    0    0    0    0
## 2358      0    1    0    0    0    0    0    0    0    0    0
## 2359      0    0    0    0    0    0    0    1    0    0    0
## 2360      0    0    1    0    3    1    0    5    0    0    0
## 2361      3    0    0    0    0    0    0    0    0    0    0
## 2362      0    0    0    0    0    0    0    0    0    0    1
## 2363      0    2    0    2    0    1    0    0    0    0    0
## 2364      0    0    0    0    0    0    1    4    0    0    0
## 2365      0    0    0    0    0    2    0    0    0    0    0
## 2366      0    0    0    0    0    0    0    0    0    0    0
## 2367      0    0    0    3    0    0    0    0    0    0    0
## 2368      0    0    2    0    1    0    0    0    0    0    0
## 2369      1    0    0    1    0    0    0    0    0    0    0
## 2370      0    0    0    0    0    0    0    0    0    0    0
## 2371      0    0    0    0    0    0    0    0    0    0    0
## 2372      0    0    0    1    0    0    0    0    0    0    0
## 2373      0    0    0    2    0    0    2    1    0    0    0
## 2374      0    0    0    0    0    0    0    0    0    0    0
## 2375      0    0    0    0    0    0    0    0    0    0    0
## 2376      0    0    0    0    0    0    0    0    0    0    0
## 2377      0    0    0    0    3    0    0    0    0    0    0
## 2378      0    0    0    0    0    0    0    0    3    0    0
## 2379      0    0    0    1    0    1    0    0    0    0    0
## 2380      0    0    0    0    0    0    0    0    0    3    1
## 2381      0    0    0    0    0    0    0    0    0    0    0
## 2382      0    0    0    0    0    0    4    0    0    0    0
## 2383      0    0    0    0    0    0    0    2    0    0    0
## 2384      0    0    0    1    1    2    0    1    0    0    0
## 2385      0    0    0    0    0    0    0    0    0    0    0
## 2386      0    0    0    0    1    0    0    0    0    1    0
## 2387      0    0    0    0    0    0    0    0    0    0    0
## 2388      0    0    0    0    0    3    0    0    0    0    0
## 2389      1    0    0    0    0    1    0    0    0    0    0
## 2390      0    0    0    0    0    0    0    0    0    0    0
## 2391      0    0    0    0    0    0    0    0    0    0    0
## 2392      0    0    0    0    0    0    0    3    0    0    0
## 2393      0    0    0    3    0    0    0    0    0    1    0
## 2394      0    0    0    0    0    0    0    1    0    1    0
## 2395      0    0    0    0    0    0    0    0    0    0    0
## 2396      0    0    0    0    0    0    0    0    0    0    0
## 2397      0    0    0    1    3    0    0    0    0    0    0
```

```
## 2398    0    0    1    0    0    0    0    0    0    0    0
## 2399    0    0    0    0    0    2    0    1    0    0    0
## 2400    0    0    0    2    0    0    0    0    0    0    0
## 2401    0    0    0    0    0    0    0    0    0    0    0
## 2402    0    0    0    0    0    0    0    0    2    0    0
## 2403    2    1    0    0    0    0    0    0    0    0    1
## 2404    1    2    0    0    0    0    0    0    0    0    0
## 2405    0    0    0    0    0    0    0    1    3    0    0
## 2406    0    0    0    0    0    0    1    0    0    0    0
## 2407    0    0    0    0    0    0    0    2    0    0    0
## 2408    0    0    2    0    0    0    0    0    0    0    0
## 2409    0    0    0    3    0    0    0    0    0    0    0
## 2410    0    0    0    0    0    0    0    0    1    1    0
## 2411    0    0    2    0    0    0    0    0    0    0    0
## 2412    0    0    0    0    0    0    0    0    0    1    0
## 2413    1    0    0    2    0    0    0    0    0    0    0
## 2414    0    0    0    0    0    0    0    0    0    0    0
## 2415    0    0    0    0    0    0    0    0    0    0    0
## 2416    0    0    0    0    0    0    0    4    0    0    0
## 2417    0    0    0    0    0    0    0    0    0    0    0
## 2418    0    0    0    0    0    0    0    2    0    0    0
## 2419    1    0    1    0    0    0    0    0    0    0    0
## 2420    0    0    0    0    0    0    0    0    0    0    0
## 2421    0    0    0    0    1    0    0    0    0    0    0
## 2422    0    0    0    0    0    0    0    4    1    0    0
## 2423    0    0    1    2    0    0    0    0    0    0    0
## 2424    0    0    0    0    0    2    0    0    0    0    0
## 2425    0    0    1    0    0    0    0    0    0    0    0
## 2426    0    0    0    0    0    0    0    2    0    0    0
## 2427    0    0    0    0    0    0    0    0    2    0    0
## 2428    0    0    0    0    0    0    0    0    0    0    0
## 2429    0    0    0    0    0    0    0    0    0    0    0
## 2430    0    0    0    0    0    0    0    0    2    0    0
## 2431    1    0    1    1    0    0    0    0    0    0    0
## 2432    0    0    0    0    0    0    2    0    0    0    0
## 2433    0    3    0    0    0    0    0    0    0    0    0
## 2434    0    1    0    1    0    0    0    0    0    0    0
## 2435    0    0    0    0    0    2    0    0    0    0    0
## 2436    0    0    0    2    0    0    1    1    1    0    0
## 2437    0    0    0    2    0    0    0    0    0    0    0
## 2438    0    0    0    0    0    0    1    0    0    0    0
## 2439    0    0    0    0    0    0    0    0    0    0    0
## 2440    0    0    0    0    0    2    0    0    0    0    0
## 2441    0    0    0    0    0    0    0    3    0    0    0
## 2442    0    0    1    0    0    0    0    0    0    0    0
## 2443    0    0    0    0    0    0    0    0    0    0    0
## 2444    0    0    0    0    0    0    0    0    2    0    0
## 2445    0    0    0    0    0    0    1    1    0    0    0
## 2446    0    0    0    0    1    0    0    0    0    0    0
## 2447    0    0    0    1    0    0    0    3    0    0    0
## 2448    0    2    0    0    0    0    0    0    0    0    0
## 2449    0    0    0    0    0    0    0    0    0    0    0
## 2450    0    0    0    0    0    0    0    0    0    0    0
## 2451    0    0    2    0    0    0    0    0    0    0    0
```

```
## 2452   0   0   0   0   0   0   0   0   0   0   0
## 2453   0   0   0   0   0   0   0   0   0   0   0
## 2454   1   0   0   0   0   0   0   0   0   0   0
## 2455   0   0   0   0   2   0   0   0   0   0   0
## 2456   0   0   0   0   0   2   0   0   0   0   0
## 2457   0   0   0   0   0   0   0   0   0   0   0
## 2458   0   0   0   0   0   0   0   0   0   0   3
## 2459   0   2   1   0   0   0   0   0   0   0   0
## 2460   0   0   0   0   0   0   0   0   0   0   0
## 2461   0   2   0   0   0   0   0   0   0   0   0
## 2462   0   0   0   0   1   1   0   0   0   0   0
## 2463   0   0   0   0   0   0   0   0   0   0   0
## 2464   2   0   0   0   0   0   0   0   0   0   0
## 2465   0   0   0   0   0   0   1   0   0   1   0
## 2466   0   0   0   0   0   0   0   0   0   0   0
## 2467   0   0   0   0   2   0   0   0   0   2   0
## 2468   0   0   0   0   0   0   0   0   0   0   2
## 2469   0   0   0   0   0   0   0   0   0   0   0
## 2470   0   0   0   0   0   0   0   0   0   0   0
## 2471   1   2   0   0   1   0   6   2   0   1   0
## 2472   0   0   0   0   0   0   0   0   1   0   2
## 2473   0   0   0   0   0   0   0   0   0   0   0
## 2474   0   0   2   0   0   0   0   0   0   0   0
## 2475   0   0   0   0   0   0   0   0   2   0   0
## 2476   0   0   0   1   0   0   0   0   0   0   0
## 2477   0   0   0   0   0   0   3   0   0   1   0
## 2478   0   0   0   0   2   0   1   0   0   0   0
## 2479   0   0   0   0   2   0   0   0   0   0   0
## 2480   0   0   0   0   0   0   0   2   0   0   0
## 2481   0   0   0   0   0   0   0   0   0   0   0
## 2482   0   0   2   0   0   0   0   0   0   0   0
## 2483   0   0   0   0   0   0   0   0   0   0   0
## 2484   0   0   0   0   0   2   0   0   0   0   0
## 2485   0   0   0   0   0   2   0   0   0   0   0
## 2486   0   0   0   0   0   0   0   0   1   0   0
## 2487   0   0   0   0   0   0   0   3   0   0   0
## 2488   0   1   1   0   0   0   0   0   2   0   0
## 2489   0   0   0   0   0   4   0   0   0   0   0
## 2490   0   1   2   1   0   1   0   0   0   0   0
## 2491   0   0   0   0   0   0   0   0   0   0   0
## 2492   1   0   0   0   0   0   0   0   0   0   0
## 2493   0   0   0   0   0   0   0   0   0   0   0
## 2494   0   0   0   0   0   1   0   3   0   0   0
## 2495   0   2   0   0   0   0   0   0   0   0   0
## 2496   0   0   0   0   0   0   2   0   0   0   0
## 2497   0   0   0   0   0   0   0   0   0   0   0
## 2498   0   0   0   0   0   0   0   0   0   0   0
## 2499   0   1   1   0   1   0   0   0   0   0   0
## 2500   0   0   0   0   0   0   2   0   0   0   0
## 2501   0   0   0   0   2   0   0   0   0   0   0
## 2502   0   0   0   0   0   0   0   0   0   0   0
## 2503   0   0   0   0   0   0   0   2   0   0   0
## 2504   0   0   0   0   2   0   0   0   0   0   0
## 2505   0   0   0   0   0   0   1   0   0   1   0
```

```
## 2506      0      0      0      0      0      0      0      0      0      0      0
## 2507      0      0      0      2      0      0      0      0      0      0      0
## 2508      1      0      0      0      0      0      0      0      0      0      0
## 2509      0      0      0      0      0      0      0      0      0      0      0
## 2510      0      0      0      0      0      0      0      0      0      0      0
## 2511      0      1      0      0      0      1      0      2      0      0      0
## 2512      0      0      0      0      0      0      0      0      0      0      0
## 2513      0      0      0      0      0      0      1      0      0      0      0
## 2514      0      0      0      0      0      0      0      0      0      0      0
## 2515      0      0      0      0      0      0      0      0      0      0      0
## 2516      0      0      0      0      0      0      0      0      0      0      0
## 2517      0      0      2      0      0      0      0      0      0      0      0
## 2518      0      0      0      0      0      1      1      3      0      0      0
## 2519      0      0      0      0      0      0      0      0      0      0      0
## 2520      0      0      0      0      0      0      0      0      0      0      0
## 2521      0      0      0      0      0      0      0      0      0      0      0
## 2522      0      0      0      0      0      0      0      0      0      0      0
## 2523      0      0      0      0      1      0      0      0      0      0      0
## 2524      0      0      0      0      0      0      0      0      0      0      0
## 2525      0      1      1      0      0      0      0      0      0      0      0
## 2526      0      0      0      0      0      0      0      0      0      0      0
## 2527      0      0      0      0      0      0      0      0      0      0      0
## 2528      0      0      0      0      0      0      0      0      0      0      0
## 2529      0      0      0      0      0      0      0      0      0      2      0
## 2530      0      0      0      0      0      0      0      2      2      0      0
## 2531      1      0      0      0      0      0      0      0      0      0      0
## 2532      0      0      1      0      0      1      0      0      0      0      0
## 2533      0      0      0      0      0      0      0      0      0      0      0
## 2534      0      0      0      0      0      0      0      0      0      1      0
## 2535      1      0      0      0      0      0      0      0      0      0      0
## 2536      2      0      0      0      0      0      0      0      0      0      0
## 2537      0      0      0      0      1      0      0      0      0      0      0
## 2538      0      0      0      1      0      0      0      0      0      0      0
## 2539      0      0      0      0      0      0      0      2      0      0      0
## 2540      0      0      0      0      0      0      0      0      0      0      0
## 2541      0      0      0      0      1      0      0      0      0      0      0
## 2542      0      1      0      0      0      0      0      0      0      0      0
## 2543      0      0      0      0      0      0      0      0      0      0      0
## 2544      0      0      0      0      2      0      0      0      0      0      0
## 2545      0      0      0      0      0      0      0      0      0      0      1
## 2546      0      0      0      1      1      0      2      0      0      0      0
## 2547      0      0      0      0      0      0      0      0      0      0      0
## 2548      0      0      0      0      0      0      0      0      0      0      0
## 2549      0      1      1      0      0      0      0      0      0      0      0
## 2550      0      0      0      0      2      0      0      0      0      0      0
## 2551      0      0      0      0      0      0      0      0      3      0      0
## 2552      0      0      0      0      0      0      0      0      0      0      0
## 2553      0      0      0      0      0      0      0      0      0      0      0
## 2554      0      0      0      0      0      0      0      3      0      0      0
## 2555      0      0      0      0      0      0      0      0      0      0      0
## 2556      0      0      0      0      0      0      0      0      0      0      0
## 2557      0      0      0      0      0      0      0      0      0      0      0
## 2558      0      1      0      0      0      0      0      0      1      0      0
## 2559      0      0      0      0      0      0      2      0      0      0      0
```

```
## 2560     2    0    0    0    0    0    0    0    0    0    0
## 2561     0    0    0    2    0    0    0    0    0    0    0
## 2562     0    0    0    0    0    0    0    0    0    0    0
## 2563     0    0    0    0    0    0    0    0    0    0    0
## 2564     0    0    0    0    0    0    0    0    0    0    2
## 2565     0    0    0    0    0    0    0    0    0    0    0
## 2566     0    0    0    0    0    0    0    2    0    0    0
## 2567     0    0    0    0    0    2    0    0    0    0    0
## 2568     0    0    0    0    0    0    0    2    0    0    0
## 2569     0    0    0    0    2    0    0    0    0    0    0
## 2570     0    0    0    0    0    0    0    0    0    0    0
## 2571     0    0    0    1    0    0    0    0    0    0    0
## 2572     0    0    0    0    0    0    0    0    0    0    0
## 2573     0    0    0    0    0    0    0    1    0    0    0
## 2574     0    1    0    0    0    0    0    0    0    0    0
## 2575     0    0    0    0    0    0    0    2    0    0    0
## 2576     0    0    0    0    0    0    0    0    0    0    0
## 2577     0    1    0    1    0    0    0    0    0    0    0
## 2578     0    0    0    0    0    0    0    0    0    0    0
## 2579     0    0    0    0    0    0    0    0    0    1    1
## 2580     0    2    0    0    0    0    0    0    0    0    1
## 2581     0    0    0    0    0    0    0    0    0    0    0
## 2582     0    0    0    0    0    2    0    0    0    0    0
## 2583     5    1    0    0    0    0    0    0    0    0    0
## 2584     0    0    0    0    0    0    0    0    0    0    0
## 2585     1    0    0    0    0    0    0    0    0    0    0
## 2586     0    0    0    0    0    0    2    0    0    0    0
## 2587     0    0    0    0    0    0    0    2    0    0    0
## 2588     0    0    0    0    2    0    0    0    0    0    0
## 2589     0    0    0    0    0    0    0    0    0    0    0
## 2590     0    0    0    0    2    0    0    0    0    0    0
## 2591     0    0    0    0    0    0    0    0    0    0    0
## 2592     0    0    0    0    0    0    0    0    0    0    0
## 2593     0    1    0    0    0    0    0    0    0    2    0
## 2594     1    1    1    2    0    3    0    0    0    0    0
## 2595     0    0    0    0    0    0    0    0    0    0    2
## 2596     0    0    0    0    0    0    0    0    0    2    0
## 2597     0    0    0    0    0    0    0    0    0    0    1
## 2598     0    0    1    2    0    0    1    0    0    0    0
## 2599     0    0    0    0    0    0    0    0    0    0    0
## 2600     0    2    0    0    0    0    0    0    0    0    0
## 2601     0    0    0    0    0    0    0    0    0    0    0
## 2602     2    0    0    0    0    0    0    0    0    0    0
## 2603     0    0    0    0    0    0    0    0    0    0    0
## 2604     0    0    0    0    0    0    0    0    0    0    0
## 2605     0    0    0    2    0    1    0    0    0    0    0
## 2606     0    0    0    2    0    0    0    0    0    0    0
## 2607     0    0    0    0    0    0    1    0    0    0    0
## 2608     0    0    0    0    0    0    0    2    0    0    0
## 2609     0    0    0    1    1    1    0    0    1    0    0
## 2610     0    0    0    0    0    0    0    0    0    0    0
## 2611     0    0    0    0    0    0    0    0    0    0    0
## 2612     0    0    0    0    0    0    0    0    0    0    0
## 2613     0    0    0    0    0    0    0    0    0    0    0
```

```
## 2614      0    0    0    0    0    0    0    0    0    0    0
## 2615      2    1    0    0    0    0    0    0    0    0    0
## 2616      0    0    0    2    0    1    0    0    0    0    0
## 2617      0    0    0    2    0    0    0    0    0    0    0
## 2618      0    0    0    0    0    0    0    0    0    0    0
## 2619      0    0    0    2    0    0    0    0    0    0    0
## 2620      0    0    0    1    1    0    0    0    0    0    0
## 2621      0    0    0    0    0    0    0    0    0    0    0
## 2622      0    0    0    0    0    0    1    0    0    0    0
## 2623      0    0    0    0    0    0    1    0    0    0    0
## 2624      0    0    0    0    0    0    0    0    0    0    0
## 2625      0    0    0    0    1    1    0    0    0    0    0
## 2626      0    0    0    2    0    0    0    0    0    0    0
## 2627      0    0    0    0    0    0    0    1    0    0    0
## 2628      0    0    0    0    0    0    0    0    0    0    0
## 2629      0    0    0    0    0    0    1    0    0    0    1
## 2630      0    0    0    0    1    0    0    1    0    2    0
## 2631      0    3    1    0    0    0    0    0    0    0    0
## 2632      0    0    0    0    0    1    0    0    0    0    0
## 2633      0    0    0    2    0    0    0    0    0    0    0
## 2634      2    1    0    0    0    0    0    0    0    0    0
## 2635      0    0    0    1    2    0    0    0    0    0    0
## 2636      0    0    0    0    0    1    0    0    0    0    0
## 2637      0    0    0    1    0    0    0    0    0    0    0
## 2638      0    0    0    2    0    2    0    0    0    0    0
## 2639      0    0    0    0    0    0    0    0    0    2    0
## 2640      0    2    0    0    0    0    0    0    0    0    0
## 2641      2    1    0    0    0    0    0    0    0    0    0
## 2642      0    0    0    0    0    0    0    0    3    0    0
## 2643      0    0    0    0    2    0    0    0    0    0    0
## 2644      0    0    0    0    0    0    0    0    0    0    0
## 2645      0    0    0    0    0    0    0    0    0    0    0
## 2646      0    0    0    0    0    0    2    0    0    0    0
## 2647      0    0    0    0    0    0    1    0    0    0    0
## 2648      1    0    1    0    0    0    0    0    0    0    0
## 2649      0    0    0    0    0    0    0    0    0    0    0
## 2650      0    0    0    0    0    0    0    0    0    0    0
## 2651      0    0    0    0    0    0    0    0    0    0    0
## 2652      0    0    0    0    0    0    0    0    0    0    1
## 2653      0    0    0    0    2    0    0    0    0    0    0
## 2654      0    0    0    0    0    0    1    1    0    0    0
## 2655      0    2    0    0    0    0    0    0    0    0    0
## 2656      0    0    0    0    0    0    0    0    0    0    2
## 2657      0    0    3    1    0    0    0    0    0    0    0
## 2658      0    0    0    0    0    0    0    0    0    0    0
## 2659      0    0    0    0    0    0    0    0    1    0    0
## 2660      1    0    1    0    0    0    0    0    0    0    0
## 2661      0    0    0    1    0    0    0    0    0    0    0
## 2662      0    0    0    0    0    0    0    0    0    0    0
## 2663      0    0    0    0    0    0    0    0    0    0    0
## 2664      0    0    1    0    2    0    0    0    0    0    0
## 2665      0    0    0    0    0    0    0    0    0    0    0
## 2666      0    0    0    0    0    0    0    0    0    0    0
## 2667      0    0    0    0    0    0    2    0    0    0    0
```

```
## 2668       0     0     0     0     0     0     0     0     0     0     0
## 2669       0     0     0     0     0     0     0     0     0     0     0
## 2670       0     0     0     0     0     0     2     0     0     0     0
## 2671       0     0     2     0     0     0     0     0     0     0     0
## 2672       0     0     0     0     0     2     0     0     0     0     0
## 2673       0     0     0     0     0     0     0     0     0     0     0
## 2674       0     0     0     0     2     0     0     0     0     0     0
## 2675       0     0     0     0     0     1     0     0     0     0     0
## 2676       0     0     0     0     0     0     0     1     0     0     0
## 2677       0     0     0     0     0     0     0     0     0     0     0
## 2678       0     0     0     0     0     0     0     0     0     0     0
## 2679       0     0     0     0     0     0     0     0     0     0     0
## 2680       0     0     0     0     0     0     0     0     0     0     0
## 2681       0     0     0     0     0     0     0     0     0     0     0
## 2682       0     0     0     0     1     0     3     0     0     0     0
## 2683       0     0     0     0     0     0     0     0     0     0     0
## 2684       2     0     0     0     0     0     0     0     0     0     0
## 2685       0     0     0     2     0     0     0     0     0     0     0
## 2686       0     0     0     0     0     0     2     0     0     1     0
## 2687       0     0     0     0     0     0     0     0     0     0     0
## 2688       0     0     0     0     0     0     0     0     0     0     0
## 2689       0     0     0     0     0     2     0     0     0     0     0
## 2690       0     0     0     0     0     0     0     0     0     0     0
## 2691       0     0     0     1     2     1     1     0     0     0     0
## 2692       0     0     0     0     0     0     0     2     0     0     0
## 2693       0     0     0     0     0     0     0     0     0     0     0
## 2694       0     0     0     0     0     0     0     0     0     0     0
## 2695       0     0     0     0     0     0     0     0     0     0     0
## 2696       2     0     0     0     0     0     0     0     0     0     0
## 2697       0     2     0     0     0     0     0     0     0     0     0
## 2698       0     0     0     2     1     0     0     0     0     0     0
## 2699       0     0     0     0     0     0     0     0     0     0     0
## 2700       0     0     0     0     0     0     1     0     0     0     0
## 2701       0     0     0     0     0     0     2     0     0     0     0
## 2702       0     0     0     0     2     0     0     0     0     0     0
## 2703       0     0     0     0     0     0     0     0     0     0     0
## 2704       0     0     0     0     0     0     0     1     0     0     0
## 2705       0     0     0     0     0     0     0     0     2     0     0
## 2706       0     0     0     0     0     0     0     0     0     0     0
## 2707       1     0     0     0     0     0     0     0     0     0     0
## 2708       0     0     0     0     0     0     0     0     0     0     0
## 2709       0     0     0     0     0     0     2     0     0     1     0
## 2710       0     0     0     0     0     0     0     2     0     0     0
## 2711       0     0     0     0     0     0     0     0     0     0     3
## 2712       0     0     2     0     0     0     0     0     0     0     0
## 2713       0     0     0     1     0     0     1     0     3     0     0
## 2714       0     0     0     0     0     0     0     1     0     0     0
## 2715       0     1     1     0     0     0     0     0     0     0     0
## 2716       0     2     0     0     0     0     0     0     0     0     0
## 2717       0     0     0     0     0     0     0     0     2     0     0
## 2718       0     0     0     0     0     0     0     0     0     0     0
## 2719       0     0     0     0     0     0     0     0     2     0     0
## 2720       0     0     0     0     0     0     0     0     0     0     0
## 2721       0     0     0     0     0     0     0     0     0     0     0
```

```
## 2722    0   2   0   0   0   0   0   0   0   0   0
## 2723    0   0   0   1   0   0   1   0   0   0   0
## 2724    0   1   0   0   0   0   0   0   0   0   0
## 2725    0   0   0   0   0   0   0   0   0   0   0
## 2726    0   0   0   0   0   0   0   0   0   0   0
## 2727    0   1   0   0   0   0   0   0   0   0   0
## 2728    0   0   0   0   0   0   2   0   0   0   0
## 2729    0   1   0   0   0   0   0   0   0   0   0
## 2730    0   1   2   0   0   0   0   0   0   0   0
## 2731    1   0   3   1   1   0   0   0   0   0   0
## 2732    0   1   0   0   0   0   0   0   0   0   0
## 2733    0   0   0   0   0   0   0   0   0   0   0
## 2734    0   0   0   0   0   0   0   0   0   0   0
## 2735    0   0   0   0   0   0   2   0   0   0   0
## 2736    0   0   0   0   0   0   0   0   0   0   0
## 2737    0   0   0   0   0   1   0   0   0   0   0
## 2738    0   0   0   0   0   0   0   0   4   0   0
## 2739    0   0   0   0   1   0   0   1   1   0   0
## 2740    0   0   0   0   0   0   0   0   0   0   2
## 2741    0   0   0   1   0   1   0   1   1   0   0
## 2742    0   0   0   0   0   0   1   1   0   0   0
## 2743    0   0   0   0   0   0   0   0   0   0   0
## 2744    0   0   2   0   0   0   0   0   0   0   0
## 2745    0   0   0   0   0   0   2   0   0   0   0
## 2746    0   0   0   0   0   0   2   0   0   0   0
## 2747    0   0   3   0   0   0   0   0   0   0   0
## 2748    1   0   0   0   0   0   0   0   0   0   0
## 2749    0   0   0   0   0   0   2   0   0   0   0
## 2750    0   0   3   0   0   0   0   0   0   0   0
## 2751    0   0   0   0   0   0   0   0   0   0   0
## 2752    0   0   0   0   0   2   0   0   0   0   0
## 2753    0   2   0   0   0   0   0   0   0   0   0
## 2754    0   0   0   0   0   2   0   0   0   0   0
## 2755    0   0   0   0   0   0   0   0   0   0   0
## 2756    0   0   0   0   0   0   0   0   0   0   0
## 2757    2   0   0   0   0   0   0   0   0   0   0
## 2758    0   0   0   0   0   1   0   0   0   0   0
## 2759    0   0   0   0   0   0   0   2   0   0   0
## 2760    0   0   0   0   1   0   0   0   1   0   0
## 2761    0   0   0   0   0   0   0   0   0   0   0
## 2762    0   0   0   0   0   0   0   0   0   0   0
## 2763    0   2   0   0   0   0   0   0   0   0   0
## 2764    0   0   0   0   0   0   0   0   0   0   0
## 2765    1   0   0   0   0   0   1   1   0   0   0
## 2766    0   0   0   0   0   0   2   1   0   0   0
## 2767    0   0   0   0   2   0   0   0   0   0   0
## 2768    0   0   0   0   0   0   0   0   0   0   0
## 2769    0   0   0   0   0   2   0   0   0   0   0
## 2770    0   1   0   0   0   0   0   1   0   0   0
## 2771    0   0   0   0   0   0   2   0   0   0   1
## 2772    0   0   0   0   0   2   0   0   0   0   0
## 2773    0   0   0   0   0   0   0   2   0   0   0
## 2774    0   0   0   0   0   0   0   0   0   2   1
## 2775    0   0   0   0   0   0   0   0   0   0   0
```

```
## 2776     0     1     0     1     0     0     0     0     0     0     0
## 2777     0     0     0     0     0     0     0     0     0     0     0
## 2778     0     0     0     0     0     0     0     0     0     0     0
## 2779     0     0     0     0     2     0     0     0     0     0     0
## 2780     0     0     0     0     0     0     0     0     0     0     0
## 2781     1     2     0     0     0     0     0     0     0     0     0
## 2782     0     0     0     0     0     1     0     0     0     0     0
## 2783     0     0     0     0     0     0     0     0     0     0     0
## 2784     0     0     0     0     2     0     0     0     0     0     0
## 2785     0     0     0     0     2     1     0     0     0     0     0
## 2786     0     0     0     0     0     2     0     0     0     0     0
## 2787     0     0     0     1     1     0     0     0     0     0     0
## 2788     0     0     0     0     0     1     1     0     0     0     0
## 2789     0     0     0     0     0     0     0     0     0     0     2
## 2790     0     0     0     0     0     0     2     0     0     0     0
## 2791     0     0     3     0     0     0     0     0     0     0     0
## 2792     0     0     0     0     0     0     0     0     0     0     0
## 2793     0     0     0     0     0     0     1     0     0     0     0
## 2794     0     0     0     0     0     0     0     0     2     0     0
## 2795     1     0     0     0     0     0     0     0     0     0     0
## 2796     0     0     0     0     2     0     0     0     0     0     0
## 2797     0     0     0     1     0     0     0     0     0     0     0
## 2798     0     1     0     0     1     0     0     0     0     0     0
## 2799     0     0     0     0     0     0     0     1     0     0     0
## 2800     0     1     0     0     0     0     0     0     0     2     0
## 2801     0     0     0     0     0     0     1     0     0     0     0
## 2802     0     0     0     0     0     0     0     0     0     0     0
## 2803     0     0     2     0     0     0     0     0     0     0     0
## 2804     0     0     0     0     0     0     0     0     0     0     0
## 2805     0     0     1     1     0     0     1     1     0     0     0
## 2806     0     0     0     0     0     0     0     0     0     0     0
## 2807     0     0     0     0     0     0     0     0     2     0     0
## 2808     0     0     2     0     0     0     0     0     0     0     0
## 2809     0     0     0     0     1     0     0     0     0     0     0
## 2810     0     0     0     0     0     0     0     0     0     0     0
## 2811     0     0     0     0     0     0     0     0     0     0     0
## 2812     0     0     0     0     1     0     0     0     0     0     0
## 2813     0     0     0     0     0     0     0     0     0     0     0
## 2814     0     0     0     2     0     0     0     0     0     0     0
## 2815     0     0     0     3     0     0     0     0     0     2     0
## 2816     0     0     0     0     0     0     0     0     0     0     0
## 2817     1     0     0     0     0     0     0     0     0     0     0
## 2818     2     0     0     0     0     0     0     0     0     0     0
## 2819     0     0     0     0     0     0     2     0     0     0     0
## 2820     1     0     1     5     0     0     0     0     0     0     0
## 2821     0     0     0     0     0     0     0     0     0     0     0
## 2822     1     0     0     0     1     0     0     0     0     1     0
## 2823     0     0     0     0     1     0     0     0     0     0     0
## 2824     0     0     0     0     0     0     0     0     1     1     0
## 2825     0     0     0     0     0     0     0     0     0     0     1
## 2826     0     0     0     0     0     0     2     0     0     0     0
## 2827     0     0     0     0     0     0     0     0     0     0     0
## 2828     0     0     0     0     0     0     0     0     0     0     0
## 2829     2     0     0     1     0     0     1     0     1     0     0
```

```
## 2830    0    0    0    0    0    0    0    0    2    0    1
## 2831    2    0    0    0    0    0    0    0    0    0    0
## 2832    0    0    0    0    0    0    1    0    0    0    0
## 2833    0    0    0    0    0    0    0    0    3    0    0
## 2834    0    0    0    2    0    0    0    0    0    0    0
## 2835    0    0    0    0    0    0    0    0    0    0    0
## 2836    0    0    0    0    0    0    0    0    0    1    0
## 2837    0    0    0    0    0    0    1    0    0    0    1
## 2838    0    0    0    0    0    0    0    0    0    0    0
## 2839    0    0    0    0    0    0    1    0    0    0    0
## 2840    0    0    0    0    0    0    0    0    0    0    0
## 2841    0    0    0    0    0    0    0    0    1    0    0
## 2842    0    0    0    0    0    0    2    0    0    0    0
## 2843    0    0    2    0    0    0    0    0    0    0    0
## 2844    0    0    0    0    0    0    0    0    0    0    0
## 2845    0    0    0    0    0    0    0    0    0    0    0
## 2846    2    0    0    0    0    0    0    0    0    0    0
## 2847    0    0    0    0    0    0    0    0    0    0    0
## 2848    0    0    0    0    0    0    0    0    0    0    0
## 2849    0    0    0    0    0    0    0    0    0    0    0
## 2850    0    0    0    1    0    1    0    0    0    0    0
## 2851    0    0    0    0    0    0    0    0    0    0    0
## 2852    0    1    0    0    0    0    0    0    0    0    0
## 2853    0    0    0    0    0    0    0    0    0    0    0
## 2854    0    0    0    0    0    0    0    0    0    2    0
## 2855    0    0    0    0    2    0    0    0    0    0    0
## 2856    0    0    0    0    0    2    0    0    0    0    0
## 2857    0    0    2    0    0    0    0    0    0    0    0
## 2858    1    0    0    0    1    0    0    0    0    0    0
## 2859    0    0    0    0    0    2    0    0    0    0    0
## 2860    0    0    0    0    0    0    0    0    0    0    0
## 2861    0    0    0    0    0    1    0    1    0    0    2
## 2862    0    0    0    0    0    0    0    0    0    0    0
## 2863    0    2    0    0    0    0    0    0    0    0    0
## 2864    0    0    0    0    0    0    0    0    0    0    3
## 2865    0    0    0    0    0    0    0    0    0    0    0
## 2866    0    0    0    0    0    0    0    0    0    0    0
## 2867    0    0    0    0    0    0    0    0    0    0    0
## 2868    0    0    0    0    0    0    0    0    0    0    0
## 2869    0    0    0    0    0    0    0    0    0    0    0
## 2870    0    0    2    0    0    0    0    0    0    0    0
## 2871    0    0    0    0    0    0    0    0    0    0    2
## 2872    0    0    0    0    0    0    0    0    2    0    0
## 2873    0    0    0    0    0    0    0    0    0    0    0
## 2874    0    0    0    0    0    0    0    0    0    0    0
## 2875    0    0    0    0    0    0    0    0    3    0    0
## 2876    0    0    0    0    0    0    0    1    0    0    0
## 2877    0    0    0    0    0    0    0    0    4    0    0
## 2878    0    0    0    0    0    0    0    0    1    0    0
## 2879    0    0    0    0    2    0    0    0    0    0    0
## 2880    0    0    0    0    0    0    0    0    0    0    1
## 2881    0    0    2    0    0    0    0    0    0    0    0
## 2882    0    0    0    0    0    1    0    2    0    0    0
## 2883    0    0    0    0    0    0    0    0    0    0    0
```

```
## 2884      0    0    0    0    0    0    0    0    0    0    2
## 2885      0    0    0    0    0    0    0    0    0    0    0
## 2886      0    0    0    0    0    0    1    0    0    0    0
## 2887      0    0    0    0    0    0    1    1    0    0    0
## 2888      0    0    0    0    0    0    2    0    0    0    0
## 2889      0    0    0    0    0    0    0    0    1    0    0
## 2890      0    0    0    0    0    0    0    0    3    0    0
## 2891      0    0    2    0    0    0    0    0    0    0    0
## 2892      0    0    0    0    0    0    0    0    0    1    2
## 2893      0    0    0    0    0    0    0    0    0    0    0
## 2894      1    0    1    0    0    0    0    0    0    0    0
## 2895      0    0    0    0    0    0    0    0    1    0    2
## 2896      0    0    0    0    0    0    0    0    2    0    0
## 2897      0    0    0    3    2    0    0    0    0    0    0
## 2898      0    0    0    0    0    0    2    0    0    0    0
## 2899      0    1    1    1    1    0    0    0    0    0    0
## 2900      0    0    0    0    1    1    0    0    0    0    0
## 2901      0    0    0    0    0    0    0    1    0    0    0
## 2902      0    0    0    0    0    0    0    0    0    0    0
## 2903      0    0    0    0    0    0    0    0    0    0    0
## 2904      0    0    0    0    0    0    1    0    0    0    0
## 2905      0    0    0    0    0    0    0    0    0    0    0
## 2906      0    0    0    0    0    2    0    0    0    0    0
## 2907      0    1    0    0    0    0    0    0    0    0    0
## 2908      0    1    0    1    0    0    0    0    0    0    0
## 2909      0    0    0    0    0    1    0    0    0    0    0
## 2910      0    0    0    0    0    0    0    0    0    0    0
## 2911      0    1    0    0    0    0    0    0    0    0    0
## 2912      0    0    1    0    0    1    0    0    0    0    0
## 2913      0    0    0    0    0    0    0    0    0    0    0
## 2914      0    0    0    1    0    0    0    4    0    0    0
## 2915      0    0    0    0    0    0    0    0    2    0    0
## 2916      0    0    0    0    0    0    0    0    0    0    0
## 2917      0    0    0    0    0    0    0    0    0    0    0
## 2918      0    0    0    2    0    0    0    0    0    0    0
## 2919      0    0    0    0    0    0    0    0    1    0    0
## 2920      0    1    0    0    0    0    0    0    0    0    0
## 2921      0    0    0    0    1    1    0    0    0    0    0
## 2922      0    0    0    0    0    0    0    0    0    0    0
## 2923      0    0    0    0    0    0    0    0    0    0    0
## 2924      0    0    0    0    0    0    0    2    0    0    0
## 2925      0    0    0    4    0    0    0    0    0    0    0
## 2926      0    0    0    0    0    0    0    0    0    0    0
## 2927      0    0    0    0    0    0    0    0    0    0    0
## 2928      0    0    0    0    0    0    2    0    0    0    0
## 2929      0    0    0    1    0    0    0    2    0    0    0
## 2930      0    0    0    2    0    0    0    0    0    0    0
## 2931      0    0    2    0    0    0    0    0    0    2    0
## 2932      0    1    0    0    0    0    0    0    0    0    0
## 2933      0    0    1    0    0    0    0    0    0    0    0
## 2934      0    0    0    0    0    0    0    0    0    0    0
## 2935      0    0    0    1    0    2    0    0    0    0    0
## 2936      0    0    0    0    0    0    0    0    0    0    0
## 2937      0    0    0    0    0    0    0    0    0    0    0
```

```
## 2938        0    0    0    0    0    0    0    0    1    0    1
## 2939        0    0    0    0    0    0    0    0    0    0    0
## 2940        0    0    0    0    0    0    0    0    0    0    0
## 2941        0    0    0    0    0    0    0    0    2    0    0
## 2942        0    0    0    0    0    0    0    0    0    0    0
## 2943        0    0    0    0    0    0    0    0    1    0    1
## 2944        0    0    0    0    0    0    0    0    0    0    0
## 2945        0    0    0    0    0    0    0    2    0    0    0
## 2946        0    1    0    0    0    0    2    1    0    0    0
## 2947        0    0    0    0    2    0    0    0    0    0    0
## 2948        0    0    0    0    0    0    0    0    0    0    0
## 2949        0    0    0    1    0    0    0    0    0    0    0
## 2950        1    0    0    0    2    0    0    0    0    0    0
## 2951        0    0    0    0    0    0    0    0    0    0    2
## 2952        0    0    0    0    0    0    0    0    0    0    0
## 2953        0    0    0    0    0    0    0    0    0    0    2
## 2954        0    0    0    0    0    0    0    0    1    0    0
## 2955        0    0    0    0    0    0    0    0    0    0    0
## 2956        2    0    0    0    0    0    0    0    0    0    0
## 2957        0    0    0    0    0    0    0    0    0    0    0
## 2958        0    2    0    0    0    0    0    0    0    0    0
## 2959        0    0    0    0    0    0    0    0    0    0    0
## 2960        0    0    0    0    0    0    0    0    0    0    0
## 2961        0    0    0    0    0    0    2    1    0    0    0
## 2962        0    0    2    0    0    0    0    0    0    0    0
## 2963        0    0    0    0    1    0    1    0    0    0    0
## 2964        0    0    0    0    0    0    0    0    0    0    0
## 2965        1    0    0    0    0    0    0    0    0    0    0
## 2966        0    0    0    0    2    0    0    0    0    0    0
## 2967        0    0    0    0    0    0    0    0    0    0    2
## 2968        0    0    0    0    0    0    0    0    0    0    1
## 2969        0    0    0    0    0    0    0    0    0    0    0
## 2970        0    1    0    0    0    0    0    0    0    0    0
## 2971        0    0    0    0    0    0    0    0    0    0    0
## 2972        0    0    0    0    0    0    0    0    0    0    0
## 2973        0    0    0    0    0    0    0    0    0    0    0
## 2974        0    0    0    2    0    0    0    0    0    0    0
## 2975        0    0    0    2    0    2    0    0    0    0    0
## 2976        0    2    0    0    0    0    0    0    0    0    0
## 2977        0    0    2    0    0    0    0    0    0    0    0
## 2978        0    0    0    0    0    0    0    2    0    0    0
## 2979        0    0    0    0    0    0    0    0    0    0    0
## 2980        0    0    0    0    0    0    0    1    0    1    0
## 2981        0    0    2    0    0    0    0    0    0    0    0
## 2982        0    0    1    1    0    1    0    0    0    0    0
## 2983        0    0    0    0    0    0    1    0    0    0    0
## 2984        0    1    1    0    0    0    0    0    0    0    0
## 2985        0    0    0    0    2    0    0    0    0    0    0
## 2986        0    0    0    0    3    1    1    0    0    0    0
## 2987        1    1    0    0    0    0    1    0    0    0    0
## 2988        0    0    0    0    0    0    0    0    0    0    2
## 2989        0    0    0    0    0    0    0    0    3    0    0
## 2990        0    0    0    0    0    0    2    0    0    0    0
## 2991        0    0    0    0    0    0    0    0    0    0    0
```

```
## 2992   1   1   0   0   0   0   0   0   0   0   0
## 2993   0   0   0   0   0   0   0   0   0   0   0
## 2994   0   0   0   0   0   0   0   0   0   0   2
## 2995   0   0   0   1   0   1   0   0   0   0   0
## 2996   0   0   0   0   0   0   0   0   0   2   0
## 2997   0   0   1   0   0   0   0   0   0   0   0
## 2998   0   0   0   0   0   0   0   0   0   0   0
## 2999   0   0   1   1   0   0   0   0   0   0   0
## 3000   0   1   1   0   0   0   0   0   0   0   0
## 3001   0   0   0   0   2   0   0   0   0   0   0
## 3002   0   0   0   2   0   0   1   0   0   0   0
## 3003   1   0   0   2   0   0   0   0   0   0   0
## 3004   0   0   0   0   0   0   0   0   0   0   0
## 3005   0   0   0   0   0   0   0   0   0   0   0
## 3006   0   0   0   0   0   0   2   0   0   0   0
## 3007   0   1   2   0   0   0   0   0   0   0   0
## 3008   0   0   0   0   0   0   0   0   2   0   0
## 3009   0   0   0   0   0   0   0   0   0   0   0
## 3010   0   0   0   0   0   0   0   0   0   0   0
## 3011   0   0   0   0   0   0   0   0   1   1   0
## 3012   0   0   0   0   0   0   0   0   2   0   0
## 3013   0   0   0   0   0   0   0   2   0   0   0
## 3014   0   0   0   0   0   0   2   0   0   0   1
## 3015   0   0   0   0   0   2   0   0   0   0   0
## 3016   0   0   0   0   0   0   0   3   0   1   1
## 3017   0   0   0   0   0   2   0   0   0   0   0
## 3018   0   0   0   0   0   0   2   2   0   0   0
## 3019   0   0   0   0   0   0   0   0   0   0   0
## 3020   1   0   2   1   2   0   0   0   0   0   0
## 3021   0   0   0   0   0   0   0   0   0   0   0
## 3022   0   0   0   0   0   0   0   0   0   0   0
## 3023   0   0   0   0   0   0   0   0   1   0   0
## 3024   0   0   0   0   0   2   0   0   0   0   0
## 3025   0   0   0   0   0   0   0   0   0   0   0
## 3026   0   0   0   0   0   0   0   0   1   1   0
## 3027   0   2   0   0   0   0   0   0   0   0   0
## 3028   0   0   0   0   0   0   2   0   0   0   0
## 3029   0   0   0   0   0   0   0   0   0   0   0
## 3030   0   0   0   0   0   0   0   3   0   0   0
## 3031   0   0   0   1   0   0   0   0   2   0   0
## 3032   0   0   0   0   0   0   0   0   0   0   0
## 3033   0   0   2   0   0   0   0   0   0   0   0
## 3034   0   0   0   0   0   0   0   0   0   0   0
## 3035   2   0   0   0   0   0   0   0   0   0   0
## 3036   0   0   0   0   0   0   0   0   0   0   0
## 3037   0   0   0   0   0   0   0   0   0   0   0
## 3038   0   0   0   0   1   0   0   0   0   0   0
## 3039   0   0   0   0   0   0   1   0   0   0   0
## 3040   0   0   0   0   0   0   0   2   0   0   0
## 3041   0   0   0   0   0   0   0   0   3   0   0
## 3042   0   0   0   0   0   0   0   0   0   0   0
## 3043   0   0   0   0   0   0   0   0   0   0   0
## 3044   0   0   0   2   0   0   0   0   0   0   0
## 3045   0   0   0   0   1   0   0   0   0   0   0
```

```
## 3046      0    0    2    0    0    0    0    0    0    0    0
## 3047      0    0    0    0    0    1    0    0    0    0    0
## 3048      0    0    0    0    0    0    4    0    0    0    0
## 3049      0    0    0    0    3    0    0    0    0    0    0
## 3050      0    0    0    0    0    0    0    0    0    1    0
## 3051      0    0    0    0    0    1    0    0    0    0    0
## 3052      0    0    0    0    0    0    0    0    0    0    0
## 3053      0    0    0    2    0    3    0    0    0    0    0
## 3054      1    0    0    1    1    0    0    0    0    0    0
## 3055      0    0    0    0    0    2    0    0    0    0    0
## 3056      0    0    0    0    0    0    0    0    0    0    0
## 3057      0    0    0    0    0    0    0    0    0    0    0
## 3058      0    0    0    2    0    0    0    0    0    0    0
## 3059      0    2    0    0    0    0    0    0    0    0    0
## 3060      1    0    2    0    0    0    0    0    0    0    0
## 3061      0    2    0    0    0    0    0    0    0    0    0
## 3062      0    0    0    0    0    0    0    0    1    0    0
## 3063      0    0    0    0    0    0    0    0    0    0    1
## 3064      0    0    0    1    0    1    3    0    0    1    0
## 3065      0    0    0    0    0    0    0    0    1    0    0
## 3066      0    0    0    1    0    1    0    0    0    0    0
## 3067      1    0    3    0    0    0    0    0    0    0    0
## 3068      0    0    0    0    0    0    2    0    0    0    0
## 3069      0    2    0    0    0    0    0    0    0    0    0
## 3070      1    1    0    0    0    0    0    0    0    0    0
## 3071      0    0    4    0    0    0    0    0    0    0    0
## 3072      0    0    0    0    0    0    0    0    0    0    0
## 3073      0    0    0    0    0    0    0    0    0    0    0
## 3074      0    0    0    4    0    0    0    0    0    1    0
## 3075      0    0    1    0    0    0    0    0    0    0    0
## 3076      0    0    0    0    0    0    0    0    0    0    0
## 3077      0    0    0    0    1    1    1    0    0    0    0
## 3078      0    0    0    0    0    0    0    0    0    2    0
## 3079      0    0    0    0    0    0    0    0    0    0    0
## 3080      0    0    0    0    0    0    0    0    0    0    2
## 3081      0    0    0    0    0    3    0    0    0    0    0
## 3082      0    0    0    0    0    0    0    0    0    1    0
## 3083      0    0    1    0    0    0    0    0    0    0    0
## 3084      2    0    0    0    0    0    0    0    0    0    0
## 3085      0    0    3    0    0    0    0    0    0    0    0
## 3086      1    1    0    0    0    0    0    0    0    0    0
## 3087      0    0    0    0    2    1    2    0    1    0    0
## 3088      0    0    0    0    0    0    0    0    2    0    0
## 3089      0    0    0    0    0    0    0    0    0    0    0
## 3090      0    0    0    0    0    0    0    0    0    0    0
## 3091      0    0    0    0    0    0    0    0    0    0    0
## 3092      0    0    0    0    1    0    0    0    1    0    2
## 3093      0    0    0    0    2    0    0    0    0    0    0
## 3094      0    0    0    0    0    0    0    0    0    0    0
## 3095      0    0    0    0    0    0    0    0    0    0    0
## 3096      0    2    1    0    1    0    0    0    0    0    0
## 3097      0    0    0    0    1    0    0    0    0    0    0
## 3098      0    0    0    0    0    0    0    0    0    0    0
## 3099      0    0    0    0    0    0    0    0    0    0    0
```

```
## 3100    0    0    0    0    0    0    0    0    0    0    0
## 3101    0    0    0    2    0    0    0    0    0    0    0
## 3102    0    0    0    0    0    0    0    3    0    0    0
## 3103    0    0    0    0    0    0    0    0    2    0    0
## 3104    0    0    0    0    0    0    0    0    2    0    0
## 3105    0    0    0    1    0    2    0    0    0    0    0
## 3106    0    0    0    0    0    0    0    0    0    0    2
## 3107    1    0    0    0    0    0    0    0    0    0    0
## 3108    0    0    0    0    0    0    0    1    0    1    0
## 3109    0    0    0    0    0    0    0    0    0    0    0
## 3110    0    0    0    0    0    0    0    0    4    0    0
## 3111    1    2    0    0    0    0    0    0    0    0    0
## 3112    0    0    0    2    0    0    0    0    0    0    0
## 3113    0    0    0    0    0    0    2    0    0    0    0
## 3114    0    0    0    0    0    0    1    0    0    0    0
## 3115    0    0    0    0    0    0    0    0    0    1    0
## 3116    0    0    0    0    0    0    0    0    0    0    0
## 3117    0    0    0    0    0    0    0    0    0    0    0
## 3118    0    0    0    0    0    2    0    0    0    0    0
## 3119    0    0    0    0    0    0    0    0    0    0    0
## 3120    0    0    0    0    0    0    0    0    0    0    0
## 3121    0    0    0    0    0    0    0    0    0    0    0
## 3122    0    0    0    0    0    0    0    0    0    0    0
## 3123    0    0    0    3    0    0    0    0    0    0    0
## 3124    0    0    0    0    0    0    0    0    0    0    0
## 3125    0    0    0    0    2    0    0    0    0    0    0
## 3126    0    0    2    0    0    0    0    0    0    0    0
## 3127    0    0    0    0    0    0    0    0    0    0    0
## 3128    0    0    0    0    0    0    0    0    0    0    0
## 3129    0    0    0    0    0    0    2    0    0    0    0
## 3130    0    0    0    0    2    0    0    0    0    0    0
## 3131    0    0    0    0    0    0    0    0    0    2    0
## 3132    0    0    0    0    0    0    1    2    0    0    0
## 3133    0    0    0    0    0    2    0    0    0    0    0
## 3134    0    0    0    0    0    0    0    0    0    0    0
## 3135    0    0    0    0    0    0    0    0    0    0    0
## 3136    0    0    0    0    0    0    0    0    0    0    0
## 3137    0    0    0    0    0    0    0    0    0    0    0
## 3138    0    0    0    0    0    0    0    0    0    1    0
## 3139    0    0    0    2    0    0    0    0    0    0    0
## 3140    0    1    0    0    0    0    0    0    0    0    0
## 3141    0    0    0    0    0    0    0    0    0    0    0
## 3142    0    0    0    2    0    0    0    0    0    0    0
## 3143    0    0    0    0    0    0    0    2    0    0    0
## 3144    0    0    0    0    0    0    0    0    0    0    0
## 3145    0    0    0    0    0    0    0    0    0    0    0
## 3146    0    0    0    0    0    0    0    0    0    0    0
## 3147    0    0    0    0    0    0    3    0    0    0    0
## 3148    0    0    0    0    0    0    0    0    0    0    0
## 3149    0    0    0    0    0    0    0    0    0    0    0
## 3150    0    0    0    0    0    0    0    0    0    0    0
## 3151    0    0    0    0    0    0    0    0    0    0    0
## 3152    0    0    0    0    0    0    2    0    0    0    0
## 3153    0    0    0    0    0    0    0    0    0    0    0
```

```
## 3154      0    0    0    0    0    2    0    0    0    0    0
## 3155      0    2    0    0    0    0    0    0    0    0    0
## 3156      0    2    0    0    0    0    0    0    0    0    0
## 3157      0    0    0    0    0    0    2    2    2    0    0
## 3158      0    1    0    0    0    1    0    0    0    2    0
## 3159      0    0    0    0    0    0    0    0    0    0    0
## 3160      0    0    0    0    0    0    1    0    0    0    0
## 3161      0    0    0    2    0    1    0    0    0    0    0
## 3162      0    0    0    0    0    0    3    0    0    0    0
## 3163      0    0    0    0    0    0    2    0    0    0    0
## 3164      2    0    0    0    0    0    0    0    0    0    0
## 3165      0    0    0    0    0    0    2    0    0    0    0
## 3166      0    0    1    0    0    0    0    0    0    0    0
## 3167      0    0    0    0    0    0    0    0    0    0    0
## 3168      0    0    0    0    0    0    0    2    0    0    0
## 3169      0    0    0    0    0    0    2    0    0    0    0
## 3170      0    0    0    0    0    0    0    0    0    0    0
## 3171      2    0    0    0    0    0    1    0    0    0    0
## 3172      0    0    0    0    0    0    0    0    0    0    0
## 3173      0    0    0    0    0    0    0    0    0    0    0
## 3174      0    0    0    0    0    0    2    5    0    0    0
## 3175      0    0    0    0    2    0    0    0    0    0    0
## 3176      0    0    0    0    0    3    0    0    0    0    0
## 3177      1    1    1    1    0    0    0    0    0    0    0
## 3178      1    1    1    0    0    0    0    0    0    0    0
## 3179      0    0    0    0    0    0    0    2    0    0    0
## 3180      0    0    1    0    1    0    0    0    0    0    0
## 3181      0    0    0    0    0    0    0    0    0    0    0
## 3182      0    0    0    0    0    0    0    0    0    0    2
## 3183      0    0    0    0    0    0    0    0    0    0    0
## 3184      0    0    0    0    1    1    0    0    0    0    0
## 3185      1    1    0    1    0    0    0    0    0    0    0
## 3186      0    1    0    0    0    0    0    0    0    0    0
## 3187      0    0    0    0    0    0    0    0    0    0    0
## 3188      0    0    2    0    0    0    0    0    0    0    0
## 3189      0    0    0    0    2    0    0    1    0    0    0
## 3190      0    0    0    0    2    0    0    0    0    0    0
## 3191      0    0    0    0    0    2    0    0    0    0    0
## 3192      0    0    0    0    2    0    0    0    0    0    0
## 3193      0    1    0    1    3    2    0    0    1    0    0
## 3194      0    0    0    0    0    0    0    0    0    1    2
## 3195      0    0    0    0    0    2    0    0    0    0    1
## 3196      0    0    0    0    0    0    0    0    0    0    0
## 3197      0    0    0    0    0    0    0    0    2    0    0
## 3198      0    0    0    0    0    0    0    0    0    0    0
## 3199      0    0    0    0    0    0    0    0    0    0    1
## 3200      0    0    0    0    0    0    0    0    0    0    0
## 3201      0    0    0    0    0    0    0    0    0    0    0
## 3202      0    0    0    0    0    0    0    0    0    0    0
## 3203      0    0    0    0    0    0    1    0    0    0    0
## 3204      0    0    0    0    2    1    0    0    0    1    0
## 3205      0    0    0    0    0    0    0    0    0    1    0
## 3206      0    0    0    0    2    0    0    0    0    0    0
## 3207      0    0    0    0    3    0    0    0    0    0    0
```

```
## 3208    0    1    0    0    0    1    0    0    0    0    0
## 3209    0    0    0    0    0    0    2    0    1    0    0
## 3210    1    1    0    0    0    0    0    0    0    0    0
## 3211    0    0    0    0    2    0    0    0    0    0    0
## 3212    0    0    0    0    0    0    0    0    0    0    0
## 3213    0    0    0    0    0    0    0    0    0    0    0
## 3214    0    0    0    0    0    0    0    0    0    0    0
## 3215    0    0    0    0    0    0    0    0    0    0    0
## 3216    0    0    0    0    2    0    0    0    0    0    0
## 3217    0    0    0    0    0    0    0    0    0    0    0
## 3218    0    0    0    0    0    0    0    0    0    0    0
## 3219    0    0    0    0    0    0    2    0    0    0    0
## 3220    0    0    0    0    0    0    0    0    0    0    0
## 3221    0    0    0    0    0    0    1    0    2    0    0
## 3222    0    0    0    0    0    0    0    0    0    0    0
## 3223    1    0    2    0    0    0    0    0    0    0    0
## 3224    0    0    0    0    2    0    0    0    0    0    0
## 3225    0    0    0    0    0    0    0    0    0    0    0
## 3226    0    0    0    0    0    0    0    0    2    0    0
## 3227    0    0    0    0    0    0    0    0    2    0    0
## 3228    0    0    0    2    1    0    0    0    0    0    0
## 3229    0    0    1    0    0    0    0    0    0    0    0
## 3230    0    0    0    0    0    0    1    0    0    0    0
## 3231    0    0    0    0    0    0    0    0    0    0    2
## 3232    3    0    2    0    0    0    0    0    0    0    0
## 3233    0    0    0    0    0    0    0    0    0    0    0
## 3234    0    0    0    0    0    0    0    0    0    0    0
## 3235    1    0    0    0    0    4    1    0    1    2    0
## 3236    0    0    0    0    0    0    0    2    0    0    0
## 3237    0    0    0    0    0    0    2    0    0    0    0
## 3238    0    0    0    0    0    0    0    0    0    0    0
## 3239    0    0    0    0    0    0    0    0    0    0    0
## 3240    0    1    0    0    0    0    0    1    0    0    0
## 3241    0    0    0    0    0    0    0    0    0    0    0
## 3242    0    0    0    0    0    0    0    3    0    0    0
## 3243    0    0    0    0    0    0    1    0    0    0    0
## 3244    0    0    0    0    0    0    0    0    0    0    0
## 3245    0    0    0    0    0    0    0    0    0    0    0
## 3246    0    1    2    0    0    0    0    0    0    0    0
## 3247    0    0    0    0    2    0    0    0    0    0    0
## 3248    0    0    0    0    0    0    0    0    0    2    0
## 3249    0    0    0    0    2    0    0    0    0    0    0
## 3250    0    0    0    0    0    0    0    0    0    0    0
## 3251    2    0    0    0    0    0    0    0    0    0    0
## 3252    0    0    0    0    0    0    2    0    0    0    0
## 3253    0    0    0    0    0    0    0    0    0    0    0
## 3254    0    0    0    0    0    0    0    0    0    0    0
## 3255    0    0    0    0    0    0    0    0    0    0    0
## 3256    0    0    0    1    0    0    0    0    0    0    0
## 3257    0    0    0    0    0    0    0    0    2    0    0
## 3258    0    0    0    0    0    0    0    0    0    0    0
## 3259    0    0    0    0    0    0    1    0    0    1    0
## 3260    1    2    1    0    0    0    0    0    0    0    0
## 3261    0    0    0    0    0    0    0    0    0    0    0
```

```
## 3262    0    0    0    0    0    0    0    0    0    0    0
## 3263    1    0    0    0    0    0    0    0    0    0    0
## 3264    2    0    0    0    0    0    0    0    0    0    0
## 3265    0    0    0    0    0    0    0    0    0    0    0
## 3266    0    0    0    0    0    0    0    0    0    0    0
## 3267    0    0    0    0    0    0    0    0    0    0    0
## 3268    0    0    0    0    0    0    0    0    0    0    0
## 3269    0    0    0    0    0    0    0    0    0    0    0
## 3270    0    0    0    2    0    0    0    0    0    0    0
## 3271    0    0    0    0    0    0    0    0    0    0    0
## 3272    0    2    0    0    0    0    0    0    0    0    0
## 3273    0    0    0    0    0    0    0    0    0    0    0
## 3274    0    0    0    0    0    0    0    0    0    0    0
## 3275    0    0    0    0    0    0    0    0    0    0    2
## 3276    0    0    0    0    1    1    0    1    0    0    0
## 3277    0    0    0    3    0    0    1    0    0    0    0
## 3278    0    0    0    0    0    0    2    0    0    0    0
## 3279    0    0    0    0    2    0    0    0    0    0    0
## 3280    0    2    0    1    0    2    0    0    0    0    0
## 3281    0    0    0    0    2    0    0    0    0    0    0
## 3282    0    0    0    0    0    0    0    0    0    0    0
## 3283    0    0    1    2    0    0    0    0    0    0    0
## 3284    0    0    0    0    0    0    1    0    0    0    0
## 3285    0    0    0    0    1    0    0    0    0    0    0
## 3286    0    0    0    0    0    0    0    0    0    0    0
## 3287    0    2    0    0    0    0    0    0    0    0    0
## 3288    0    0    0    0    0    0    0    0    0    0    0
## 3289    0    0    0    0    1    0    0    0    0    0    0
## 3290    0    1    0    0    0    0    0    0    0    0    0
## 3291    0    0    3    0    0    0    0    0    0    0    0
## 3292    0    0    0    0    0    0    0    0    0    0    0
## 3293    0    0    0    0    0    0    0    0    0    0    0
## 3294    0    0    0    0    0    0    2    0    0    0    0
## 3295    0    0    0    1    0    0    0    0    0    0    0
## 3296    0    0    0    0    0    0    0    0    0    2    0
## 3297    0    0    0    0    0    0    0    0    0    0    0
## 3298    0    0    0    0    0    2    0    0    0    0    0
## 3299    0    0    0    0    0    0    0    0    0    0    0
## 3300    0    0    0    0    0    0    0    0    0    0    0
## 3301    0    0    0    1    0    0    0    0    0    0    0
## 3302    0    0    1    0    0    0    0    0    0    0    0
## 3303    0    0    0    0    0    1    0    1    0    0    0
## 3304    0    0    1    0    0    0    0    0    0    0    0
## 3305    0    0    0    0    0    2    0    0    0    0    0
## 3306    0    0    0    0    0    0    0    0    1    1    1
## 3307    0    2    0    0    0    0    0    0    0    0    0
## 3308    0    0    0    0    0    0    0    0    0    0    0
## 3309    0    0    0    0    0    3    0    0    0    0    0
## 3310    0    0    0    0    0    0    0    0    0    0    0
## 3311    0    0    0    0    0    0    0    0    0    0    0
## 3312    0    0    0    0    0    0    0    1    0    0    0
## 3313    0    0    0    0    0    0    0    0    2    0    0
## 3314    0    0    0    0    0    0    0    0    0    0    0
## 3315    0    0    0    0    0    0    0    0    0    0    0
```

```
## 3316      0    0    0    0    0    0    0    0    0    0    0
## 3317      0    0    0    0    0    0    0    0    0    0    0
## 3318      0    0    0    0    0    0    0    0    2    0    0
## 3319      0    0    0    0    4    1    0    0    0    0    0
## 3320      0    0    0    0    0    0    0    0    0    1    1
## 3321      0    0    0    0    0    0    0    0    0    0    0
## 3322      0    0    0    0    0    0    0    0    2    0    1
## 3323      0    0    0    0    0    0    0    3    0    0    0
## 3324      0    0    0    0    1    0    0    0    0    0    0
## 3325      0    0    0    0    0    0    0    0    0    0    0
## 3326      0    0    0    0    2    0    0    0    0    0    0
## 3327      0    0    0    0    0    0    0    2    0    0    0
## 3328      0    0    0    0    0    0    0    0    0    1    0
## 3329      0    0    0    0    0    0    0    0    0    0    0
## 3330      0    0    0    0    0    0    0    0    0    2    0
## 3331      0    0    0    0    2    0    0    1    0    0    0
## 3332      0    0    0    0    0    0    0    0    3    0    1
## 3333      0    0    0    0    0    0    0    0    0    0    0
## 3334      0    0    0    0    0    0    1    0    0    0    0
## 3335      0    0    0    0    0    2    0    0    0    0    0
## 3336      0    0    0    0    0    0    0    0    0    0    0
## 3337      0    0    0    0    0    0    0    0    0    0    0
## 3338      0    0    0    0    0    0    0    0    0    0    0
## 3339      0    0    0    0    0    0    1    2    0    0    0
## 3340      0    0    2    0    0    0    0    0    0    0    0
## 3341      0    0    0    0    0    2    0    0    0    0    0
## 3342      0    0    0    2    3    0    2    0    0    0    0
## 3343      0    0    0    0    0    0    3    0    0    1    0
## 3344      0    0    0    0    0    0    0    0    2    0    0
## 3345      0    0    0    0    0    2    0    0    0    0    0
## 3346      0    0    0    0    0    0    0    0    0    0    0
## 3347      0    0    0    0    3    0    0    0    0    0    0
## 3348      0    0    0    0    0    1    0    0    0    0    0
## 3349      0    0    0    0    0    0    0    0    0    2    0
## 3350      0    0    0    0    0    0    2    0    0    0    0
## 3351      0    0    2    0    1    0    0    0    0    2    0
## 3352      0    0    0    0    0    0    0    0    0    0    0
## 3353      0    1    1    0    0    0    0    0    0    0    0
## 3354      0    0    0    0    0    0    0    0    0    2    0
## 3355      0    0    0    0    0    1    0    0    0    0    0
## 3356      0    0    0    0    1    0    0    0    0    0    0
## 3357      0    0    0    0    0    0    0    0    0    0    0
## 3358      0    0    0    0    0    0    0    0    0    0    0
## 3359      0    0    0    0    0    0    0    0    0    0    0
## 3360      0    0    0    0    3    0    0    0    0    0    0
## 3361      0    0    0    0    0    0    0    0    0    0    0
## 3362      0    0    0    2    0    0    0    0    2    0    0
## 3363      0    0    0    2    0    0    0    0    0    0    0
## 3364      0    0    0    0    0    0    2    0    0    0    0
## 3365      0    0    0    1    0    0    0    0    0    0    0
## 3366      0    0    0    0    0    3    0    0    0    0    0
## 3367      0    0    0    0    0    0    0    0    0    0    0
## 3368      0    0    0    0    0    0    1    0    0    0    0
## 3369      0    0    0    0    0    0    0    0    0    0    0
```

```
## 3370    0    0    0    0    0    0    0    0    0    0    0
## 3371    0    0    0    0    0    0    1    0    0    1    0
## 3372    1    0    0    0    1    2    0    0    0    0    0
## 3373    0    2    0    0    0    0    0    0    0    0    0
## 3374    0    0    0    0    0    0    0    0    3    0    0
## 3375    0    1    0    0    0    0    0    0    0    0    0
## 3376    0    0    0    0    0    4    0    0    0    0    0
## 3377    0    0    1    0    0    0    0    0    0    0    0
## 3378    0    0    0    0    0    0    0    0    0    0    0
## 3379    0    0    0    0    0    0    2    0    0    0    1
## 3380    0    0    2    0    1    0    0    0    0    0    0
## 3381    0    0    0    1    0    0    0    0    0    0    0
## 3382    0    0    0    0    0    0    0    0    0    0    0
## 3383    0    0    0    0    0    0    2    0    0    0    0
## 3384    0    0    0    0    0    0    0    2    0    0    0
## 3385    0    0    0    0    0    1    0    0    0    0    0
## 3386    0    0    0    0    0    0    0    0    0    0    0
## 3387    0    0    0    0    0    0    0    0    0    0    0
## 3388    0    0    0    2    0    0    0    0    0    0    0
## 3389    0    0    0    0    0    0    0    1    0    0    0
## 3390    0    0    0    0    0    0    0    0    1    0    2
## 3391    0    2    0    0    0    0    0    0    0    0    0
## 3392    0    0    0    0    0    0    1    0    0    0    0
## 3393    0    0    0    0    0    0    2    2    0    0    0
## 3394    0    0    0    0    0    0    0    0    0    1    0
## 3395    0    0    0    0    0    0    0    2    0    0    0
## 3396    0    0    0    0    0    0    0    0    0    0    0
## 3397    0    0    0    0    0    0    0    0    0    0    0
## 3398    1    2    0    1    0    0    0    0    0    0    0
## 3399    0    0    0    0    0    0    0    0    0    0    0
## 3400    0    0    0    0    0    0    0    0    0    0    0
## 3401    0    0    0    0    0    0    0    0    0    0    0
## 3402    0    0    0    2    0    0    0    0    0    0    0
## 3403    0    0    0    1    0    0    0    0    0    0    0
## 3404    0    2    0    0    0    0    0    0    0    0    0
## 3405    0    2    0    0    0    0    0    0    0    0    0
## 3406    0    0    0    0    0    0    2    0    0    0    0
## 3407    0    0    0    0    0    0    0    3    0    0    0
## 3408    0    0    2    0    0    0    0    0    0    0    0
## 3409    0    0    0    1    1    0    0    0    0    0    0
## 3410    0    0    0    2    1    0    0    1    0    0    0
## 3411    0    0    0    1    0    0    0    0    0    0    0
## 3412    0    0    0    0    0    0    0    1    2    0    0
## 3413    0    0    0    0    0    0    0    0    0    0    0
## 3414    2    0    0    0    0    1    0    0    0    0    0
## 3415    0    0    0    0    0    0    0    0    0    2    0
## 3416    0    1    0    0    0    0    0    1    0    0    0
## 3417    0    0    0    0    0    0    0    0    0    0    0
## 3418    0    0    0    0    0    3    1    0    0    0    0
## 3419    0    2    0    0    0    0    0    0    0    0    0
## 3420    0    0    0    0    0    0    0    0    0    0    0
## 3421    1    0    0    0    0    0    0    0    0    0    0
## 3422    0    0    0    0    0    0    0    0    0    0    0
## 3423    0    0    0    0    0    0    0    0    0    0    0
```

```
## 3424    0    0    0    0    0    0    0    0    0    0    0
## 3425    0    0    0    0    0    0    0    1    0    1    0
## 3426    0    0    0    0    0    0    0    0    0    0    0
## 3427    0    0    0    0    0    0    1    0    0    0    0
## 3428    0    0    2    0    0    0    0    0    0    0    0
## 3429    0    0    0    0    0    0    0    0    0    0    0
## 3430    0    0    0    0    0    2    0    0    0    0    0
## 3431    0    0    0    0    0    0    0    0    0    0    0
## 3432    0    0    0    0    0    0    0    0    0    0    0
## 3433    0    0    0    1    0    0    0    0    0    0    0
## 3434    0    0    0    0    0    0    0    0    0    0    0
## 3435    0    0    0    0    0    0    0    0    0    0    1
## 3436    0    0    0    0    0    0    0    0    0    0    0
## 3437    0    0    0    0    0    0    0    0    0    0    0
## 3438    0    0    0    0    0    0    0    0    0    2    0
## 3439    0    0    0    0    0    0    0    0    0    0    0
## 3440    0    0    0    0    0    0    0    0    2    0    0
## 3441    0    0    0    2    0    0    0    0    0    0    0
## 3442    0    0    0    0    0    2    0    0    0    0    0
## 3443    0    0    0    0    2    0    0    0    0    0    0
## 3444    0    0    0    0    0    0    0    0    0    0    0
## 3445    0    0    0    2    0    0    0    0    0    0    0
## 3446    0    0    0    0    0    0    0    0    2    1    0
## 3447    2    0    0    0    0    0    0    0    0    0    0
## 3448    0    0    1    0    0    0    0    0    0    0    0
## 3449    0    0    0    0    0    0    0    0    0    0    0
## 3450    0    0    0    2    0    0    0    0    1    0    0
## 3451    0    0    2    0    0    0    0    0    0    0    0
## 3452    0    0    0    0    2    0    0    0    0    0    0
## 3453    0    0    0    0    0    0    0    0    0    0    0
## 3454    0    0    0    0    0    0    0    0    2    0    1
## 3455    0    0    0    0    0    0    0    0    0    0    0
## 3456    0    1    0    0    0    0    0    0    0    0    0
## 3457    0    0    0    0    0    0    0    0    0    0    0
## 3458    0    0    0    0    0    0    0    0    0    0    0
## 3459    0    0    0    0    0    0    2    0    0    0    0
## 3460    1    3    0    0    0    0    0    0    0    0    0
## 3461    0    0    0    0    0    0    0    0    0    0    0
## 3462    0    0    0    0    0    0    0    0    0    1    0
## 3463    0    0    1    0    0    0    0    0    0    0    0
## 3464    0    0    0    0    0    0    0    0    0    0    2
## 3465    0    2    0    0    0    0    0    0    0    0    0
## 3466    1    0    0    0    0    0    0    0    0    0    0
## 3467    0    1    3    0    0    0    0    0    0    0    0
## 3468    0    0    0    0    0    2    0    0    0    0    0
## 3469    0    0    0    0    0    0    1    0    0    0    0
## 3470    0    1    0    0    0    0    0    0    0    0    0
## 3471    0    0    0    0    0    0    0    0    1    0    0
## 3472    0    0    0    1    0    1    0    0    0    0    0
## 3473    0    0    0    0    0    0    0    0    0    0    0
## 3474    0    1    0    0    0    0    1    0    0    0    0
## 3475    0    0    0    0    0    0    0    0    3    0    0
## 3476    0    0    0    0    0    0    0    0    0    0    0
## 3477    0    0    0    1    0    0    0    0    0    0    0
```

```
## 3478      0    0    0    0    0    0    0    0    0    0    0
## 3479      0    1    1    0    0    0    1    0    0    0    0
## 3480      0    0    0    0    3    0    0    0    0    0    0
## 3481      1    0    0    0    0    0    0    0    0    0    0
## 3482      0    0    0    0    0    0    0    0    0    0    0
## 3483      0    0    0    0    0    0    0    0    0    0    0
## 3484      0    0    0    0    0    0    0    0    0    0    0
## 3485      0    0    0    3    0    0    0    0    0    0    0
## 3486      0    2    0    0    0    0    0    0    0    0    0
## 3487      1    0    0    0    0    0    0    0    0    0    0
## 3488      0    0    0    0    0    0    0    0    0    0    0
## 3489      0    1    0    1    0    0    0    0    0    0    0
## 3490      0    0    0    0    0    0    0    0    0    0    0
## 3491      0    0    0    0    0    0    0    0    0    0    0
## 3492      0    0    0    0    0    0    1    0    0    0    0
## 3493      0    0    0    0    0    0    0    2    0    0    0
## 3494      0    0    0    0    0    1    0    0    0    0    0
## 3495      0    0    0    0    0    0    0    0    0    0    0
## 3496      0    0    0    0    0    0    0    0    3    0    2
## 3497      0    0    0    1    0    0    0    0    0    1    0
## 3498      1    1    0    0    0    0    0    0    0    0    0
## 3499      0    0    0    0    0    0    0    0    0    0    0
## 3500      0    0    0    0    0    0    0    0    0    0    0
## 3501      0    0    0    0    2    0    0    0    0    0    0
## 3502      0    0    0    0    0    0    0    0    0    1    1
## 3503      0    0    0    2    0    0    0    0    0    0    0
## 3504      0    0    0    0    0    0    1    0    1    0    0
## 3505      0    0    0    0    0    3    0    0    0    0    0
## 3506      0    0    0    0    0    0    1    0    0    0    0
## 3507      0    0    0    0    0    0    0    0    0    0    0
## 3508      0    0    1    0    2    0    0    0    0    0    0
## 3509      0    0    0    0    0    0    0    0    0    0    0
## 3510      0    0    0    0    0    0    0    0    0    0    0
## 3511      0    1    0    0    0    0    0    0    0    0    0
## 3512      0    0    0    0    0    0    0    0    0    0    0
## 3513      0    0    0    0    0    2    0    0    0    0    0
## 3514      1    0    0    0    0    0    1    0    0    0    0
## 3515      0    0    0    0    0    0    0    0    0    0    0
## 3516      0    0    0    0    0    0    0    0    0    0    0
## 3517      0    0    0    0    0    3    0    0    0    0    0
## 3518      0    0    0    0    0    2    0    0    0    0    0
## 3519      0    0    0    0    0    0    0    0    0    0    2
## 3520      0    0    0    0    0    0    0    0    0    0    0
## 3521      0    0    0    0    0    0    0    0    0    0    0
## 3522      0    0    0    1    0    0    0    0    0    0    0
## 3523      0    0    0    0    0    0    0    0    0    0    0
## 3524      0    0    0    2    0    0    0    0    0    0    0
## 3525      0    0    0    0    0    0    0    0    0    0    0
## 3526      0    0    0    0    0    0    0    0    0    0    3
## 3527      0    0    0    0    0    1    0    0    0    0    0
## 3528      0    0    0    0    0    0    0    0    0    4    0
## 3529      0    0    0    0    0    0    0    0    0    0    1
## 3530      0    0    0    0    0    0    0    0    0    0    0
## 3531      0    0    0    0    0    0    0    0    0    0    1
```

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```
## 3532     0     0     2     0     0     0     0     0     0     0     0
## 3533     0     0     0     0     2     0     0     0     0     0     0
## 3534     0     2     0     0     0     0     0     0     0     0     0
## 3535     0     0     0     0     0     0     0     0     0     0     0
## 3536     2     0     0     0     0     0     0     0     0     0     0
## 3537     0     0     0     0     0     0     2     0     0     0     0
## 3538     0     0     0     0     0     0     0     0     0     0     0
## 3539     0     0     0     0     0     0     0     0     0     1     0
## 3540     0     0     0     0     1     0     0     0     0     0     0
## 3541     0     0     0     0     0     0     0     0     0     0     0
## 3542     0     0     0     0     0     0     0     0     0     1     1
## 3543     0     0     0     0     0     0     0     0     0     0     2
## 3544     0     0     2     0     0     0     0     0     0     0     0
## 3545     0     0     0     0     0     0     0     0     0     1     0
## 3546     0     0     2     0     0     0     0     0     0     0     0
## 3547     0     0     0     0     0     0     0     0     0     0     0
## 3548     0     0     0     0     0     0     0     0     0     0     0
## 3549     0     0     0     0     0     0     0     0     2     0     0
## 3550     0     0     0     0     0     0     0     0     0     0     0
## 3551     0     0     0     0     0     0     2     0     0     0     0
## 3552     0     0     0     0     0     0     0     0     0     0     0
## 3553     0     0     0     0     0     0     2     0     0     0     0
## 3554     0     0     0     0     0     0     0     0     0     0     0
## 3555     0     0     2     0     0     0     0     0     0     0     0
## 3556     0     0     0     0     1     0     2     0     0     0     0
## 3557     0     0     0     0     0     0     1     0     0     0     0
## 3558     0     0     0     0     0     0     0     0     0     0     0
## 3559     0     0     0     0     0     6     0     0     0     0     0
## 3560     0     0     0     0     0     0     0     0     0     0     0
## 3561     0     0     0     0     0     0     0     0     0     0     0
## 3562     0     0     0     0     0     0     0     0     0     0     0
## 3563     0     0     0     0     0     0     0     0     0     0     0
## 3564     0     0     0     0     0     0     0     0     0     0     0
## 3565     0     1     0     0     0     0     0     0     0     0     0
## 3566     0     1     0     0     0     0     0     0     0     0     0
## 3567     0     0     0     1     0     0     0     0     0     0     1
## 3568     0     0     0     1     0     0     0     0     0     0     0
## 3569     0     0     0     0     2     2     0     0     0     0     0
## 3570     0     0     0     0     0     0     2     0     0     0     0
## 3571     0     0     0     0     0     0     0     0     0     0     0
## 3572     0     0     0     0     0     1     0     0     0     0     0
## 3573     0     0     0     0     0     0     0     0     0     0     2
## 3574     0     0     0     0     0     0     0     0     0     0     0
## 3575     0     0     0     1     0     0     1     1     0     1     0
## 3576     0     0     0     0     0     0     0     0     0     0     1
## 3577     0     0     0     0     0     0     2     0     0     0     0
## 3578     0     0     0     0     0     0     0     0     0     0     0
## 3579     0     0     0     0     0     0     0     0     0     0     0
## 3580     0     0     2     0     0     0     0     0     0     0     0
## 3581     0     1     0     0     1     0     0     1     0     0     0
## 3582     0     0     0     0     0     0     0     0     0     0     0
## 3583     0     0     0     0     0     0     0     0     0     0     0
## 3584     0     2     0     0     0     0     0     0     0     0     0
## 3585     0     0     0     0     0     0     0     0     0     2     0
```

```
## 3586      0    0    0    0    0    0    0    0    0    0    0
## 3587      0    0    0    0    0    0    0    0    0    2    0
## 3588      0    0    0    0    0    0    0    0    2    1    0
## 3589      0    0    0    0    0    0    0    0    0    0    0
## 3590      0    0    0    0    0    0    0    2    0    0    0
## 3591      0    0    0    0    0    0    2    0    0    0    0
## 3592      0    0    0    0    0    0    0    0    0    0    0
## 3593      0    2    0    0    0    0    0    0    0    0    0
## 3594      0    0    0    0    0    0    0    0    0    0    0
## 3595      1    0    1    0    0    0    0    0    0    0    0
## 3596      0    0    0    2    0    0    0    0    0    0    0
## 3597      0    0    0    0    0    0    0    1    0    0    1
## 3598      0    0    0    0    0    0    0    0    0    0    0
## 3599      0    0    0    0    0    0    0    0    0    0    0
## 3600      0    0    0    1    0    0    0    0    0    0    0
## 3601      0    0    0    0    0    0    0    2    0    0    0
## 3602      0    0    0    0    0    0    0    2    0    0    0
## 3603      0    0    0    0    0    0    0    2    0    0    0
## 3604      0    0    0    0    0    0    0    0    2    0    0
## 3605      0    0    0    0    0    0    0    0    3    0    0
## 3606      0    0    0    0    1    0    1    0    1    0    1
## 3607      0    0    0    0    0    0    1    2    0    0    0
## 3608      0    0    0    0    0    0    2    0    0    0    0
## 3609      0    0    0    0    0    0    0    0    0    0    0
## 3610      0    0    0    0    0    0    0    0    0    0    0
## 3611      0    0    2    0    0    0    0    0    0    0    0
## 3612      1    1    0    2    0    0    0    2    0    0    0
## 3613      0    0    0    0    0    0    0    0    0    0    0
## 3614      0    0    0    0    0    0    0    0    0    0    0
## 3615      0    0    0    0    0    2    0    0    0    0    0
## 3616      0    0    0    0    0    0    0    0    0    0    0
## 3617      0    0    0    0    0    0    2    0    0    0    0
## 3618      1    0    0    1    0    0    3    0    0    0    0
## 3619      0    0    0    0    0    0    0    0    2    0    0
## 3620      0    0    0    0    0    0    0    0    0    0    0
## 3621      0    0    1    0    0    0    0    0    0    0    0
## 3622      0    0    0    0    1    0    0    0    0    0    0
## 3623      0    0    0    0    0    0    0    0    0    0    0
## 3624      0    0    0    0    0    0    0    0    0    0    0
## 3625      1    0    0    0    0    0    0    0    0    0    0
## 3626      0    0    0    0    0    0    0    0    2    0    0
## 3627      0    0    0    0    0    0    0    2    0    0    0
## 3628      0    0    0    0    0    0    0    0    0    0    0
## 3629      2    0    0    0    0    0    0    0    0    0    0
## 3630      0    0    0    0    0    0    0    0    0    0    0
## 3631      0    0    0    0    0    0    0    0    0    0    0
## 3632      0    1    0    0    0    3    0    0    0    0    0
## 3633      0    0    0    0    0    0    0    0    0    0    0
## 3634      0    0    0    0    0    0    0    0    0    0    0
## 3635      0    0    0    2    0    0    0    0    0    0    0
## 3636      0    1    0    0    0    0    0    0    0    0    0
## 3637      0    0    0    0    0    0    0    0    0    0    0
## 3638      0    0    0    0    0    0    0    0    0    0    0
## 3639      0    0    0    0    0    0    0    0    0    0    0
```

```
## 3640      0    0    0    1    0    2    0    0    0    0    0
## 3641      0    0    0    0    0    0    0    0    0    0    0
## 3642      0    0    0    0    2    0    0    0    0    0    0
## 3643      0    0    0    0    2    0    0    0    0    0    0
## 3644      0    2    0    0    0    0    0    0    0    0    0
## 3645      0    0    0    0    2    0    0    0    0    0    0
## 3646      0    0    0    0    0    0    0    0    0    0    0
## 3647      0    2    0    0    0    0    0    0    0    0    0
## 3648      0    0    0    0    0    0    0    0    0    0    0
## 3649      0    0    2    0    0    0    0    0    0    0    0
## 3650      0    0    0    0    0    0    0    0    0    0    0
## 3651      0    2    0    0    0    0    0    0    0    0    0
## 3652      0    0    0    1    0    0    0    0    0    0    0
## 3653      0    0    3    0    0    0    0    0    0    0    0
## 3654      0    0    0    0    0    0    2    0    0    0    0
## 3655      2    0    0    0    0    0    0    0    0    0    0
## 3656      0    0    0    0    0    0    0    2    0    0    0
## 3657      0    0    0    0    0    0    2    0    0    0    0
## 3658      0    0    0    0    0    0    0    0    0    0    0
## 3659      0    0    0    0    0    0    0    0    0    0    0
## 3660      0    0    0    0    0    0    0    3    0    0    0
## 3661      0    2    0    0    0    0    0    0    0    0    0
## 3662      0    0    0    0    0    0    0    0    0    0    0
## 3663      1    0    0    0    0    0    0    0    0    0    0
## 3664      0    0    0    1    0    0    0    0    0    0    0
## 3665      1    1    1    0    0    0    0    0    0    0    0
## 3666      0    0    2    0    0    0    0    0    0    0    0
## 3667      0    0    0    2    0    0    0    0    0    0    0
## 3668      0    0    2    0    0    0    0    0    0    0    0
## 3669      0    2    1    0    0    0    1    0    1    0    0
## 3670      0    0    0    0    0    0    0    0    0    0    0
## 3671      0    0    2    0    0    0    0    0    0    0    0
## 3672      0    0    0    0    0    1    0    0    0    0    0
## 3673      0    0    1    0    0    0    0    0    0    0    0
## 3674      0    0    0    0    0    0    0    0    0    0    0
## 3675      0    0    0    0    0    0    0    0    0    0    0
## 3676      1    0    0    0    0    0    0    0    0    0    0
## 3677      0    2    0    0    0    0    0    0    0    0    0
## 3678      3    0    0    0    0    0    0    0    0    0    0
## 3679      0    0    0    0    0    0    0    0    0    0    0
## 3680      0    0    0    0    0    0    0    0    0    0    0
## 3681      0    0    0    0    0    0    0    0    1    0    0
## 3682      0    0    0    0    0    0    0    0    0    0    0
## 3683      2    0    1    0    0    0    0    0    0    0    0
## 3684      0    0    0    0    0    0    0    0    2    0    0
## 3685      0    0    0    0    2    0    0    0    0    0    0
## 3686      0    0    0    0    0    0    2    0    0    0    0
## 3687      0    0    0    0    0    0    2    0    0    0    0
## 3688      0    1    1    0    0    0    0    0    0    0    0
## 3689      0    0    0    0    0    0    0    0    0    0    0
## 3690      0    0    0    0    0    0    0    0    0    0    0
## 3691      0    2    0    0    0    0    0    0    0    0    0
## 3692      0    0    0    0    0    0    0    0    0    0    0
## 3693      0    0    0    0    0    0    1    0    0    0    0
```

```
## 3694     0    3    0    0    0    0    0    0    0    0    0
## 3695     0    0    0    0    0    0    0    0    0    0    0
## 3696     0    0    0    0    0    0    2    0    0    0    0
## 3697     0    0    0    0    0    0    0    3    0    0    2
## 3698     0    0    0    1    0    0    0    0    0    0    0
## 3699     0    0    0    0    0    0    0    0    2    0    0
## 3700     0    0    0    0    0    0    0    0    2    0    0
## 3701     2    0    0    0    0    0    0    0    0    0    0
## 3702     0    0    0    0    0    0    0    2    0    0    0
## 3703     0    0    0    0    0    0    0    0    0    0    0
## 3704     0    0    0    0    2    0    0    0    0    0    0
## 3705     0    0    0    0    0    0    0    0    2    0    0
## 3706     0    0    0    1    0    0    0    0    0    0    0
## 3707     0    0    0    0    0    0    0    0    0    0    0
## 3708     0    0    0    0    0    0    0    0    0    0    0
## 3709     0    0    0    0    0    0    1    2    0    0    0
## 3710     0    0    0    0    0    0    2    0    0    0    0
## 3711     0    0    0    0    0    0    0    0    0    0    0
## 3712     0    0    0    0    0    0    2    0    0    0    0
## 3713     0    0    0    0    0    0    0    0    0    0    0
## 3714     0    0    0    0    0    0    0    2    0    0    0
## 3715     0    0    0    0    0    0    0    0    0    0    0
## 3716     0    0    0    0    0    0    0    0    0    0    0
## 3717     0    0    0    0    0    1    0    0    0    2    0
## 3718     0    0    0    0    0    0    0    3    0    0    0
## 3719     0    0    0    0    0    0    0    0    0    0    1
## 3720     0    0    0    0    0    0    0    0    0    0    0
## 3721     0    0    0    0    0    1    0    0    0    0    0
## 3722     0    0    0    0    0    0    0    0    0    0    0
## 3723     0    0    0    0    0    0    0    0    0    0    0
## 3724     0    1    0    0    0    0    0    0    0    0    0
## 3725     0    0    0    0    0    0    0    0    0    0    0
## 3726     0    0    0    0    0    2    0    0    0    0    0
## 3727     0    0    0    0    0    0    0    0    0    0    0
## 3728     0    2    0    0    0    0    0    0    0    0    0
## 3729     0    0    0    0    0    0    0    0    0    0    0
## 3730     0    0    0    0    0    0    0    0    0    0    0
## 3731     0    0    0    0    0    0    0    0    0    0    0
## 3732     0    0    0    0    0    0    0    0    0    0    0
## 3733     0    2    0    0    0    0    0    0    0    0    0
## 3734     0    1    1    0    0    0    0    0    0    0    0
## 3735     0    0    0    0    0    0    0    0    0    0    0
## 3736     0    0    0    0    0    0    0    0    0    0    0
## 3737     0    0    0    0    0    2    0    0    0    0    0
## 3738     0    0    0    0    0    0    2    0    0    0    0
## 3739     0    0    0    0    1    0    1    0    0    0    0
## 3740     0    0    0    0    0    0    0    0    0    0    0
## 3741     0    0    0    2    0    0    0    0    0    0    0
## 3742     0    0    0    0    0    1    0    0    0    0    0
## 3743     0    0    0    2    0    0    0    0    0    0    0
## 3744     0    0    0    0    0    0    0    0    0    0    0
## 3745     1    0    1    2    0    0    0    0    0    0    0
## 3746     0    2    0    0    0    0    0    0    0    0    0
## 3747     0    1    1    0    0    0    0    0    0    0    0
```

```
## 3748      0    0    0    0    0    0    1    0    0    0    0
## 3749      0    0    0    0    0    0    0    0    0    0    0
## 3750      0    0    0    0    0    2    0    0    0    0    0
## 3751      0    0    0    0    0    0    0    0    0    0    0
## 3752      0    0    0    0    0    0    0    0    0    0    1
## 3753      1    0    0    0    0    2    0    0    0    0    0
## 3754      0    0    0    0    0    0    0    0    2    0    0
## 3755      0    0    0    0    0    0    0    0    0    0    0
## 3756      0    0    1    0    0    0    0    0    0    0    0
## 3757      0    0    0    0    0    0    0    0    0    0    0
## 3758      0    0    0    1    0    0    0    0    0    0    0
## 3759      0    0    0    0    0    2    0    0    0    0    0
## 3760      0    0    0    0    0    0    0    2    0    0    0
## 3761      0    2    0    0    0    0    0    0    0    0    0
## 3762      0    0    0    0    3    0    0    0    0    1    0
## 3763      2    0    0    0    0    1    0    0    0    0    0
## 3764      0    1    0    2    0    0    0    0    0    0    1
## 3765      0    0    0    0    1    0    0    2    0    0    0
## 3766      0    0    0    0    1    1    0    0    0    0    0
## 3767      0    0    0    0    0    0    2    0    0    0    0
## 3768      0    0    0    0    0    0    2    0    0    0    0
## 3769      0    0    0    0    0    0    0    0    0    0    0
## 3770      0    0    0    1    0    0    0    0    0    0    0
## 3771      0    0    0    0    0    0    0    0    0    1    0
## 3772      0    0    0    0    0    0    0    0    0    0    0
## 3773      0    0    0    0    0    0    0    0    0    0    0
## 3774      1    0    2    0    0    0    1    0    0    0    0
## 3775      0    0    0    2    0    0    0    0    0    0    0
## 3776      0    2    0    0    0    0    0    0    0    0    0
## 3777      0    0    0    0    1    0    0    0    0    0    0
## 3778      0    0    0    0    0    0    0    0    0    0    0
## 3779      0    0    0    0    0    0    0    1    0    0    1
## 3780      0    0    0    2    0    0    0    0    0    0    0
## 3781      2    0    0    0    0    0    0    0    0    0    0
## 3782      1    0    0    0    0    0    0    0    0    0    0
## 3783      0    0    0    0    0    0    0    0    0    0    0
## 3784      0    0    0    0    0    0    2    0    0    0    0
## 3785      0    0    0    0    0    0    0    0    1    0    0
## 3786      0    0    0    0    0    1    0    0    0    0    0
## 3787      0    0    0    2    0    0    0    0    0    0    0
## 3788      0    0    0    0    1    0    0    0    0    0    0
## 3789      0    0    0    0    0    0    0    0    0    0    0
## 3790      0    0    0    0    0    0    0    0    0    0    0
## 3791      0    0    0    0    1    1    0    0    0    0    0
## 3792      0    0    0    0    0    2    0    0    0    0    0
## 3793      0    0    0    0    0    0    0    0    0    1    7
## 3794      0    0    0    0    0    0    0    0    0    0    0
## 3795      0    0    0    0    0    0    1    0    0    0    1
## 3796      0    0    0    0    0    2    0    0    0    0    0
## 3797      0    0    0    0    0    0    0    0    0    0    0
## 3798      0    0    0    0    0    0    0    0    0    0    0
## 3799      0    0    0    0    0    0    0    0    0    0    0
## 3800      0    1    0    0    0    0    0    0    0    0    0
## 3801      0    1    0    0    0    0    0    1    0    0    0
```

```
## 3802      0    0    0    0    0    0    0    0    0    0    0
## 3803      2    0    0    0    0    0    0    0    0    0    0
## 3804      0    0    0    0    0    0    0    0    0    0    1
## 3805      0    0    0    0    0    0    0    0    0    1    0
## 3806      0    0    0    0    0    0    0    0    0    0    0
## 3807      0    0    0    0    0    0    0    0    0    0    0
## 3808      0    0    0    0    0    0    0    0    0    0    2
## 3809      0    0    0    0    0    0    0    0    0    0    0
## 3810      0    0    1    0    3    0    0    0    0    0    0
## 3811      0    0    0    0    2    4    0    0    0    1    0
## 3812      0    0    0    0    0    0    0    0    0    0    0
## 3813      0    0    0    0    0    1    1    0    0    0    0
## 3814      0    0    0    0    0    0    0    0    0    0    0
## 3815      0    0    0    0    0    0    0    0    0    0    0
## 3816      0    0    0    0    0    0    0    0    3    0    0
## 3817      0    1    1    0    0    0    0    0    0    0    0
## 3818      0    0    0    1    0    0    0    0    0    0    0
## 3819      0    0    0    0    0    2    0    0    0    0    0
## 3820      1    0    0    0    0    1    0    0    0    0    0
## 3821      0    0    0    0    1    0    1    0    0    0    0
## 3822      0    0    0    0    0    0    0    0    0    0    0
## 3823      0    0    0    0    0    0    0    0    0    0    0
## 3824      0    0    0    0    0    0    1    2    0    0    0
## 3825      0    0    0    0    0    0    0    0    0    1    0
## 3826      0    0    0    0    0    0    0    2    0    0    0
## 3827      0    0    0    1    0    1    1    0    0    0    0
## 3828      0    0    0    0    0    0    0    0    0    1    0
## 3829      0    0    0    0    0    0    0    0    0    0    0
## 3830      0    0    0    0    0    0    0    0    0    0    0
## 3831      0    0    0    0    0    0    0    0    0    0    0
## 3832      0    0    0    0    0    0    2    0    0    0    0
## 3833      0    0    0    0    0    0    0    0    2    0    0
## 3834      0    0    0    0    0    0    0    0    0    0    0
## 3835      0    0    0    0    0    0    0    0    0    0    0
## 3836      0    0    0    0    0    0    1    0    0    0    0
## 3837      0    0    0    0    0    0    0    0    0    0    0
## 3838      0    0    0    0    0    2    0    0    0    0    0
## 3839      0    0    0    0    0    2    0    0    0    0    0
## 3840      0    0    0    0    0    0    0    0    0    0    0
## 3841      0    1    0    0    0    0    0    0    0    0    0
## 3842      0    0    0    0    0    0    0    0    0    0    0
## 3843      0    0    0    0    0    0    0    0    2    0    0
## 3844      0    0    0    0    0    0    0    0    0    0    2
## 3845      0    0    0    0    1    0    0    0    0    0    0
## 3846      0    2    0    0    0    0    0    0    0    0    0
## 3847      0    0    0    0    0    0    0    0    0    0    0
## 3848      0    0    0    0    0    0    0    0    0    0    0
## 3849      0    0    0    0    2    0    0    0    0    0    0
## 3850      0    0    0    0    0    0    0    0    0    0    0
## 3851      0    0    0    0    0    0    0    2    0    0    0
## 3852      1    1    0    2    0    0    0    0    0    0    0
## 3853      0    0    0    0    0    0    0    0    0    0    0
## 3854      0    0    0    2    0    0    0    0    0    0    0
## 3855      0    0    0    1    0    1    2    0    0    0    0
```

```
## 3856      0    0    0    0    0    0    1    0    0    0    0
## 3857      0    0    0    0    0    0    0    0    0    0    0
## 3858      0    2    0    0    0    0    0    0    0    0    0
## 3859      0    0    0    0    0    0    0    0    0    0    0
## 3860      0    0    0    0    0    0    0    0    0    0    0
## 3861      0    0    0    0    0    0    1    0    0    0    0
## 3862      1    1    0    0    0    0    0    0    0    0    0
## 3863      0    0    2    0    0    0    0    0    0    0    0
## 3864      0    0    0    0    2    0    0    0    0    0    0
## 3865      0    0    0    0    0    0    0    2    0    0    0
## 3866      0    0    2    0    0    0    0    0    0    0    0
## 3867      0    0    1    0    0    0    0    0    0    0    0
## 3868      0    0    2    0    0    0    0    0    0    0    0
## 3869      0    0    0    0    0    2    0    0    0    0    0
## 3870      0    0    0    1    0    0    1    0    0    0    0
## 3871      0    0    0    0    0    0    2    0    0    0    0
## 3872      0    0    0    2    0    0    0    0    0    0    0
## 3873      0    1    0    0    0    0    0    1    0    0    0
## 3874      0    0    0    0    3    0    0    0    0    0    0
## 3875      0    0    0    0    0    0    0    0    0    0    0
## 3876      0    0    0    0    1    0    1    4    0    0    0
## 3877      0    0    0    0    0    0    2    0    0    0    0
## 3878      0    0    0    0    0    0    0    0    0    0    0
## 3879      0    0    0    2    0    0    0    0    0    0    0
## 3880      4    0    0    1    2    0    0    0    0    0    0
## 3881      0    0    0    0    0    0    0    0    1    0    0
## 3882      0    0    0    1    1    0    0    1    0    1    0
## 3883      0    0    0    0    0    0    0    0    0    0    0
## 3884      0    0    0    0    0    0    0    0    0    2    0
## 3885      0    1    0    1    0    0    0    0    0    0    0
## 3886      0    0    0    0    0    0    0    0    1    1    0
## 3887      0    0    0    0    0    1    0    0    0    0    0
## 3888      0    0    0    2    0    0    0    0    0    0    0
## 3889      0    4    0    0    0    0    0    0    0    0    0
## 3890      1    1    0    0    0    0    0    0    0    0    0
## 3891      0    0    0    1    0    2    0    0    0    0    0
## 3892      0    0    0    0    0    0    0    0    0    0    0
## 3893      0    0    0    0    0    0    0    0    0    0    0
## 3894      0    0    0    0    0    0    0    0    0    0    0
## 3895      0    0    0    0    0    0    0    0    0    0    0
## 3896      0    0    0    0    0    0    0    0    0    0    0
## 3897      0    0    0    0    0    0    0    0    0    0    0
## 3898      0    0    0    0    0    0    0    0    0    0    2
## 3899      0    0    0    0    0    0    0    0    0    0    0
## 3900      0    0    0    0    0    2    0    0    0    0    0
## 3901      0    0    0    0    0    0    0    0    0    0    0
## 3902      1    0    2    1    0    0    0    0    0    0    0
## 3903      0    0    0    0    0    0    0    0    0    0    0
## 3904      0    0    0    0    0    0    0    0    0    0    0
## 3905      0    0    0    0    0    0    0    0    0    0    0
## 3906      0    0    0    0    0    0    0    0    0    0    0
## 3907      0    0    0    4    0    0    0    1    0    0    0
## 3908      0    0    0    0    0    0    0    0    0    0    0
## 3909      0    0    0    1    0    0    0    0    0    0    0
```

```
## 3910      0    0    0    0    0    0    0    0    0    0    0
## 3911      0    0    0    0    0    0    0    0    0    0    0
## 3912      0    0    0    0    0    0    0    0    0    0    1
## 3913      0    0    0    0    0    0    0    0    0    0    0
## 3914      0    0    0    0    0    0    0    0    0    0    0
## 3915      1    0    0    0    0    0    0    0    0    0    0
## 3916      0    0    0    0    0    0    0    0    0    2    1
## 3917      0    0    0    0    0    0    0    0    0    0    0
## 3918      0    0    0    2    0    0    1    1    0    0    0
## 3919      0    0    0    0    1    0    0    0    0    0    0
## 3920      0    0    0    0    0    0    1    0    0    0    0
## 3921      0    0    2    0    0    0    0    0    0    0    0
## 3922      0    0    0    0    0    0    0    0    0    0    2
## 3923      0    0    0    0    2    0    0    0    0    0    0
## 3924      0    0    0    0    0    0    0    1    0    0    0
## 3925      0    0    0    0    2    0    0    0    1    0    0
## 3926      0    0    0    2    0    0    0    0    0    0    0
## 3927      0    0    0    0    0    0    0    0    2    0    0
## 3928      2    1    0    0    0    0    0    0    0    0    0
## 3929      0    0    0    2    0    0    0    0    0    0    0
## 3930      0    2    0    0    0    0    0    0    0    0    0
## 3931      0    0    0    2    0    0    0    0    0    0    0
## 3932      0    0    0    0    0    0    0    0    0    0    0
## 3933      0    0    0    0    0    1    0    0    0    0    0
## 3934      0    0    0    0    0    0    0    0    2    0    0
## 3935      0    0    0    0    0    0    0    0    0    0    0
## 3936      0    0    0    0    0    0    0    0    0    0    0
## 3937      0    0    0    0    0    0    0    0    0    2    0
## 3938      0    0    0    0    0    0    0    0    0    0    0
## 3939      0    0    0    0    0    2    0    0    0    0    0
## 3940      1    2    2    0    0    0    0    0    0    0    0
## 3941      0    0    0    0    0    0    0    0    0    0    0
## 3942      0    0    0    0    0    0    0    2    0    0    0
## 3943      0    0    0    0    0    0    0    0    0    0    0
## 3944      0    0    0    0    0    0    0    0    0    1    0
## 3945      0    0    0    0    0    0    0    0    0    0    0
## 3946      0    0    0    0    0    0    0    0    0    0    0
## 3947      0    0    0    1    0    0    0    0    0    0    0
## 3948      0    0    0    0    0    0    0    0    0    0    0
## 3949      0    0    2    0    0    0    0    0    0    0    0
## 3950      0    0    0    1    0    1    0    0    0    0    0
## 3951      0    0    0    0    0    0    0    0    0    0    0
## 3952      0    0    0    0    1    1    0    0    0    0    0
## 3953      0    0    0    0    0    0    0    0    0    0    0
## 3954      0    0    0    0    0    0    0    0    0    0    0
## 3955      0    0    0    0    0    0    0    0    0    0    0
## 3956      0    0    0    0    0    0    0    0    0    0    0
## 3957      0    0    0    0    2    0    0    0    0    0    0
## 3958      0    0    0    0    0    0    0    0    2    0    0
## 3959      0    0    0    0    0    0    2    0    0    0    0
## 3960      0    0    0    0    0    0    0    2    0    0    0
## 3961      0    0    0    0    0    0    1    0    0    0    0
## 3962      0    0    0    0    0    0    0    0    0    0    0
## 3963      0    0    0    0    0    0    0    1    0    0    0
```

```
## 3964      0    0    0    0    0    0    0    0    0    0    0
## 3965      0    1    0    2    0    0    0    0    0    0    0
## 3966      0    0    0    2    0    0    0    0    0    0    0
## 3967      0    2    0    0    0    0    0    0    0    0    0
## 3968      1    0    0    0    0    0    0    0    0    0    1
## 3969      0    0    0    0    1    0    0    0    0    0    0
## 3970      0    0    0    0    1    0    0    0    1    0    0
## 3971      0    0    0    0    0    0    2    0    0    0    0
## 3972      0    0    0    0    0    0    3    1    0    0    0
## 3973      0    0    0    0    2    0    0    0    0    0    0
## 3974      0    0    0    0    0    0    0    0    4    0    0
## 3975      0    1    2    0    0    0    0    0    0    0    0
## 3976      0    0    0    0    0    0    0    0    0    0    0
## 3977      0    0    0    0    0    0    0    0    0    0    0
## 3978      0    0    0    0    0    0    0    3    0    0    0
## 3979      0    0    0    0    0    0    2    0    0    0    0
## 3980      0    0    0    0    0    0    0    0    3    0    0
## 3981      0    0    0    0    0    0    0    1    0    0    0
## 3982      0    0    0    0    0    2    0    0    0    0    0
## 3983      0    0    0    0    1    0    2    0    0    0    0
## 3984      0    0    0    0    0    0    0    0    0    0    0
## 3985      0    0    0    0    0    0    1    0    0    0    0
## 3986      1    0    0    0    0    0    1    0    0    0    0
## 3987      0    0    0    1    1    0    0    0    0    0    0
## 3988      1    0    0    0    0    0    0    0    0    0    0
## 3989      0    0    0    0    0    0    0    0    0    0    0
## 3990      0    0    0    3    0    0    0    0    0    0    0
## 3991      0    0    0    0    0    0    0    0    1    2    1
## 3992      1    1    0    0    0    0    0    0    0    0    0
## 3993      0    0    0    0    0    0    1    0    0    0    0
## 3994      0    0    0    1    0    0    1    1    0    0    0
## 3995      0    0    0    0    0    0    0    2    0    0    0
## 3996      0    0    0    0    0    0    0    0    0    0    0
## 3997      1    1    0    0    0    0    0    0    0    0    0
## 3998      0    0    0    0    0    0    0    0    0    0    0
## 3999      0    0    0    1    1    1    0    1    0    0    0
## 4000      0    0    0    0    0    0    0    2    0    0    0
## 4001      0    0    0    1    1    1    0    1    0    0    0
## 4002      1    0    0    0    0    0    0    0    0    0    0
## 4003      0    2    0    0    0    0    0    0    0    0    0
## 4004      0    0    0    0    0    0    2    0    0    0    0
## 4005      0    0    1    0    0    0    0    0    0    0    0
## 4006      0    0    0    0    0    0    0    0    0    0    0
## 4007      0    0    0    0    0    0    0    0    0    0    0
## 4008      0    0    0    0    0    0    0    0    0    0    0
## 4009      0    0    0    0    0    0    0    0    0    0    0
## 4010      0    0    0    0    0    0    0    0    0    0    2
## 4011      0    0    0    0    0    0    0    0    0    0    0
## 4012      0    0    0    0    0    0    0    0    2    0    0
## 4013      0    0    0    0    0    0    0    0    0    0    0
## 4014      0    0    0    0    0    0    0    0    0    0    0
## 4015      0    2    0    0    0    0    0    0    0    0    0
## 4016      0    0    0    0    0    0    0    0    0    2    0
## 4017      0    0    0    0    0    0    2    0    0    0    0
```

```
## 4018     0     0     0     0     0     0     0     0     0     0     0
## 4019     0     0     0     0     0     0     0     3     0     0     0
## 4020     0     0     0     0     0     0     0     0     0     0     0
## 4021     0     0     0     0     1     0     2     0     0     0     0
## 4022     0     0     1     1     0     0     0     0     0     0     0
## 4023     0     0     0     0     0     0     0     0     0     0     0
## 4024     0     0     0     0     0     0     0     0     0     0     0
## 4025     0     0     0     0     0     0     2     0     0     0     0
## 4026     0     0     0     0     0     0     0     1     0     0     0
## 4027     0     0     0     0     0     0     0     0     0     0     0
## 4028     0     0     0     0     2     0     0     0     0     2     0
## 4029     0     0     1     0     1     2     0     0     0     0     0
## 4030     0     0     0     0     0     0     0     0     0     0     0
## 4031     0     0     0     0     0     0     0     0     0     0     0
## 4032     0     0     0     0     0     0     0     0     0     0     0
## 4033     0     1     0     0     0     0     0     0     0     0     0
## 4034     0     0     0     0     0     0     0     0     0     0     0
## 4035     0     0     0     0     0     0     1     0     0     0     0
## 4036     0     0     0     0     0     0     0     0     0     0     0
## 4037     0     0     0     0     0     0     0     0     0     0     0
## 4038     0     0     0     0     0     0     0     0     3     2     0
## 4039     0     0     0     0     0     3     0     0     0     0     0
## 4040     0     0     1     0     0     0     0     0     0     0     0
## 4041     0     0     2     0     0     0     0     0     0     0     0
## 4042     0     0     0     1     0     1     0     0     0     0     0
## 4043     0     0     0     0     0     0     0     1     0     0     1
## 4044     0     0     0     0     0     0     0     0     0     0     0
## 4045     2     0     0     0     0     0     0     0     0     0     0
## 4046     0     0     0     0     1     0     0     0     0     0     0
## 4047     0     0     0     1     0     0     0     0     0     0     0
## 4048     0     0     0     0     0     0     1     0     0     1     0
## 4049     0     0     0     0     0     0     0     0     0     0     0
## 4050     0     0     0     1     0     0     0     0     0     0     0
## 4051     1     0     0     0     0     0     0     0     0     0     0
## 4052     0     1     0     0     0     0     0     0     0     0     0
## 4053     0     0     0     0     0     0     0     0     1     1     2
## 4054     0     0     0     0     0     0     0     0     0     0     0
## 4055     0     0     0     2     0     0     0     0     0     0     0
## 4056     0     0     0     0     0     0     0     0     2     0     0
## 4057     0     1     1     0     0     0     0     0     1     0     0
## 4058     0     0     0     1     0     0     0     0     0     0     0
## 4059     0     2     0     1     1     0     0     0     0     0     0
## 4060     0     0     0     0     0     0     0     0     0     0     1
## 4061     0     0     0     0     0     0     0     0     0     0     0
## 4062     0     0     0     0     0     0     0     0     0     0     0
## 4063     0     0     0     0     0     0     0     0     0     0     0
## 4064     0     0     0     2     0     0     0     1     0     0     0
## 4065     0     0     0     0     2     0     0     0     1     0     0
## 4066     0     0     0     2     0     0     0     0     0     0     0
## 4067     0     0     0     0     0     1     0     0     0     0     0
## 4068     0     0     0     0     0     0     0     0     0     0     0
## 4069     1     0     0     1     0     0     0     0     0     0     0
## 4070     0     0     0     0     0     0     0     0     2     0     0
## 4071     0     0     0     0     0     0     0     0     3     0     0
```

```
## 4072      0    0    0    0    0    0    0    4    0    0    0
## 4073      0    0    0    1    0    2    0    0    0    0    0
## 4074      0    0    0    0    0    0    1    0    0    0    1
## 4075      0    0    0    0    0    1    0    0    0    0    0
## 4076      0    0    0    0    0    0    0    2    0    0    1
## 4077      0    0    0    0    2    0    0    0    0    0    0
## 4078      0    0    0    0    0    0    0    0    0    2    0
## 4079      0    0    0    0    0    0    0    0    3    0    0
## 4080      0    0    0    0    0    0    0    0    0    0    0
## 4081      0    1    0    0    0    0    1    0    0    0    0
## 4082      0    0    0    0    0    0    0    1    0    0    0
## 4083      0    0    0    0    0    0    0    0    0    0    0
## 4084      0    0    0    1    0    0    0    2    0    0    0
## 4085      0    0    2    0    0    0    0    0    0    0    0
## 4086      0    0    0    0    0    0    0    0    0    0    0
## 4087      0    0    0    0    0    0    0    0    0    0    0
## 4088      0    0    0    0    0    0    0    0    0    0    0
## 4089      0    0    0    0    0    0    0    0    0    0    0
## 4090      0    0    1    0    0    0    0    0    0    0    0
## 4091      0    1    0    0    0    0    1    0    0    3    2
## 4092      0    0    0    0    0    0    2    1    0    0    0
## 4093      0    1    0    0    0    0    0    0    0    0    0
## 4094      2    0    0    0    0    0    0    0    0    0    0
## 4095      0    0    0    0    0    0    0    0    0    0    0
## 4096      0    0    0    0    0    0    0    0    0    0    0
## 4097      0    0    0    0    1    0    0    0    0    0    0
## 4098      0    0    0    2    0    0    0    0    0    0    0
## 4099      0    0    0    0    0    0    0    0    0    0    0
## 4100      0    0    1    0    0    0    0    0    0    0    0
## 4101      0    0    0    0    0    0    1    0    0    1    0
## 4102      0    0    0    0    0    0    0    0    0    0    1
## 4103      0    0    0    0    0    0    0    0    0    2    0
## 4104      0    0    0    0    0    0    0    0    0    0    0
## 4105      0    0    0    0    0    0    0    0    0    2    0
## 4106      0    0    2    0    0    0    0    0    0    0    0
## 4107      2    0    0    0    0    1    0    0    0    0    0
## 4108      0    1    0    0    0    0    0    0    0    0    0
## 4109      1    1    0    0    0    0    0    0    0    0    0
## 4110      0    0    0    0    0    0    0    0    0    1    0
## 4111      0    0    0    0    0    0    2    0    0    0    0
## 4112      0    0    0    2    0    0    0    0    0    0    0
## 4113      0    0    0    0    0    0    0    0    0    1    0
## 4114      0    0    0    0    0    0    0    0    0    0    0
## 4115      0    0    0    0    2    0    0    0    0    0    0
## 4116      2    0    0    0    0    2    1    0    0    0    0
## 4117      0    0    0    0    0    0    0    0    0    0    0
## 4118      0    0    0    0    0    0    0    0    0    0    0
## 4119      0    0    0    0    0    0    0    0    0    0    0
## 4120      0    0    0    0    0    0    0    0    0    2    0
## 4121      0    0    0    0    0    0    0    0    0    0    0
## 4122      0    0    0    0    0    0    0    0    0    1    0
## 4123      0    0    0    0    0    0    0    0    0    0    0
## 4124      0    0    0    0    2    0    0    0    0    0    0
## 4125      0    0    0    0    0    0    3    0    0    0    0
```

```
## 4126      0    0    0    0    0    0    0    0    0    1    0
## 4127      0    0    0    0    0    0    0    0    0    0    0
## 4128      0    0    0    0    0    0    0    0    0    0    0
## 4129      0    0    0    0    0    0    0    0    0    0    0
## 4130      0    0    0    1    0    0    1    0    0    0    0
## 4131      0    0    0    0    1    1    0    0    0    0    0
## 4132      0    0    0    0    0    0    2    0    0    0    0
## 4133      0    0    0    0    0    0    0    0    0    2    0
## 4134      0    0    0    2    0    0    0    0    0    0    0
## 4135      0    2    0    2    0    0    0    0    0    0    0
## 4136      0    0    0    0    2    0    0    0    0    0    0
## 4137      0    0    0    0    0    0    0    0    0    0    0
## 4138      0    0    0    0    0    0    0    2    0    0    0
## 4139      0    0    0    0    1    0    1    1    0    0    1
## 4140      0    0    0    1    5    1    0    0    0    2    0
## 4141      0    0    0    1    1    0    0    0    0    1    1
## 4142      0    0    0    0    0    0    0    0    0    0    0
## 4143      0    0    0    0    0    0    0    0    0    0    0
## 4144      0    0    0    2    0    0    0    0    0    0    0
## 4145      0    0    2    0    0    0    0    0    0    0    0
## 4146      0    0    0    1    0    2    0    0    0    1    0
## 4147      0    0    0    0    0    0    1    0    0    0    0
## 4148      0    2    0    0    0    0    0    0    0    0    0
## 4149      0    0    0    0    0    0    0    0    0    0    0
## 4150      0    0    0    0    0    0    0    0    0    0    2
## 4151      0    0    0    0    0    0    0    0    0    0    0
## 4152      0    0    0    0    0    0    0    0    0    0    0
## 4153      0    0    0    0    0    0    0    0    0    1    0
## 4154      1    0    0    0    0    0    0    0    0    0    0
## 4155      0    0    0    0    0    0    0    0    0    1    0
## 4156      0    0    0    2    0    0    0    0    0    0    0
## 4157      0    0    0    0    0    0    0    1    0    0    0
## 4158      0    0    0    0    2    0    0    0    0    0    0
## 4159      0    0    0    0    0    0    0    0    0    0    0
## 4160      0    0    0    0    0    0    0    0    0    0    0
## 4161      0    2    0    0    0    0    0    0    0    0    0
## 4162      0    0    0    0    0    0    0    0    1    0    0
## 4163      0    0    0    1    0    0    0    0    0    0    0
## 4164      0    0    0    0    0    0    0    0    1    1    0
## 4165      0    0    0    0    0    0    0    2    0    1    0
## 4166      0    0    0    0    0    0    0    0    0    0    0
## 4167      0    0    0    0    0    0    0    0    4    0    0
## 4168      1    0    0    0    1    1    0    0    0    0    0
## 4169      2    0    0    0    0    0    0    0    0    0    0
## 4170      0    0    2    0    0    0    0    0    0    0    0
## 4171      0    0    0    0    0    0    0    0    0    0    0
## 4172      0    0    1    0    0    0    0    0    0    0    0
## 4173      0    0    0    0    0    0    0    0    2    0    0
## 4174      0    0    0    0    0    0    1    0    0    0    0
## 4175      0    0    0    0    0    0    0    0    0    0    0
## 4176      0    0    0    0    2    2    1    2    0    1    0
## 4177      0    0    0    0    0    0    0    0    0    2    0
## 4178      0    0    0    0    0    0    0    0    0    0    0
## 4179      0    0    0    0    0    0    2    0    0    0    0
```

```
## 4180    0    0    0    0    1    0    0    0    0    0    0
## 4181    0    0    0    1    0    0    0    0    0    0    0
## 4182    0    0    0    0    0    0    0    0    0    0    0
## 4183    0    0    0    0    0    0    0    0    2    0    0
## 4184    0    0    0    0    0    2    0    0    0    1    0
## 4185    0    1    2    0    0    0    0    0    0    0    0
## 4186    0    0    0    0    0    0    2    0    0    0    0
## 4187    0    0    0    0    0    0    0    0    0    0    0
## 4188    0    0    0    0    0    0    0    0    0    0    0
## 4189    0    1    0    0    0    0    0    0    0    0    0
## 4190    0    0    0    1    0    0    0    0    0    0    0
## 4191    0    0    0    0    0    0    0    0    3    0    0
## 4192    0    0    0    0    0    0    2    0    0    0    0
## 4193    0    0    0    0    0    0    1    0    1    0    0
## 4194    0    1    0    0    0    0    0    0    0    2    0
## 4195    0    0    0    0    0    0    0    0    1    0    2
## 4196    0    0    0    0    0    0    0    1    0    0    1
## 4197    0    0    0    0    0    0    0    0    0    0    0
## 4198    0    0    0    0    0    0    0    0    0    1    1
## 4199    0    0    0    0    0    0    0    1    2    0    0
## 4200    0    0    0    0    0    0    0    0    0    0    0
## 4201    0    0    0    0    0    0    0    0    0    0    0
## 4202    0    0    0    0    0    0    0    0    0    0    0
## 4203    0    0    0    0    0    0    0    0    0    0    0
## 4204    0    0    0    0    0    0    0    0    0    0    0
## 4205    0    0    0    0    0    2    0    0    0    0    0
## 4206    0    0    0    0    0    0    0    0    0    0    0
## 4207    0    0    0    0    0    0    0    0    0    0    0
## 4208    0    0    0    0    0    3    0    0    0    0    0
## 4209    0    2    0    0    1    0    0    0    0    0    0
## 4210    0    0    0    0    0    0    0    0    0    0    0
## 4211    0    0    0    0    0    0    2    0    0    0    0
## 4212    0    0    0    0    0    0    2    0    0    0    0
## 4213    0    0    0    0    0    0    0    0    0    0    0
## 4214    0    0    0    0    0    0    0    0    0    0    0
## 4215    0    0    0    0    0    2    0    0    0    0    0
## 4216    0    2    0    0    0    0    0    0    0    0    0
## 4217    0    0    0    0    0    0    0    0    0    0    0
## 4218    0    0    1    0    2    0    0    0    0    0    0
## 4219    0    0    0    0    0    0    0    0    1    0    2
## 4220    0    0    0    0    0    0    0    0    0    0    0
## 4221    0    0    0    0    0    0    0    0    0    0    0
## 4222    0    0    0    0    0    0    0    0    0    0    0
## 4223    0    0    0    0    1    0    0    0    0    0    0
## 4224    0    0    0    0    0    0    0    0    0    0    0
## 4225    1    1    0    0    0    0    0    0    0    0    0
## 4226    1    0    0    0    0    0    0    0    0    0    0
## 4227    0    0    0    0    2    0    0    1    0    0    0
## 4228    0    0    0    0    0    0    0    0    0    0    2
## 4229    0    0    0    0    0    0    0    0    0    2    0
## 4230    0    0    0    1    0    0    0    0    0    0    0
## 4231    0    0    0    0    0    0    0    0    0    0    0
## 4232    0    0    0    0    0    0    1    0    0    0    0
## 4233    0    0    0    0    0    0    0    0    0    0    0
```

```
## 4234    1    0    0    0    0    0    0    0    0    0    0
## 4235    0    0    0    0    0    0    0    0    0    0    0
## 4236    0    0    0    0    0    0    4    0    0    0    0
## 4237    0    0    0    0    0    0    0    0    0    0    0
## 4238    0    0    0    2    0    0    0    0    0    0    0
## 4239    0    1    0    1    0    0    0    0    0    0    0
## 4240    0    2    0    0    0    0    0    0    0    0    0
## 4241    0    0    0    1    0    2    0    0    0    0    0
## 4242    0    0    0    0    0    0    0    0    0    0    0
## 4243    2    0    0    0    0    0    0    0    0    0    0
## 4244    0    0    0    0    0    0    2    0    1    0    0
## 4245    0    0    0    0    0    0    0    0    0    0    0
## 4246    0    0    0    0    0    0    0    0    0    0    0
## 4247    0    0    0    0    0    0    0    0    0    2    0
## 4248    0    0    0    0    2    0    0    0    0    0    0
## 4249    0    0    0    0    0    0    0    0    0    3    0
## 4250    0    0    0    0    0    0    0    0    0    0    1
## 4251    0    0    0    0    0    0    0    0    0    0    0
## 4252    0    0    0    0    0    0    0    0    0    0    0
## 4253    0    2    0    1    0    0    0    0    0    0    0
## 4254    0    0    0    1    0    1    0    0    0    0    0
## 4255    3    0    0    2    0    0    0    0    0    0    0
## 4256    0    0    0    0    0    0    0    0    0    0    0
## 4257    0    0    0    0    1    0    1    0    0    0    0
## 4258    0    0    0    1    0    0    0    0    0    0    0
## 4259    0    0    0    0    0    0    2    0    0    0    0
## 4260    0    0    0    0    1    0    0    1    0    1    0
## 4261    0    0    0    0    0    0    0    4    0    0    0
## 4262    0    0    0    0    0    0    0    0    0    0    0
## 4263    0    0    0    0    0    0    0    0    0    0    0
## 4264    4    0    0    0    0    0    0    0    0    0    0
## 4265    0    0    0    0    2    0    0    0    0    0    0
## 4266    0    0    0    2    0    0    0    0    0    0    0
## 4267    0    1    0    0    0    0    1    0    0    0    0
## 4268    0    0    0    0    0    2    0    0    0    0    0
## 4269    1    0    0    0    0    0    0    0    0    0    0
## 4270    0    0    0    0    0    0    5    0    0    0    0
## 4271    0    0    0    0    0    0    0    0    0    0    0
## 4272    0    2    0    0    0    0    0    0    0    0    0
## 4273    0    0    0    0    0    0    0    0    0    0    0
## 4274    0    0    2    0    0    0    0    0    0    0    0
## 4275    0    0    0    0    1    0    3    0    0    0    0
## 4276    0    0    0    0    0    0    0    0    0    0    0
## 4277    0    0    1    0    0    0    0    0    0    0    0
## 4278    0    0    0    0    0    0    2    0    0    0    1
## 4279    0    0    0    0    0    0    0    0    0    0    0
## 4280    0    0    0    0    0    0    0    0    2    1    0
## 4281    0    0    0    0    0    0    2    2    0    0    0
## 4282    2    0    0    0    0    0    0    0    0    0    0
## 4283    0    2    0    0    0    0    0    0    0    0    0
## 4284    0    0    0    0    0    0    0    0    2    1    0
## 4285    0    0    1    0    0    1    0    0    0    0    0
## 4286    0    0    0    0    0    0    0    0    0    0    0
## 4287    2    1    0    0    1    0    0    0    0    0    0
```

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```
## 4288     0     0     0     0     0     3     0     0     0     0     0
## 4289     0     2     0     0     0     0     0     0     0     0     1
## 4290     0     0     0     0     0     0     0     0     0     2     0
## 4291     0     0     0     2     0     0     0     0     0     0     0
## 4292     0     0     0     0     0     0     0     0     2     0     0
## 4293     0     0     0     0     0     0     0     6     0     0     0
## 4294     0     0     0     0     0     0     0     0     0     0     0
## 4295     0     0     0     0     0     0     0     2     0     0     0
## 4296     1     0     1     0     0     0     0     0     0     0     0
## 4297     0     0     0     0     0     0     0     2     0     0     0
## 4298     0     0     0     0     0     0     0     0     0     0     0
## 4299     0     0     0     0     0     0     0     0     0     0     0
## 4300     0     0     0     0     0     0     0     0     2     0     0
## 4301     0     0     0     0     0     0     0     0     0     0     0
## 4302     0     0     0     0     0     0     0     0     0     0     0
## 4303     0     0     0     0     0     3     0     0     0     0     0
## 4304     0     0     0     0     0     0     0     0     0     0     0
## 4305     0     0     0     0     2     0     0     0     0     0     0
## 4306     0     0     0     0     0     0     0     0     0     0     0
## 4307     0     0     0     0     1     0     1     0     0     0     0
## 4308     0     0     0     0     0     0     1     0     0     0     0
## 4309     0     0     2     0     0     0     0     0     0     0     0
## 4310     0     0     0     0     0     0     0     0     0     0     0
## 4311     1     1     0     0     0     0     1     0     0     0     0
## 4312     0     0     0     0     0     0     0     0     0     0     0
## 4313     0     0     0     1     0     0     0     0     0     0     0
## 4314     0     2     0     1     0     0     0     0     0     0     0
## 4315     0     0     0     0     0     0     0     0     1     0     0
## 4316     0     0     0     0     0     0     0     2     0     0     0
## 4317     2     0     0     0     0     2     0     0     0     0     0
## 4318     0     0     0     0     0     0     0     0     0     0     0
## 4319     0     0     0     1     1     0     0     0     0     0     0
## 4320     0     0     0     0     0     0     2     0     0     0     0
## 4321     0     0     0     0     0     0     0     0     0     0     0
## 4322     0     0     0     0     0     0     0     0     0     0     0
## 4323     0     0     0     0     0     0     0     0     0     0     0
## 4324     0     0     0     0     0     0     0     0     0     0     0
## 4325     0     0     0     0     0     0     0     0     0     0     0
## 4326     0     0     0     0     0     1     0     0     0     0     0
## 4327     0     0     0     0     0     0     0     0     0     0     0
## 4328     0     0     0     0     0     0     2     1     0     0     0
## 4329     0     0     0     0     0     0     0     1     2     0     0
## 4330     0     0     1     0     0     0     0     0     0     0     0
## 4331     0     0     0     0     0     0     0     0     0     0     0
## 4332     0     0     0     0     0     0     0     0     0     0     0
## 4333     0     0     0     0     0     0     0     0     2     0     0
## 4334     0     2     0     0     0     0     0     0     0     0     0
## 4335     0     0     0     0     0     0     0     0     0     0     0
## 4336     2     0     0     0     0     0     0     0     0     0     0
## 4337     0     0     0     0     0     0     0     0     0     0     0
## 4338     0     0     0     0     0     0     0     0     0     0     0
## 4339     0     0     0     0     0     0     0     0     0     0     0
## 4340     0     0     0     1     0     0     0     0     0     0     0
## 4341     0     0     0     0     0     0     0     0     0     0     0
```

```
## 4342      0    0    0    0    0    0    0    0    0    0    0
## 4343      0    0    0    0    0    0    0    0    0    0    0
## 4344      0    0    0    0    0    0    0    0    0    0    0
## 4345      0    0    0    0    1    0    0    0    0    2    0
## 4346      0    0    2    0    0    0    0    0    0    0    0
## 4347      0    0    0    0    0    0    0    0    0    0    0
## 4348      0    0    0    0    0    0    0    0    0    0    0
## 4349      0    0    0    0    0    0    1    1    0    0    0
## 4350      0    0    0    2    0    0    0    0    0    0    0
## 4351      2    0    0    0    0    0    0    0    0    0    0
## 4352      0    0    0    0    0    0    0    0    1    0    0
## 4353      0    0    0    0    0    0    0    0    0    0    0
## 4354      0    0    0    0    0    0    1    1    0    0    0
## 4355      0    0    0    0    0    3    0    0    0    0    0
## 4356      0    0    0    2    0    2    1    2    0    0    0
## 4357      0    0    0    1    0    0    0    0    0    0    0
## 4358      0    0    0    0    0    0    1    0    0    0    0
## 4359      0    0    0    0    0    0    0    0    0    0    0
## 4360      0    0    0    0    0    0    0    0    0    0    0
## 4361      0    0    0    0    0    0    0    0    0    0    0
## 4362      0    0    0    0    0    0    0    0    0    0    0
## 4363      0    0    0    1    0    2    0    0    0    0    0
## 4364      0    0    0    0    0    0    0    0    0    0    0
## 4365      0    0    0    0    0    0    2    0    0    0    0
## 4366      0    0    0    0    0    2    0    0    0    0    0
## 4367      0    0    0    0    0    0    0    0    0    0    0
## 4368      0    0    0    0    3    0    0    0    0    0    0
## 4369      0    0    0    0    0    1    0    0    1    0    0
## 4370      2    0    0    0    0    0    0    0    0    0    0
## 4371      0    0    0    0    0    0    0    0    0    0    0
## 4372      0    0    0    0    0    0    0    0    0    0    2
## 4373      0    0    0    0    0    0    0    0    0    0    0
## 4374      0    2    0    0    0    0    0    0    0    0    0
## 4375      0    0    0    0    0    0    0    0    0    0    0
## 4376      0    0    0    0    0    0    0    0    3    0    0
## 4377      0    0    0    0    0    0    0    0    0    0    0
## 4378      0    0    0    0    0    0    0    0    0    0    0
## 4379      2    0    0    0    0    0    0    0    0    0    0
## 4380      0    2    0    0    0    0    0    0    0    0    0
## 4381      0    0    0    0    0    3    0    0    0    0    0
## 4382      0    0    0    0    0    0    0    0    0    0    0
## 4383      0    0    0    0    0    0    0    0    0    0    2
## 4384      0    0    0    0    2    0    0    0    0    0    0
## 4385      0    0    0    0    0    2    0    0    0    0    0
## 4386      0    0    0    0    0    0    1    0    0    0    0
## 4387      0    0    0    0    0    0    0    0    0    0    0
## 4388      0    0    0    0    0    0    0    0    0    0    0
## 4389      0    0    0    0    0    0    1    1    1    0    0
## 4390      0    0    0    0    0    1    0    0    0    0    0
## 4391      0    1    1    0    0    0    0    0    0    0    0
## 4392      1    0    3    0    0    0    0    0    0    0    0
## 4393      0    0    0    2    0    0    0    0    0    0    0
## 4394      0    0    0    0    0    0    0    0    0    0    0
## 4395      0    0    0    0    0    0    2    0    0    0    0
```

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```
## 4396    0    0    0    1    0    2    0    0    0    0    0
## 4397    0    0    0    0    0    0    0    2    0    0    0
## 4398    0    0    0    0    0    0    0    0    0    0    0
## 4399    0    0    0    0    0    0    0    0    0    0    0
## 4400    1    1    0    0    0    0    0    0    0    0    0
## 4401    0    0    0    0    0    0    1    0    0    0    0
## 4402    0    0    0    0    0    0    0    0    0    0    0
## 4403    3    0    0    0    0    0    0    0    0    0    0
## 4404    0    0    0    0    0    0    0    0    0    0    0
## 4405    0    0    0    0    0    0    2    0    0    0    0
## 4406    0    0    0    0    0    0    0    0    0    0    0
## 4407    0    0    0    0    0    0    0    0    0    0    0
## 4408    0    0    0    0    0    0    2    0    0    0    0
## 4409    0    0    0    0    0    0    1    0    0    2    2
## 4410    0    1    1    0    0    0    0    0    0    0    0
## 4411    0    0    0    2    0    0    0    0    0    0    0
## 4412    0    0    0    0    0    0    0    0    0    0    0
## 4413    0    0    0    0    0    0    0    0    0    0    0
## 4414    0    0    2    0    0    0    0    0    0    0    0
## 4415    0    0    0    0    0    0    0    0    0    0    0
## 4416    0    2    1    0    0    0    0    0    0    0    0
## 4417    0    0    0    0    0    0    0    0    0    0    0
## 4418    0    0    0    0    0    0    0    1    0    0    3
## 4419    0    0    0    0    0    0    2    0    0    0    0
## 4420    0    0    1    4    0    0    0    0    0    0    0
## 4421    0    0    0    0    0    0    0    0    0    0    0
## 4422    0    0    0    0    0    0    0    1    0    0    0
## 4423    0    1    0    0    0    0    0    0    0    0    0
## 4424    0    0    0    0    0    0    0    0    1    1    0
## 4425    0    0    2    0    0    0    0    0    0    0    0
## 4426    0    0    0    2    2    0    0    0    0    0    0
## 4427    0    0    0    0    0    0    0    0    0    1    0
## 4428    0    0    0    0    0    0    0    0    0    0    0
## 4429    2    0    0    0    0    0    0    0    0    0    0
## 4430    0    0    0    0    0    0    2    0    0    0    0
## 4431    0    0    0    0    0    0    0    0    2    0    0
## 4432    0    0    0    1    0    0    0    0    0    0    0
## 4433    0    0    0    0    0    0    0    0    0    0    0
## 4434    0    0    0    0    0    0    0    0    0    0    0
## 4435    0    0    0    0    0    0    0    0    0    0    0
## 4436    0    0    0    0    0    0    0    0    0    0    0
## 4437    0    0    0    0    0    0    0    0    0    0    0
## 4438    0    0    0    0    0    0    0    0    0    0    0
## 4439    0    0    0    0    0    0    0    0    0    2    0
## 4440    0    0    0    0    0    2    0    0    0    0    0
## 4441    0    0    0    0    0    0    0    0    2    0    0
## 4442    0    0    0    0    0    0    0    0    0    0    0
## 4443    0    0    0    0    0    0    0    0    0    0    0
## 4444    0    0    0    0    0    0    0    0    0    0    1
## 4445    0    0    0    0    0    3    0    0    0    0    0
## 4446    0    0    0    0    0    0    0    0    0    0    0
## 4447    0    0    0    0    0    0    0    0    0    0    0
## 4448    0    1    0    0    0    0    0    0    0    0    0
## 4449    0    0    0    0    1    0    0    0    0    0    0
```

```
## 4450     0     0     0     1     1     0     0     0     0     0     0
## 4451     2     0     0     0     0     1     0     0     0     0     0
## 4452     0     0     0     0     0     0     0     0     0     0     0
## 4453     2     0     0     0     0     0     0     0     0     0     0
## 4454     0     0     0     0     0     2     1     0     0     0     0
## 4455     0     0     1     2     0     0     0     0     0     0     0
## 4456     0     0     0     2     0     0     0     0     0     0     0
## 4457     2     0     1     0     0     0     0     0     0     0     0
## 4458     0     0     0     0     0     0     0     0     0     0     0
## 4459     0     0     0     0     0     0     0     0     0     1     0
## 4460     0     0     0     0     0     0     0     2     0     0     0
## 4461     0     0     0     1     0     0     0     0     2     0     0
## 4462     0     0     0     0     1     0     0     0     0     0     0
## 4463     0     0     0     0     0     0     2     0     0     0     0
## 4464     0     0     0     0     0     0     0     0     0     0     0
## 4465     1     2     0     0     0     0     0     0     0     0     0
## 4466     0     0     0     0     0     0     2     0     0     0     0
## 4467     0     0     0     0     3     0     1     2     3     1     0
## 4468     0     0     0     0     0     0     0     0     0     0     0
## 4469     0     0     0     0     0     0     0     2     0     0     0
## 4470     0     0     0     0     0     0     1     0     0     0     1
## 4471     0     1     0     0     0     0     0     0     0     0     0
## 4472     0     0     0     0     0     0     0     0     0     0     0
## 4473     0     0     0     0     0     0     0     0     0     0     0
## 4474     0     0     2     0     0     0     0     0     0     0     0
## 4475     0     1     0     0     0     0     0     0     0     0     0
## 4476     0     0     0     0     0     2     0     0     0     0     0
## 4477     0     0     0     1     0     0     0     0     0     0     0
## 4478     0     0     0     0     1     0     0     0     0     0     0
## 4479     0     0     0     0     0     0     0     0     0     0     0
## 4480     0     0     0     0     0     0     0     0     0     0     0
## 4481     0     0     0     0     0     0     0     0     0     1     3
## 4482     0     0     0     0     0     2     0     0     0     0     0
## 4483     0     0     0     0     0     0     0     0     0     0     0
## 4484     0     0     0     3     0     0     0     0     0     0     0
## 4485     0     0     0     0     0     0     0     0     0     0     0
## 4486     0     0     0     0     0     0     0     0     0     0     0
## 4487     0     0     0     0     0     0     0     0     0     2     0
## 4488     0     3     0     0     0     0     0     0     0     0     0
## 4489     0     0     1     0     1     0     0     0     0     0     0
## 4490     0     0     0     1     0     2     0     0     0     0     0
## 4491     0     0     0     0     0     0     0     0     0     0     0
## 4492     0     0     0     0     0     0     0     0     0     0     0
## 4493     0     0     0     0     0     0     0     0     0     0     0
## 4494     0     0     0     0     0     0     2     0     0     0     0
## 4495     0     2     2     0     0     0     0     1     0     0     0
## 4496     0     0     0     0     0     0     0     0     0     0     0
## 4497     0     0     0     0     0     0     1     0     0     0     0
## 4498     0     0     0     0     0     0     0     0     2     0     0
## 4499     1     1     0     0     0     0     0     0     0     0     0
## 4500     0     0     0     0     0     0     2     0     0     0     0
## 4501     0     0     1     0     0     0     1     0     0     0     0
## 4502     0     0     0     0     0     0     0     0     0     0     0
## 4503     0     0     0     0     0     0     0     0     0     0     0
```

```
## 4504      1      0      1      0      0      0      0      0      0      0      0
## 4505      0      0      0      0      0      0      0      0      0      0      0
## 4506      0      0      0      0      0      0      0      0      0      0      0
## 4507      0      0      0      0      0      0      1      0      0      0      0
## 4508      0      0      0      0      0      0      1      0      0      0      0
## 4509      0      0      0      0      1      0      0      0      0      0      0
## 4510      0      0      0      0      0      0      0      0      0      0      0
## 4511      0      0      0      0      0      0      0      0      0      0      0
## 4512      0      0      0      0      0      0      0      2      0      0      0
## 4513      1      0      0      0      0      0      0      0      0      0      0
## 4514      0      0      0      0      0      0      0      0      0      0      0
## 4515      0      0      0      0      0      0      0      0      0      0      0
## 4516      0      0      0      0      0      1      0      0      0      0      0
## 4517      0      0      0      0      0      0      0      0      0      0      0
## 4518      0      0      0      0      0      0      0      0      0      0      0
## 4519      0      0      0      1      0      0      0      0      0      0      0
## 4520      0      0      0      1      0      0      0      0      0      0      0
## 4521      0      0      0      1      0      0      0      0      0      0      0
## 4522      0      0      0      0      0      0      0      0      0      0      0
## 4523      0      0      0      0      0      0      1      0      0      0      0
## 4524      0      0      0      0      0      0      0      0      0      0      0
## 4525      0      0      0      0      0      0      0      0      0      0      1
## 4526      0      0      0      0      0      0      1      0      0      0      0
## 4527      0      0      0      0      0      0      0      0      0      0      1
## 4528      0      0      0      0      0      0      0      0      0      0      0
## 4529      0      0      0      0      0      0      0      0      0      0      0
## 4530      0      0      0      2      0      0      0      0      0      0      0
## 4531      0      0      0      1      0      0      0      0      0      0      0
## 4532      0      0      0      0      0      0      0      1      0      0      0
## 4533      0      1      0      0      0      0      1      0      1      0      1
## 4534      0      0      0      0      0      0      2      0      0      0      0
## 4535      0      0      0      0      0      0      0      0      0      0      0
## 4536      0      0      0      0      0      0      0      0      0      0      0
## 4537      0      0      0      0      0      0      1      0      0      0      0
## 4538      0      0      0      0      0      0      0      0      0      0      2
## 4539      0      0      0      0      0      0      0      0      0      0      0
## 4540      0      1      0      2      0      0      0      0      0      0      0
## 4541      0      0      0      0      0      0      0      0      0      0      1
## 4542      0      0      0      0      0      0      0      3      0      0      0
## 4543      0      0      0      0      0      0      0      0      0      0      0
## 4544      0      0      0      0      0      0      0      0      0      0      0
## 4545      0      0      0      0      0      1      0      0      0      0      0
## 4546      0      0      0      0      0      0      0      0      0      0      0
## 4547      0      0      0      0      0      0      0      0      0      0      0
## 4548      0      0      0      1      0      0      0      0      0      0      0
## 4549      0      0      0      0      0      0      0      0      0      0      0
## 4550      0      0      1      0      0      0      0      0      0      0      0
## 4551      0      0      0      1      0      0      0      0      0      0      0
## 4552      0      0      0      0      0      0      0      0      0      0      0
## 4553      0      0      0      0      0      0      0      0      0      0      0
## 4554      0      0      0      0      0      1      0      0      0      0      0
## 4555      0      0      0      0      0      0      0      0      0      0      1
## 4556      0      0      0      0      0      0      0      0      0      0      1
## 4557      0      1      0      0      0      0      0      0      0      0      0
```

```
## 4558      0      0      0      0      0      0      0      1      0      0      0
## 4559      0      0      0      0      0      0      0      0      0      0      0
## 4560      0      0      0      0      0      0      0      0      0      0      0
## 4561      0      1      0      0      0      0      0      0      0      0      0
## 4562      0      0      0      0      0      0      0      0      0      0      1
## 4563      0      0      0      0      0      0      0      0      0      0      0
## 4564      0      0      0      0      0      0      1      0      0      0      0
## 4565      0      0      0      0      0      1      0      0      0      0      0
## 4566      1      0      0      0      0      0      0      0      0      0      0
## 4567      0      0      0      0      0      1      0      0      0      0      0
## 4568      0      0      0      0      0      0      1      0      0      0      0
## 4569      0      0      0      0      1      0      0      0      0      0      0
## 4570      0      0      0      1      0      0      0      0      0      1      0
## 4571      0      0      0      0      0      0      0      2      0      0      0
## 4572      0      0      0      0      0      0      0      0      0      0      0
## 4573      0      0      0      1      0      0      0      0      0      0      0
## 4574      0      0      0      1      0      0      0      0      0      0      0
## 4575      0      0      0      0      0      0      0      0      0      0      0
## 4576      0      0      0      0      0      0      0      0      1      0      0
## 4577      0      0      0      0      0      0      1      0      0      0      0
## 4578      0      0      0      0      0      0      0      0      0      0      0
## 4579      0      0      0      0      0      0      0      0      1      0      0
## 4580      0      0      0      0      0      0      0      0      0      0      0
## 4581      0      0      0      0      0      0      1      0      0      0      0
## 4582      0      0      0      1      0      0      0      0      0      0      0
## 4583      0      1      0      0      0      0      1      0      0      0      0
## 4584      0      0      0      0      0      0      0      0      0      1      0
## 4585      0      0      0      0      0      0      0      0      0      0      0
## 4586      0      0      0      0      0      0      1      0      0      0      0
## 4587      0      0      0      0      0      0      1      0      0      0      0
## 4588      0      0      0      0      0      0      2      0      0      0      0
## 4589      0      0      0      0      0      0      0      0      0      0      0
## 4590      0      0      1      1      0      0      0      0      0      0      0
## 4591      0      0      0      1      0      0      0      0      0      0      0
## 4592      0      0      0      0      0      0      0      0      0      0      0
## 4593      0      0      0      0      0      0      0      0      0      0      0
## 4594      0      0      0      0      0      0      0      0      0      0      0
## 4595      0      0      0      0      0      0      0      0      0      0      0
## 4596      0      0      0      0      0      0      0      0      0      0      0
## 4597      0      0      0      0      0      0      0      0      0      1      0
## 4598      0      0      0      0      0      0      0      0      0      0      0
## 4599      0      0      0      0      0      0      0      0      0      0      0
## 4600      0      0      0      0      0      0      0      0      2      2      1
## 4601      0      0      0      0      0      0      0      0      0      0      0
## 4602      0      0      0      0      0      0      0      0      0      0      0
## 4603      0      0      0      0      0      0      0      0      0      0      0
## 4604      0      0      0      0      0      1      0      0      0      0      0
## 4605      0      0      0      0      0      0      0      1      0      0      0
## 4606      0      0      0      0      0      0      0      0      0      0      0
## 4607      0      0      0      0      0      0      0      0      0      0      0
## 4608      0      0      0      0      0      0      0      0      0      0      0
## 4609      0      0      0      0      0      0      0      0      0      0      0
## 4610      0      0      0      2      0      0      0      0      0      1      1
## 4611      0      0      0      0      1      0      0      0      0      0      0
```

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```
## 4612    0    0    0    0    0    0    0    0    0    0    0
## 4613    0    0    0    0    0    0    1    0    0    0    0
## 4614    0    0    0    0    0    0    0    0    0    0    1
## 4615    0    0    0    1    0    0    0    0    0    0    0
## 4616    0    0    0    0    0    0    0    0    0    0    0
## 4617    0    0    0    0    0    0    0    0    0    0    0
## 4618    0    0    0    0    0    1    0    0    0    0    0
## 4619    0    0    0    0    0    0    0    0    0    0    0
## 4620    0    0    0    0    0    0    0    0    0    0    0
## 4621    0    0    0    0    1    0    0    0    0    0    0
## 4622    0    0    0    0    0    0    1    0    0    0    0
## 4623    0    0    0    0    0    0    0    1    0    0    0
## 4624    0    0    0    0    0    0    0    0    0    0    0
## 4625    0    0    0    0    0    1    0    0    0    0    0
## 4626    0    0    0    0    0    0    0    0    0    0    0
## 4627    0    0    0    0    0    0    0    0    0    0    0
## 4628    0    0    1    0    0    0    0    0    0    0    0
## 4629    0    0    0    0    0    0    1    0    0    0    0
## 4630    0    0    0    0    0    0    0    0    0    0    0
## 4631    0    0    0    0    1    0    0    0    0    0    0
## 4632    0    0    0    0    0    0    0    0    0    0    0
## 4633    0    0    0    0    0    0    0    0    0    0    0
## 4634    1    0    0    0    0    0    0    0    0    0    0
## 4635    1    0    0    0    0    0    0    0    0    0    0
## 4636    0    0    0    0    0    0    1    0    0    0    0
## 4637    0    0    0    0    1    0    0    0    0    0    0
## 4638    0    0    0    1    0    0    0    0    0    0    0
## 4639    0    0    0    0    0    0    0    0    0    0    0
## 4640    0    0    0    0    0    0    0    0    0    0    0
## 4641    0    0    0    0    1    0    0    0    0    0    0
## 4642    0    0    0    0    0    0    0    0    0    0    0
## 4643    0    0    0    0    0    0    1    0    0    0    0
## 4644    0    0    0    0    0    0    0    0    0    1    0
## 4645    0    0    0    0    0    0    0    1    0    0    0
## 4646    0    0    0    1    0    0    0    0    0    0    0
## 4647    0    0    1    0    0    0    0    0    0    0    0
## 4648    0    0    0    0    0    0    0    0    0    0    0
## 4649    0    1    0    0    0    0    0    0    0    0    0
## 4650    0    0    0    0    0    0    0    0    0    0    1
## 4651    0    0    0    0    0    1    0    0    0    0    0
## 4652    0    0    0    0    0    0    0    0    0    0    0
## 4653    0    0    0    1    0    0    0    0    0    0    0
## 4654    0    0    0    0    0    0    0    0    0    0    0
## 4655    0    0    0    0    0    0    0    0    0    0    0
## 4656    0    0    0    0    0    0    0    0    0    0    0
## 4657    0    0    0    0    0    0    0    1    0    0    0
## 4658    0    0    0    0    1    0    0    0    0    0    0
## 4659    0    0    0    0    0    0    1    0    0    0    0
## 4660    0    0    0    0    0    0    1    0    1    0    0
## 4661    0    0    0    0    0    0    0    0    0    0    1
## 4662    0    0    0    0    0    0    1    0    0    0    0
## 4663    0    0    0    0    0    0    0    1    0    0    0
## 4664    0    0    0    0    0    0    0    0    0    0    0
## 4665    0    0    1    0    0    0    0    0    0    0    0
```

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```
## 4666      0     0     0     0     0     0     0     0     0     0     0
## 4667      0     0     1     0     0     0     0     0     0     0     0
## 4668      0     0     0     1     0     0     0     0     0     1     2
## 4669      0     0     0     0     0     0     0     0     0     0     0
## 4670      0     0     0     0     0     0     0     0     0     0     0
## 4671      0     0     0     0     0     0     0     0     0     0     1
## 4672      1     0     0     0     0     0     0     0     0     0     0
## 4673      0     0     0     0     0     0     0     0     0     0     0
## 4674      0     0     0     0     0     0     0     0     0     0     0
## 4675      0     0     0     2     0     1     0     0     0     0     0
## 4676      0     0     0     0     0     0     0     0     0     1     0
## 4677      0     0     0     0     0     0     0     0     0     0     0
## 4678      0     1     0     0     0     0     0     0     0     0     0
## 4679      0     0     0     0     0     0     0     0     0     0     0
## 4680      0     0     0     0     0     0     0     1     0     0     0
## 4681      0     1     0     0     0     0     0     0     0     0     0
## 4682      0     0     0     0     0     0     0     0     1     0     0
## 4683      0     0     0     0     0     0     0     0     0     0     0
## 4684      0     0     0     0     0     0     0     0     0     0     0
## 4685      1     0     0     1     0     0     0     0     0     0     0
## 4686      0     1     0     0     0     0     0     0     0     0     0
## 4687      0     0     0     0     0     0     0     0     0     0     0
## 4688      0     0     0     1     0     0     0     0     0     0     0
## 4689      0     0     0     0     0     0     0     0     0     0     0
## 4690      0     0     0     0     0     0     0     0     0     0     0
## 4691      0     0     0     0     0     0     0     0     0     0     0
## 4692      0     0     0     0     0     0     0     0     0     0     0
## 4693      0     0     0     0     0     0     0     0     0     0     0
## 4694      0     0     0     0     0     0     0     0     0     0     0
## 4695      0     0     0     0     0     0     0     0     0     0     0
## 4696      1     0     0     0     0     0     0     0     0     0     0
## 4697      0     1     1     0     0     0     0     0     0     0     0
## 4698      0     0     0     0     0     0     0     2     0     0     0
## 4699      0     0     0     0     0     0     1     0     0     0     0
## 4700      2     0     0     0     0     0     0     0     0     0     0
## 4701      0     0     0     0     0     0     0     0     0     1     0
## 4702      0     0     0     0     0     0     0     0     0     0     0
## 4703      0     0     0     0     0     0     0     1     0     0     0
## 4704      0     0     0     0     0     0     0     0     0     0     0
## 4705      0     0     0     0     0     0     1     0     0     0     0
## 4706      0     0     0     0     0     0     0     0     0     0     0
## 4707      0     0     0     0     0     0     0     0     0     0     0
## 4708      0     0     0     0     0     0     0     0     0     0     0
## 4709      0     0     0     0     0     1     0     0     0     0     0
## 4710      0     2     0     0     0     0     0     0     0     0     0
## 4711      0     0     0     0     0     0     0     0     0     0     0
## 4712      0     0     0     0     0     0     0     0     0     0     0
## 4713      0     1     0     0     0     0     1     0     0     0     0
## 4714      1     0     0     0     0     0     0     0     0     0     0
## 4715      0     0     0     0     0     0     0     0     0     0     0
## 4716      0     0     0     0     1     0     0     0     0     0     0
## 4717      0     0     0     0     0     0     0     0     1     0     0
## 4718      0     0     0     0     0     0     0     2     0     2     0
## 4719      0     0     0     0     0     0     0     0     0     0     0
```

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```
## 4720      0    0    0    0    0    0    0    0    0    0    0
## 4721      0    0    0    0    0    0    0    0    0    1    0
## 4722      0    0    0    0    0    0    0    0    0    0    0
## 4723      0    0    0    0    0    0    1    0    0    0    0
## 4724      0    0    1    0    0    0    0    0    0    0    0
## 4725      0    0    0    0    1    0    0    0    1    0    0
## 4726      0    0    0    0    0    0    0    0    0    1    0
## 4727      0    0    0    0    0    0    0    0    0    0    0
## 4728      0    0    0    0    1    0    0    0    0    0    0
## 4729      0    0    0    0    0    0    0    0    0    0    0
## 4730      0    0    0    0    0    0    0    0    0    0    0
## 4731      0    0    0    0    2    0    0    0    0    0    0
## 4732      0    0    0    1    0    0    0    0    0    0    0
## 4733      0    0    0    0    0    0    0    0    0    1    0
## 4734      1    0    0    1    0    0    0    0    0    0    0
## 4735      0    0    0    0    1    0    0    0    0    0    0
## 4736      0    0    0    0    0    0    1    0    0    0    0
## 4737      0    0    0    0    0    0    1    0    0    0    0
## 4738      0    0    0    0    0    0    0    0    0    0    0
## 4739      0    1    1    0    0    0    0    0    0    0    0
## 4740      0    0    0    0    0    0    1    0    0    0    0
## 4741      0    0    0    0    0    0    0    1    0    0    0
## 4742      0    0    0    0    1    0    0    0    0    0    0
## 4743      0    0    0    0    0    0    1    0    0    0    0
## 4744      0    0    0    1    0    0    0    0    0    0    0
## 4745      1    0    0    0    0    0    0    0    0    0    0
## 4746      0    0    0    0    0    0    0    0    0    0    0
## 4747      0    0    0    0    0    0    0    0    0    0    0
## 4748      0    0    0    0    0    0    0    0    0    0    0
## 4749      0    0    0    0    0    0    1    0    0    0    0
## 4750      0    0    0    0    0    0    0    0    0    0    1
## 4751      0    0    0    0    1    0    2    1    0    0    0
## 4752      0    0    0    0    0    0    1    0    0    0    0
## 4753      0    0    0    0    0    0    0    0    0    1    0
## 4754      0    0    0    0    0    0    0    0    0    0    0
## 4755      0    0    0    0    0    0    0    0    1    0    0
## 4756      0    0    0    0    0    0    0    0    0    0    0
## 4757      0    0    0    0    0    0    0    0    0    0    0
## 4758      0    0    0    0    0    0    0    0    0    0    0
## 4759      0    0    0    0    0    0    0    0    0    0    0
## 4760      0    0    0    0    0    0    0    0    0    0    0
## 4761      0    0    0    0    0    0    0    0    0    0    0
## 4762      1    0    0    0    0    0    0    0    0    0    0
## 4763      1    0    0    0    0    0    0    0    0    0    0
## 4764      1    0    0    0    0    0    0    0    0    0    0
## 4765      0    0    0    0    0    0    0    0    0    0    0
## 4766      0    0    1    0    0    0    0    0    0    0    0
## 4767      0    0    0    0    0    0    0    0    0    0    0
## 4768      0    0    0    0    0    0    1    0    0    0    0
## 4769      0    0    0    0    0    0    0    0    2    0    0
## 4770      0    0    0    0    0    0    0    0    0    0    0
## 4771      0    0    0    0    0    1    0    0    0    0    0
## 4772      0    0    0    0    0    0    0    0    0    0    0
## 4773      0    0    0    0    0    0    0    0    0    0    0
```

```
## 4774    0    1    0    0    0    0    0    0    0    0    0
## 4775    0    0    0    0    0    0    0    0    0    0    0
## 4776    0    0    0    0    0    1    0    0    0    0    0
## 4777    0    0    0    0    0    0    1    0    0    0    0
## 4778    0    0    0    0    0    0    1    0    0    0    0
## 4779    0    0    0    0    0    0    0    0    0    1    0
## 4780    0    0    0    0    0    0    0    0    0    0    0
## 4781    0    0    0    0    0    0    0    0    0    0    0
## 4782    0    0    0    0    0    0    0    0    0    1    0
## 4783    1    0    0    0    0    0    0    0    0    0    0
## 4784    0    0    0    0    0    0    1    0    0    0    0
## 4785    0    0    0    0    0    0    0    0    0    0    0
## 4786    0    0    0    1    0    0    0    0    0    0    0
## 4787    0    0    0    0    0    0    0    1    0    0    0
## 4788    0    0    0    0    0    0    0    0    0    0    0
## 4789    0    0    0    0    0    0    0    0    1    0    0
## 4790    0    0    0    0    0    0    0    0    0    0    0
## 4791    0    0    0    0    0    0    0    0    0    1    0
## 4792    0    0    0    0    0    0    0    0    0    0    0
## 4793    0    0    0    0    0    0    0    0    0    0    0
## 4794    0    1    0    0    0    0    0    0    0    0    0
## 4795    0    0    0    0    0    0    2    0    0    0    0
## 4796    0    0    0    0    0    1    0    0    0    0    0
## 4797    0    0    0    0    0    0    0    0    0    0    1
## 4798    0    0    0    0    0    0    0    0    0    0    0
## 4799    0    0    0    1    0    0    0    0    0    0    0
## 4800    0    0    0    0    0    0    0    0    0    0    0
## 4801    0    0    0    0    0    1    0    0    0    0    0
## 4802    0    0    0    0    0    0    0    0    0    0    0
## 4803    0    0    0    1    0    0    0    0    0    0    0
## 4804    0    0    0    1    0    0    0    0    0    0    0
## 4805    0    0    0    0    0    0    0    1    0    0    0
## 4806    0    0    0    0    0    2    0    0    0    0    0
## 4807    0    0    0    0    0    0    0    0    0    0    0
## 4808    0    0    0    0    0    0    0    0    0    0    1
## 4809    0    0    0    0    0    0    0    0    0    1    1
## 4810    0    0    0    0    0    0    0    0    0    0    0
## 4811    0    0    0    0    1    0    0    0    0    0    0
## 4812    0    0    0    0    0    0    0    0    0    0    0
## 4813    0    0    0    1    0    0    0    0    0    0    0
## 4814    0    0    0    1    0    0    0    0    0    0    0
## 4815    0    0    0    0    0    0    0    1    0    0    0
## 4816    0    0    0    0    0    0    0    0    0    0    0
## 4817    0    0    0    0    0    0    0    0    0    0    0
## 4818    0    0    0    0    0    0    0    0    0    0    0
## 4819    0    0    0    0    0    0    0    0    0    0    0
## 4820    0    0    0    0    0    0    0    0    0    0    0
## 4821    1    0    0    0    0    0    0    0    0    0    0
## 4822    0    0    0    1    0    0    0    0    0    0    0
## 4823    0    0    0    1    0    0    0    0    0    0    0
## 4824    0    0    0    0    0    0    0    1    0    0    0
## 4825    0    1    0    0    0    0    0    0    0    0    0
## 4826    0    0    0    0    0    0    0    0    0    0    0
## 4827    0    0    0    0    0    0    0    0    0    0    1
```

```
## 4828      0      0      1      0      0      0      0      0      0      0      0
## 4829      0      0      0      1      0      0      0      0      0      0      0
## 4830      0      1      0      0      0      0      0      0      0      0      0
## 4831      0      0      0      0      0      0      0      0      0      0      0
## 4832      0      0      0      0      0      0      1      0      0      0      0
## 4833      0      0      0      0      0      1      0      0      0      0      0
## 4834      0      0      1      0      0      0      0      0      0      0      0
## 4835      0      0      0      0      0      0      1      0      0      0      0
## 4836      0      0      0      0      0      1      0      0      0      0      0
## 4837      0      0      1      0      0      0      0      0      0      0      0
## 4838      0      0      0      1      0      0      0      0      0      0      0
## 4839      0      2      0      0      0      0      0      0      0      0      0
## 4840      0      0      0      0      0      0      0      0      0      1      0
## 4841      0      0      0      0      0      0      0      0      0      1      0
## 4842      0      0      0      0      0      0      1      0      0      0      0
## 4843      0      0      0      0      0      0      0      0      1      0      0
## 4844      0      0      0      0      0      0      0      0      0      0      0
## 4845      0      0      0      0      0      0      0      0      0      0      0
## 4846      0      0      0      0      0      1      0      0      0      0      0
## 4847      0      0      0      0      0      0      1      0      0      0      0
## 4848      0      0      0      0      0      0      0      0      0      0      1
## 4849      0      0      0      0      0      0      0      0      0      0      0
## 4850      0      0      0      0      0      0      0      1      0      0      0
## 4851      0      0      0      0      0      0      0      0      0      1      0
## 4852      0      0      1      0      0      0      0      0      0      0      0
## 4853      0      0      0      0      0      0      0      0      0      0      0
## 4854      0      0      0      0      0      0      0      0      0      0      0
## 4855      0      0      0      0      0      0      0      1      0      0      0
## 4856      0      0      0      0      0      0      0      0      0      0      0
## 4857      0      0      0      0      0      0      0      0      0      0      0
## 4858      0      0      0      1      0      0      0      0      0      0      0
## 4859      0      0      0      0      0      0      0      0      0      0      0
## 4860      0      0      0      0      0      0      0      0      0      0      0
## 4861      0      0      0      0      0      0      0      0      0      0      0
## 4862      0      1      0      0      0      0      0      0      0      0      0
## 4863      0      0      0      0      0      0      1      0      0      0      0
## 4864      0      0      0      0      1      0      0      0      0      0      0
## 4865      0      0      0      0      0      0      0      0      0      0      0
## 4866      0      0      0      0      1      0      0      0      0      0      0
## 4867      0      0      0      0      0      0      1      0      0      0      0
## 4868      0      0      0      0      0      0      0      0      0      0      0
## 4869      0      0      0      0      1      0      0      0      0      0      0
## 4870      0      0      0      0      0      0      1      0      0      0      0
## 4871      0      0      0      0      0      0      0      0      0      0      0
## 4872      0      0      0      0      0      0      0      0      0      0      0
## 4873      0      0      0      0      0      0      0      0      0      0      0
## 4874      0      0      0      0      0      0      0      0      0      0      0
## 4875      0      0      0      0      0      1      0      0      0      0      0
## 4876      0      0      0      0      0      1      0      0      0      0      0
## 4877      0      0      0      0      0      0      0      0      0      0      0
## 4878      0      0      0      0      0      0      0      0      0      0      0
## 4879      0      0      0      0      0      0      1      0      0      0      0
## 4880      0      0      0      0      0      0      0      0      0      0      0
## 4881      0      0      1      0      0      0      0      0      0      0      0
```

```
## 4882      0      0      0      0      0      0      0      0      0      1      0
## 4883      0      0      0      0      1      0      0      0      0      0      0
## 4884      0      0      0      0      0      0      1      0      0      0      0
## 4885      0      0      0      0      0      0      0      0      0      0      0
## 4886      0      0      1      0      0      0      0      0      0      0      0
## 4887      0      0      0      0      0      0      0      0      0      0      0
## 4888      0      0      0      0      0      0      0      0      0      0      0
## 4889      0      0      0      0      0      0      0      0      0      0      1
## 4890      0      0      0      0      0      0      0      0      0      0      0
## 4891      2      2      1      0      1      0      0      0      0      0      0
## 4892      0      0      0      0      2      0      0      0      0      0      0
## 4893      0      0      1      0      0      0      0      0      0      0      0
## 4894      0      1      0      0      0      0      0      0      0      0      0
## 4895      0      0      0      0      0      0      0      0      0      0      0
## 4896      0      0      0      0      1      0      0      0      0      0      0
## 4897      0      0      0      0      0      0      0      0      0      0      0
## 4898      0      0      0      0      1      0      0      0      0      0      0
## 4899      1      0      0      0      0      0      0      0      0      0      0
## 4900      0      0      0      0      0      0      1      0      0      0      0
## 4901      0      0      0      0      0      0      0      0      0      0      0
## 4902      0      0      0      0      0      0      0      0      0      1      0
## 4903      0      0      0      1      0      1      0      0      0      0      0
## 4904      0      0      1      0      0      0      0      0      0      0      0
## 4905      0      0      0      1      0      0      0      0      0      0      0
## 4906      0      0      0      0      0      0      1      0      0      0      0
## 4907      0      0      0      0      0      0      0      0      0      0      0
## 4908      0      0      0      0      0      0      0      0      0      0      1
## 4909      0      0      0      0      0      0      0      0      0      0      0
## 4910      0      0      0      0      0      0      2      0      0      0      0
## 4911      0      0      0      0      0      0      0      0      0      1      0
## 4912      0      0      0      1      0      0      0      0      0      0      0
## 4913      0      0      0      0      0      0      0      0      0      0      0
## 4914      0      0      0      1      0      0      0      0      0      0      0
## 4915      0      0      0      0      0      0      1      1      0      0      0
## 4916      0      0      0      0      0      0      0      0      0      0      0
## 4917      0      0      0      2      0      0      0      0      0      0      0
## 4918      0      0      0      0      0      0      0      0      0      0      1
## 4919      0      0      0      0      0      1      0      0      0      0      0
## 4920      0      0      0      0      0      0      0      0      1      0      0
## 4921      0      1      0      0      0      0      0      0      0      0      0
## 4922      0      0      0      0      0      0      0      0      0      0      0
## 4923      0      0      0      1      1      0      0      0      0      0      0
## 4924      0      0      0      0      0      0      0      0      0      0      0
## 4925      0      0      0      0      0      0      0      0      0      0      0
## 4926      0      0      0      0      0      0      0      1      0      0      0
## 4927      0      1      0      0      0      0      0      0      0      0      0
## 4928      1      0      0      0      0      0      0      0      0      0      0
## 4929      0      0      0      0      0      0      0      0      0      0      0
## 4930      2      0      0      0      0      0      0      0      0      0      0
## 4931      0      0      0      0      0      0      0      0      0      0      0
## 4932      0      0      0      0      0      0      0      0      0      0      0
## 4933      0      0      0      0      0      0      0      0      0      0      0
## 4934      0      0      0      0      0      0      0      0      0      0      0
## 4935      0      1      0      0      0      0      0      0      0      0      0
```

```
## 4936      0      0      0      0      0      0      0      0      0      0      0
## 4937      0      0      0      0      0      0      0      2      0      0      0
## 4938      0      0      0      0      0      0      0      0      0      0      1
## 4939      0      0      0      0      0      0      0      1      0      0      0
## 4940      0      0      0      0      0      0      0      1      0      0      0
## 4941      0      0      0      0      0      0      1      0      0      0      0
## 4942      0      0      0      0      0      0      0      0      0      0      0
## 4943      0      0      1      0      0      0      0      0      0      0      0
## 4944      0      0      0      0      0      0      0      0      1      0      0
## 4945      0      0      0      0      0      0      0      1      0      0      0
## 4946      0      0      0      0      1      0      0      0      0      0      0
## 4947      0      0      0      0      0      0      0      0      0      0      0
## 4948      0      0      0      1      0      0      0      1      0      0      0
## 4949      0      1      0      0      0      0      0      0      0      0      0
## 4950      0      0      0      0      0      0      1      0      0      0      0
## 4951      0      0      0      0      0      0      0      0      0      0      0
## 4952      0      0      0      0      0      0      0      1      0      0      0
## 4953      0      0      0      0      0      0      0      0      1      0      0
## 4954      0      0      1      0      0      0      0      0      0      0      0
## 4955      0      0      0      0      0      0      0      0      0      0      0
## 4956      0      0      0      0      0      1      0      0      0      0      0
## 4957      0      0      1      0      0      0      0      0      0      0      0
## 4958      0      0      0      0      0      0      0      0      0      0      0
## 4959      0      0      0      0      0      0      0      0      0      0      0
## 4960      0      0      0      0      0      1      0      0      0      0      0
## 4961      0      0      0      0      0      0      0      0      0      0      0
## 4962      0      0      0      0      0      0      0      0      0      0      0
## 4963      0      0      0      0      0      0      0      0      0      0      0
## 4964      0      0      0      0      0      0      0      1      0      0      0
## 4965      0      0      0      0      0      0      0      0      0      0      0
## 4966      0      0      0      0      0      0      0      0      0      0      0
## 4967      0      0      0      0      0      0      1      1      0      0      0
## 4968      0      0      0      0      1      0      0      0      0      0      0
## 4969      0      0      0      0      0      0      1      0      0      0      0
## 4970      0      0      0      0      0      0      0      1      0      0      0
## 4971      0      1      0      0      0      0      1      0      0      0      0
## 4972      0      0      0      0      0      0      0      0      0      0      1
## 4973      0      0      0      0      0      0      0      0      0      0      0
## 4974      0      0      0      0      0      0      1      0      0      0      0
## 4975      0      0      0      0      0      0      0      0      0      1      0
## 4976      0      0      0      0      0      0      0      0      0      0      0
## 4977      0      0      0      0      0      0      0      0      0      0      0
## 4978      0      0      2      0      0      0      0      0      0      0      0
## 4979      0      0      0      0      0      0      0      0      0      0      0
## 4980      0      0      0      0      0      0      0      0      0      1      0
## 4981      0      0      0      0      0      0      0      0      0      1      0
## 4982      0      0      0      0      0      0      0      0      0      0      0
## 4983      0      0      0      1      0      0      0      0      0      0      0
## 4984      0      0      0      0      0      0      1      0      0      0      0
## 4985      0      0      0      0      0      0      0      0      0      0      0
## 4986      0      0      0      0      0      0      0      0      0      0      0
## 4987      0      0      0      0      0      0      0      0      0      0      0
## 4988      0      0      0      0      0      0      0      0      0      0      0
## 4989      0      0      0      0      0      0      0      0      0      0      0
```

```
## 4990      0    0    0    0    0    0    0    0    0    0    0
## 4991      0    0    0    0    0    0    0    0    0    0    0
## 4992      0    0    0    0    0    0    0    0    0    0    0
## 4993      0    0    0    0    0    0    0    0    0    1    0
## 4994      0    0    1    0    0    0    0    0    0    0    0
## 4995      0    0    0    0    0    0    0    0    0    0    0
## 4996      0    0    0    0    0    0    1    0    0    0    0
## 4997      0    1    0    0    0    0    0    0    0    0    0
## 4998      0    0    0    0    0    0    0    0    0    0    0
## 4999      2    0    4    0    1    1    0    0    0    0    0
## 5000      0    0    0    0    0    0    0    1    0    0    0
## 5001      0    0    0    0    0    0    0    0    0    0    0
## 5002      0    0    0    0    0    0    0    1    0    0    0
## 5003      0    0    0    0    0    0    0    0    0    0    0
## 5004      0    0    0    0    0    0    0    0    0    0    0
## 5005      0    0    0    0    0    0    1    0    0    0    0
## 5006      0    0    0    1    0    0    1    0    0    0    0
## 5007      0    0    0    0    0    1    0    0    0    0    0
## 5008      0    0    0    0    0    0    0    0    0    0    0
## 5009      0    0    0    0    0    0    0    0    0    0    0
## 5010      0    0    0    0    0    0    0    0    0    0    0
## 5011      0    1    0    0    0    0    0    0    0    0    0
## 5012      0    1    0    0    0    0    0    0    0    0    0
## 5013      0    0    0    0    0    0    0    0    0    0    0
## 5014      0    0    0    0    0    0    0    0    1    0    0
## 5015      0    0    0    0    0    0    0    0    0    0    0
## 5016      0    0    0    1    0    0    0    0    0    0    0
## 5017      0    0    0    0    0    0    0    0    0    0    0
## 5018      0    0    0    1    0    0    0    0    0    0    0
## 5019      0    0    0    0    0    0    0    0    0    0    0
## 5020      0    0    0    0    0    0    0    0    0    0    1
## 5021      0    0    0    0    0    0    0    0    0    0    0
## 5022      0    0    0    0    0    0    0    0    0    0    0
## 5023      0    0    0    0    0    0    0    0    0    0    0
## 5024      1    0    0    0    0    0    0    0    0    0    0
## 5025      0    0    0    0    0    0    0    1    0    0    0
## 5026      0    0    0    1    0    0    0    0    0    0    0
## 5027      0    0    0    0    1    0    0    0    0    0    0
## 5028      0    1    0    0    0    0    0    0    0    0    0
## 5029      0    0    0    0    0    0    0    0    0    0    0
## 5030      1    0    0    0    0    0    0    0    0    0    0
## 5031      0    0    0    0    0    0    0    0    0    0    0
## 5032      0    0    0    1    0    0    0    0    0    0    0
## 5033      0    0    0    0    1    0    0    0    0    0    0
## 5034      0    0    0    0    1    0    0    0    0    0    0
## 5035      1    0    0    0    0    0    0    0    0    0    0
## 5036      0    0    0    0    0    0    0    0    0    0    0
## 5037      1    0    0    0    0    0    0    0    0    0    0
## 5038      0    0    0    0    0    0    0    0    0    1    0
## 5039      0    0    0    1    0    0    0    0    0    0    0
## 5040      0    0    0    0    0    0    0    0    0    0    1
## 5041      0    0    0    0    0    0    0    0    0    0    0
## 5042      0    0    0    0    0    0    0    0    0    0    0
## 5043      0    0    0    0    0    0    0    0    0    0    0
```

```
## 5044      0     0     0     0     0     0     0     0     0     0     0
## 5045      0     0     0     0     0     0     0     0     0     0     2
## 5046      0     0     0     0     0     0     0     0     0     0     0
## 5047      0     0     0     0     1     0     1     0     0     0     0
## 5048      0     0     0     0     0     0     0     0     0     0     0
## 5049      0     0     0     0     0     0     0     0     1     0     0
## 5050      0     0     0     1     0     0     0     0     0     0     0
## 5051      0     0     0     0     1     0     0     0     0     0     0
## 5052      1     0     0     0     0     0     0     0     0     0     0
## 5053      0     0     0     0     0     0     0     0     0     0     1
## 5054      1     0     0     0     0     0     0     0     0     0     0
## 5055      0     0     0     0     0     0     0     0     0     0     0
## 5056      0     0     0     0     0     0     0     0     0     0     0
## 5057      0     0     0     0     0     0     0     0     0     0     1
## 5058      0     0     0     0     0     0     0     0     0     0     0
## 5059      0     0     0     0     0     0     0     0     0     0     0
## 5060      0     0     0     0     0     0     0     1     0     0     0
## 5061      0     0     0     0     0     0     0     0     0     0     0
## 5062      0     0     0     0     0     0     0     0     0     0     0
## 5063      0     1     0     1     0     0     0     0     0     0     0
## 5064      0     0     0     0     0     0     0     0     0     0     0
## 5065      0     0     0     0     0     0     0     0     1     0     0
## 5066      0     0     0     0     0     0     0     0     0     0     0
## 5067      0     0     1     0     0     0     0     0     0     0     0
## 5068      0     0     0     0     0     0     0     0     0     1     0
## 5069      0     0     1     0     0     0     0     0     0     0     0
## 5070      0     0     0     0     0     0     0     0     0     0     0
## 5071      0     0     0     0     0     0     1     0     0     0     0
## 5072      0     0     0     1     0     0     0     0     0     0     0
## 5073      0     0     0     0     1     0     0     0     0     0     0
## 5074      0     0     0     0     0     0     1     0     0     0     0
## 5075      0     0     0     0     0     0     1     0     0     0     0
## 5076      0     0     0     0     0     0     0     1     0     0     0
## 5077      0     0     0     0     0     0     0     0     0     0     0
## 5078      0     0     0     0     0     0     0     0     0     1     0
## 5079      0     0     0     0     0     0     1     0     0     0     0
## 5080      0     0     0     1     0     0     0     0     0     0     0
## 5081      1     0     0     1     0     0     0     0     0     0     0
## 5082      0     0     0     0     0     0     0     0     0     0     1
## 5083      0     0     0     0     0     0     0     0     0     1     0
## 5084      0     0     0     0     0     0     1     0     0     0     0
## 5085      0     0     0     0     1     0     0     0     0     0     0
## 5086      0     0     0     0     0     0     0     0     0     0     0
## 5087      0     2     0     0     0     0     0     0     0     0     0
## 5088      0     0     0     0     0     0     0     0     0     0     0
## 5089      0     0     0     1     0     0     0     0     0     0     0
## 5090      0     0     0     1     0     0     0     0     0     0     0
## 5091      0     0     0     0     0     1     0     0     0     0     0
## 5092      0     0     0     0     0     0     0     0     0     0     0
## 5093      0     0     0     0     0     0     0     0     0     0     0
## 5094      0     0     0     0     0     0     0     0     0     0     0
## 5095      0     0     0     0     0     1     0     0     0     0     0
## 5096      0     1     0     0     0     0     0     0     0     0     0
## 5097      0     0     0     0     0     0     0     0     0     0     0
```

```
## 5098     0    0    0    0    0    0    0    0    0    0    0
## 5099     0    1    0    0    0    0    0    0    0    0    0
## 5100     0    0    0    0    0    0    1    0    0    0    0
## 5101     0    0    0    0    0    0    0    0    0    0    0
## 5102     0    0    0    0    0    0    0    0    0    0    1
## 5103     0    0    1    0    0    0    0    0    0    0    0
## 5104     0    0    0    0    0    0    0    0    0    0    0
## 5105     0    0    0    0    0    0    0    0    0    0    0
## 5106     0    0    0    0    0    0    0    0    0    0    0
## 5107     0    0    0    0    0    0    0    0    0    0    0
## 5108     0    0    0    0    0    0    0    0    0    1    0
## 5109     0    0    0    0    1    0    0    0    0    0    0
## 5110     0    0    0    0    0    0    0    0    0    1    0
## 5111     0    0    0    0    0    0    0    0    0    0    0
## 5112     0    0    0    0    0    0    0    0    0    0    0
## 5113     0    1    0    0    0    0    0    0    0    0    0
## 5114     0    0    0    0    0    0    1    0    0    0    0
## 5115     0    1    0    0    0    0    0    0    0    0    0
## 5116     0    0    0    0    0    0    0    1    0    0    0
## 5117     0    0    0    0    0    0    0    0    0    0    2
## 5118     0    0    0    0    0    0    0    0    0    1    0
## 5119     0    0    0    0    0    0    0    0    0    0    0
## 5120     0    0    0    0    0    0    0    0    0    0    0
## 5121     0    0    1    0    0    0    0    0    0    0    0
## 5122     0    0    0    0    0    0    0    0    0    0    0
## 5123     0    0    0    0    0    0    0    0    0    0    0
## 5124     0    0    0    0    0    0    0    0    0    0    1
## 5125     0    0    0    0    0    0    0    0    0    0    0
## 5126     0    0    0    0    0    0    0    0    0    0    0
## 5127     0    0    0    0    0    0    0    0    0    0    0
## 5128     0    0    0    0    2    0    0    0    0    0    0
## 5129     0    0    0    0    0    0    0    0    0    0    0
## 5130     0    0    0    0    0    0    0    0    0    0    1
## 5131     0    0    0    0    0    0    0    0    0    1    0
## 5132     0    0    0    0    0    0    0    0    0    0    0
## 5133     0    0    0    0    0    0    0    0    0    0    0
## 5134     0    0    0    0    0    0    0    1    0    0    0
## 5135     0    0    0    0    0    0    0    0    0    0    0
## 5136     0    0    0    0    0    0    0    0    0    0    0
## 5137     0    0    0    0    0    0    0    0    0    0    0
## 5138     1    0    0    0    0    0    0    0    0    0    0
## 5139     0    0    0    0    0    0    0    0    0    0    0
## 5140     0    0    0    0    0    0    0    0    0    0    0
## 5141     1    0    0    2    0    0    0    0    0    0    0
## 5142     0    0    0    0    0    0    0    0    0    0    0
## 5143     0    0    0    0    0    0    0    0    0    0    0
## 5144     0    0    0    0    0    0    0    0    0    0    0
## 5145     1    0    0    1    0    0    0    0    0    0    0
## 5146     0    0    0    1    0    0    0    0    0    0    0
## 5147     0    0    0    1    0    0    0    0    0    0    0
## 5148     0    0    0    0    0    0    1    0    0    0    0
## 5149     0    0    0    0    0    0    0    0    0    0    0
## 5150     0    0    0    0    0    0    0    0    0    0    0
## 5151     0    0    0    0    0    0    0    0    0    0    0
```

```
## 5152      0    0    0    0    0    0    0    0    0    0    0
## 5153      0    0    0    0    0    0    0    0    0    0    0
## 5154      0    0    0    0    0    0    0    0    0    0    0
## 5155      0    0    0    0    1    0    0    0    0    0    0
## 5156      0    0    0    0    0    0    1    0    0    0    0
## 5157      0    0    0    0    0    0    0    0    0    1    0
## 5158      0    0    0    1    0    0    0    1    0    0    0
## 5159      0    0    0    0    0    0    0    0    0    1    0
## 5160      0    0    0    0    0    0    0    0    0    1    0
## 5161      0    0    0    0    0    0    0    0    0    0    0
## 5162      0    0    0    0    0    0    0    0    0    1    0
## 5163      0    0    0    0    0    0    0    0    0    0    0
## 5164      0    0    0    0    0    0    0    0    0    1    0
## 5165      0    0    0    0    0    0    1    0    0    0    0
## 5166      0    1    0    0    0    0    0    0    0    0    0
## 5167      0    0    0    0    0    0    0    0    0    0    0
## 5168      0    0    0    1    0    0    0    0    0    0    0
## 5169      0    0    1    0    0    0    0    0    0    0    0
## 5170      0    0    0    0    0    0    1    0    0    0    0
## 5171      0    0    0    0    0    0    0    0    0    0    0
## 5172      0    0    0    0    0    0    0    0    0    0    0
## 5173      0    0    0    0    0    0    0    0    0    0    0
## 5174      0    0    0    0    1    0    0    0    0    0    0
## 5175      0    0    0    0    0    0    0    0    0    0    0
## 5176      0    0    0    0    0    0    0    0    0    0    0
## 5177      0    0    0    0    0    0    0    0    1    0    0
## 5178      0    0    0    0    0    0    1    1    0    0    0
## 5179      0    0    0    0    0    0    1    0    0    0    0
## 5180      0    0    0    1    0    0    0    0    0    0    0
## 5181      0    0    0    0    0    0    0    0    1    0    0
## 5182      0    0    0    0    0    0    0    0    0    1    0
## 5183      0    0    0    0    0    0    0    0    0    0    0
## 5184      0    0    0    0    0    0    0    0    0    0    0
## 5185      0    0    0    0    0    0    1    0    0    0    0
## 5186      0    0    0    0    0    0    1    0    0    0    0
## 5187      0    0    0    0    0    0    0    0    0    0    1
## 5188      0    0    0    1    0    0    0    0    0    0    0
## 5189      0    0    0    0    0    0    1    0    0    0    0
## 5190      0    0    0    0    0    0    0    1    0    0    0
## 5191      0    0    0    0    0    0    0    0    0    1    0
## 5192      0    0    0    0    0    0    1    0    1    0    0
## 5193      0    0    1    0    0    0    0    0    0    0    0
## 5194      0    0    0    0    0    0    0    0    0    0    0
## 5195      0    0    0    0    0    0    0    0    0    0    0
## 5196      1    0    0    0    0    0    0    0    0    0    0
## 5197      0    0    0    0    0    0    0    0    0    0    0
## 5198      0    0    0    0    0    0    0    0    0    0    0
## 5199      0    0    0    0    0    0    0    0    1    0    0
## 5200      0    0    0    0    0    0    0    0    2    0    0
## 5201      1    0    0    0    0    0    0    0    0    0    0
## 5202      0    0    1    0    0    0    0    0    0    0    0
## 5203      0    0    0    0    0    0    0    0    0    0    0
## 5204      0    0    0    0    0    0    0    0    0    0    0
## 5205      0    0    0    1    0    0    0    0    0    0    0
```

```
## 5206     0     0     0     0     0     0     1     0     0     0     0
## 5207     0     0     0     0     0     0     1     0     0     0     0
## 5208     0     0     0     1     0     0     0     0     0     0     0
## 5209     0     0     0     0     0     0     0     1     0     0     0
## 5210     0     0     0     0     0     0     0     0     0     0     0
## 5211     0     0     0     0     0     0     0     0     0     0     0
## 5212     0     0     0     0     0     0     0     0     0     0     0
## 5213     0     0     0     0     0     0     0     0     0     1     0
## 5214     0     0     0     0     0     0     0     0     0     0     0
## 5215     0     0     0     0     0     0     0     0     0     0     0
## 5216     0     0     0     0     0     0     0     0     0     0     0
## 5217     0     0     0     0     0     0     0     0     0     0     0
## 5218     0     0     0     0     0     0     0     0     0     0     0
## 5219     0     1     0     0     0     0     0     0     0     0     0
## 5220     0     0     0     0     0     0     1     0     0     0     0
## 5221     0     0     0     0     0     0     0     0     0     0     0
## 5222     0     0     0     0     0     0     1     0     0     0     0
## 5223     0     0     0     0     0     0     0     0     0     0     0
## 5224     0     0     0     0     0     0     1     0     0     0     0
## 5225     0     0     0     0     0     0     0     0     0     0     0
## 5226     0     0     0     0     0     0     0     0     0     0     1
## 5227     0     0     0     0     0     0     0     0     0     0     1
## 5228     0     0     0     0     1     0     1     0     0     0     0
## 5229     0     0     0     0     0     0     0     0     0     0     1
## 5230     0     0     0     0     0     0     0     0     0     0     0
## 5231     0     0     0     0     1     0     0     0     0     0     0
## 5232     0     0     0     0     0     0     0     0     0     0     0
## 5233     0     0     0     1     0     0     0     0     0     0     0
## 5234     0     1     0     0     0     0     0     0     0     0     0
## 5235     0     0     0     0     0     0     0     1     0     0     0
## 5236     0     0     0     0     0     0     0     1     0     0     0
## 5237     0     0     0     0     0     0     0     0     0     0     0
## 5238     0     0     0     0     0     0     0     0     0     0     0
## 5239     0     0     0     0     0     0     0     0     0     0     0
## 5240     0     0     0     0     0     0     0     0     0     0     0
## 5241     0     0     0     0     0     0     0     0     1     0     0
## 5242     0     0     0     0     0     0     1     0     0     0     0
## 5243     0     0     0     0     1     0     0     0     0     0     0
## 5244     0     0     0     0     1     0     0     0     0     0     0
## 5245     0     0     0     0     0     0     0     0     0     0     1
## 5246     1     1     0     0     0     0     0     0     0     0     0
## 5247     0     0     0     0     0     0     0     0     0     0     0
## 5248     0     0     0     0     0     0     1     1     0     0     0
## 5249     0     0     0     0     0     0     0     0     0     0     1
## 5250     0     0     0     0     0     0     0     0     1     0     0
## 5251     0     0     0     0     0     0     0     0     0     1     1
## 5252     0     0     0     0     0     0     0     0     0     0     0
## 5253     0     0     0     0     0     0     0     0     0     0     0
## 5254     1     0     0     0     0     0     0     0     0     0     0
## 5255     0     0     0     1     0     0     0     0     0     0     0
## 5256     0     0     0     0     0     0     0     0     0     1     0
## 5257     0     0     1     0     0     0     0     0     0     0     0
## 5258     0     0     1     0     0     0     0     0     0     0     0
## 5259     0     0     0     0     0     0     0     0     0     0     0
```

```
## 5260      0    0    0    0    0    0    0    0    3    0    0
## 5261      0    0    0    0    0    0    0    0    0    0    1
## 5262      0    0    0    0    0    0    0    0    0    0    0
## 5263      0    0    0    0    0    0    0    0    1    0    0
## 5264      0    0    0    1    0    0    0    0    0    0    0
## 5265      0    0    0    0    1    0    0    0    0    0    1
## 5266      0    0    0    0    1    0    0    0    0    0    0
## 5267      0    0    0    0    0    0    0    0    0    0    0
## 5268      0    0    0    0    0    0    0    0    0    0    1
## 5269      0    0    0    0    1    0    0    0    0    0    0
## 5270      0    0    0    1    0    0    0    0    0    0    0
## 5271      0    0    0    0    0    0    0    0    0    0    0
## 5272      1    0    0    0    0    0    0    0    0    0    0
## 5273      0    0    0    0    0    1    0    0    0    0    0
## 5274      0    0    0    0    1    0    0    0    0    0    0
## 5275      0    1    0    0    0    0    0    0    0    0    0
## 5276      0    0    1    0    0    0    0    0    0    0    0
## 5277      0    0    0    1    0    0    0    0    0    0    0
## 5278      0    0    0    0    0    0    0    0    0    0    0
## 5279      0    0    0    1    0    0    0    0    0    0    0
## 5280      0    0    0    1    0    0    0    0    0    0    0
## 5281      0    0    0    0    0    0    0    0    0    0    0
## 5282      0    0    0    0    0    1    0    0    0    0    0
## 5283      0    0    0    0    0    0    1    0    0    0    0
## 5284      0    0    1    0    0    0    0    0    0    0    0
## 5285      0    0    0    0    0    0    0    0    0    0    0
## 5286      0    0    1    0    0    0    0    0    0    0    0
## 5287      0    0    0    0    0    0    0    0    0    0    0
## 5288      0    0    1    0    0    0    0    0    0    0    0
## 5289      0    0    0    0    0    0    0    0    0    0    0
## 5290      0    0    0    0    0    0    0    0    0    0    0
## 5291      0    0    0    0    0    0    0    0    0    0    1
## 5292      0    0    0    0    0    0    0    0    1    0    0
## 5293      0    0    0    2    0    0    0    0    0    0    0
## 5294      0    0    0    0    0    0    0    0    0    0    0
## 5295      0    0    0    0    0    0    1    0    0    0    0
## 5296      0    0    0    0    0    1    0    0    0    0    0
## 5297      0    0    0    0    1    0    0    0    0    0    0
## 5298      0    0    0    1    0    0    0    0    0    0    0
## 5299      0    0    1    0    0    0    0    0    0    0    0
## 5300      0    0    0    0    0    0    0    0    0    0    0
## 5301      2    0    0    0    0    0    0    0    0    0    0
## 5302      0    0    0    0    0    0    0    0    0    0    0
## 5303      0    0    0    0    1    0    0    0    0    0    0
## 5304      0    0    0    0    0    0    0    0    0    0    0
## 5305      0    0    1    0    0    0    0    0    0    0    0
## 5306      0    0    0    0    0    0    0    0    0    0    0
## 5307      0    0    0    0    0    0    0    0    0    0    0
## 5308      0    0    0    0    0    0    0    0    0    0    0
## 5309      0    0    0    0    0    0    0    0    0    0    0
## 5310      0    0    0    0    0    0    0    0    0    0    0
## 5311      0    0    0    0    0    0    0    2    0    0    0
## 5312      0    0    0    0    0    0    0    0    0    0    0
## 5313      0    0    0    0    0    0    0    0    0    1    0
```

```
## 5314     0     0     0     0     0     0     0     0     0     0     0
## 5315     0     0     0     1     0     0     0     0     0     0     0
## 5316     0     0     0     0     0     0     0     0     0     0     0
## 5317     0     0     0     1     0     0     0     0     0     0     0
## 5318     0     0     0     0     0     0     0     0     0     1     0
## 5319     0     0     0     0     0     0     0     0     0     1     0
## 5320     1     0     0     0     0     0     0     0     0     0     0
## 5321     0     0     0     1     0     0     0     0     0     0     0
## 5322     0     0     0     0     1     0     0     0     0     0     0
## 5323     0     0     0     0     0     0     0     0     0     0     0
## 5324     0     0     0     0     0     0     0     0     0     0     0
## 5325     0     0     0     0     0     0     0     0     0     0     0
## 5326     0     0     0     0     0     0     0     0     0     0     0
## 5327     0     0     0     0     0     0     0     0     0     0     0
## 5328     0     0     0     0     0     0     1     0     0     0     0
## 5329     0     0     0     0     0     0     0     0     0     0     0
## 5330     0     0     0     0     0     1     0     0     0     0     0
## 5331     0     0     0     0     0     0     1     0     0     0     0
## 5332     0     0     1     0     0     0     0     0     0     0     0
## 5333     0     0     0     0     0     0     0     0     0     0     0
## 5334     0     0     0     0     0     0     0     0     0     0     0
## 5335     0     0     0     0     0     0     0     0     0     0     0
## 5336     0     0     0     0     0     0     0     0     0     0     0
## 5337     0     0     0     0     0     0     0     0     0     1     0
## 5338     0     0     0     0     0     0     0     0     0     0     0
## 5339     0     0     0     0     0     0     0     0     0     0     0
## 5340     0     0     0     0     0     0     0     1     0     0     0
## 5341     0     0     1     0     0     0     0     0     0     0     0
## 5342     1     0     0     0     0     0     0     0     0     0     0
## 5343     0     0     0     0     0     0     0     0     0     0     0
## 5344     0     0     0     0     0     0     1     0     0     0     0
## 5345     0     0     0     0     0     0     0     0     0     1     0
## 5346     0     0     0     0     0     0     1     0     0     0     0
## 5347     0     0     0     0     0     0     0     0     1     0     0
## 5348     0     0     0     0     0     1     0     0     0     0     0
## 5349     0     0     0     0     0     0     0     0     0     1     0
## 5350     0     1     0     0     0     0     0     0     0     0     0
## 5351     0     0     0     0     0     0     0     0     0     0     0
## 5352     0     0     0     0     0     0     0     0     0     0     0
## 5353     1     0     0     0     0     0     0     0     0     0     0
## 5354     0     0     0     0     0     0     0     0     0     0     0
## 5355     0     0     0     0     0     0     0     0     0     0     0
## 5356     0     0     0     0     0     0     0     0     0     0     0
## 5357     0     0     0     0     0     0     0     0     0     0     0
## 5358     0     0     0     0     0     0     0     0     0     0     0
## 5359     0     0     0     0     0     0     0     0     0     0     1
## 5360     0     0     0     0     0     0     0     0     0     0     0
## 5361     0     0     0     0     0     0     1     0     0     0     0
## 5362     0     0     0     0     0     0     0     0     0     0     0
## 5363     0     0     0     0     0     0     0     0     0     0     0
## 5364     0     0     0     0     0     0     0     0     0     0     0
## 5365     0     1     0     0     0     0     0     0     0     0     0
## 5366     0     0     0     0     0     0     0     0     0     0     0
## 5367     1     0     0     1     0     0     0     0     0     0     0
```

```
## 5368      0    0    0    0    0    0    0    0    0    0    0
## 5369      0    0    0    0    0    0    0    0    0    0    0
## 5370      0    0    0    0    0    0    0    0    0    0    0
## 5371      0    0    0    0    0    0    0    0    0    0    0
## 5372      0    0    0    0    0    0    0    0    0    0    0
## 5373      0    0    0    0    1    0    0    0    0    0    0
## 5374      0    1    0    0    0    0    0    0    0    0    0
## 5375      0    0    0    1    0    1    0    0    0    0    0
## 5376      0    0    0    0    0    0    0    0    0    0    0
## 5377      0    0    0    0    0    0    1    0    0    0    0
## 5378      0    0    0    0    0    0    0    0    0    0    0
## 5379      0    0    0    0    0    0    0    0    0    0    0
## 5380      0    0    0    0    0    0    0    0    0    1    0
## 5381      0    0    1    0    0    0    0    0    0    0    0
## 5382      0    0    1    0    0    0    0    0    0    0    0
## 5383      0    0    0    0    0    0    0    1    0    0    0
## 5384      0    0    0    0    0    0    0    0    0    0    0
## 5385      0    0    0    1    0    0    0    0    0    0    0
## 5386      0    0    0    0    0    0    0    0    0    0    1
## 5387      0    0    0    0    0    0    1    0    0    0    0
## 5388      0    0    0    0    0    0    0    0    0    0    0
## 5389      0    0    0    0    0    0    0    0    0    0    0
## 5390      0    1    0    0    0    0    0    0    0    0    0
## 5391      0    0    0    0    0    0    0    0    0    0    0
## 5392      0    0    0    0    0    0    0    1    0    0    0
## 5393      0    0    0    0    0    0    0    0    0    0    0
## 5394      0    0    0    0    0    0    0    0    0    0    0
## 5395      0    0    0    0    0    0    0    0    0    0    0
## 5396      1    0    0    0    0    0    0    0    0    0    0
## 5397      1    0    0    0    0    0    0    0    0    0    0
## 5398      0    0    0    0    0    0    1    0    0    0    0
## 5399      0    0    0    0    0    0    0    0    0    0    0
## 5400      0    0    0    0    0    0    0    0    0    0    0
## 5401      0    0    0    0    0    0    0    1    0    0    0
## 5402      0    0    0    0    0    0    0    0    0    0    0
## 5403      0    0    0    0    1    0    0    0    0    0    0
## 5404      0    0    0    0    0    0    0    1    0    0    0
## 5405      0    0    0    0    0    0    1    0    0    0    0
## 5406      0    0    0    0    0    0    0    1    0    0    0
## 5407      1    0    0    0    0    0    0    0    0    0    0
## 5408      0    0    0    0    0    0    0    0    0    0    0
## 5409      0    0    0    0    0    0    0    1    0    0    0
## 5410      0    0    0    0    0    0    0    0    0    0    0
## 5411      0    0    0    0    0    1    0    0    0    0    0
## 5412      1    0    0    0    0    0    0    0    0    0    0
## 5413      0    0    0    0    1    0    0    0    0    0    0
## 5414      0    0    0    0    0    0    0    0    0    0    0
## 5415      0    0    0    0    0    0    0    0    0    0    0
## 5416      0    0    0    1    0    0    0    0    0    0    0
## 5417      0    0    0    0    0    0    0    0    0    0    0
## 5418      0    0    1    0    0    0    0    0    0    0    0
## 5419      0    0    0    0    0    0    0    0    1    0    0
## 5420      0    0    0    1    0    0    0    0    0    0    0
## 5421      0    0    0    1    0    0    1    0    0    0    0
```

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```
## 5422      0    0    0    0    0    0    0    0    0    1    0
## 5423      0    0    0    0    0    0    0    0    0    1    0
## 5424      0    1    0    0    0    0    0    0    0    0    0
## 5425      0    0    0    0    0    0    0    0    0    0    0
## 5426      0    0    0    1    0    0    0    0    0    0    0
## 5427      0    0    0    0    0    0    0    0    0    0    0
## 5428      0    0    0    0    0    0    0    0    0    1    0
## 5429      0    0    0    0    0    0    0    0    1    0    0
## 5430      0    1    0    0    0    0    0    0    0    0    0
## 5431      0    0    1    0    0    0    0    0    0    0    0
## 5432      0    0    0    0    0    0    0    0    0    0    0
## 5433      1    0    0    0    0    0    0    0    0    0    0
## 5434      1    0    0    0    0    0    0    0    0    0    0
## 5435      0    0    0    0    0    0    0    0    0    1    0
## 5436      0    0    0    0    0    0    0    0    0    0    1
## 5437      0    0    0    0    0    0    0    0    0    0    0
## 5438      0    0    0    0    0    0    0    0    1    0    0
## 5439      0    0    0    0    0    0    0    0    0    0    0
## 5440      0    0    0    0    0    0    0    0    0    0    0
## 5441      0    0    0    0    0    0    0    0    0    0    0
## 5442      0    0    0    0    0    0    0    0    0    1    0
## 5443      0    0    0    0    0    0    0    0    0    0    0
## 5444      0    1    0    0    0    0    0    0    0    0    0
## 5445      0    0    0    0    0    0    0    0    0    0    0
## 5446      0    0    0    0    0    0    0    0    0    0    0
## 5447      0    0    0    0    0    0    0    0    0    0    0
## 5448      1    0    0    0    0    0    0    0    0    0    0
## 5449      0    0    0    0    0    0    0    0    0    0    0
## 5450      0    0    0    0    0    0    0    1    0    0    0
## 5451      0    0    0    1    0    0    0    0    0    0    0
## 5452      0    0    0    0    0    0    0    0    0    0    0
## 5453      0    0    0    0    0    0    0    0    0    0    0
## 5454      0    0    0    1    0    0    0    0    0    0    0
## 5455      0    0    0    0    0    0    0    0    0    0    0
## 5456      0    0    1    0    0    0    0    0    0    0    0
## 5457      0    0    0    0    0    0    0    0    0    0    0
## 5458      0    0    0    0    0    0    0    1    0    0    0
## 5459      1    0    0    0    0    0    0    0    0    0    0
## 5460      0    0    0    0    0    0    0    0    0    0    0
## 5461      1    0    0    0    0    0    0    0    0    0    0
## 5462      0    0    0    1    0    0    0    0    0    0    0
## 5463      0    0    0    0    0    0    0    0    0    0    0
## 5464      0    0    0    0    0    0    0    0    0    0    0
## 5465      0    0    0    0    0    0    0    0    0    0    1
## 5466      0    0    0    0    0    0    0    0    0    0    0
## 5467      0    0    0    0    1    0    0    0    0    0    0
## 5468      0    0    0    0    0    0    0    0    0    0    0
## 5469      0    0    0    0    0    0    0    1    0    0    0
## 5470      0    0    0    0    0    0    0    0    0    0    0
## 5471      0    0    0    0    0    0    0    0    0    0    0
## 5472      0    0    1    0    0    0    0    0    0    0    0
## 5473      0    0    0    1    0    0    0    0    0    0    0
## 5474      0    0    0    0    0    0    0    0    0    0    1
## 5475      0    0    0    0    0    0    0    0    0    0    0
```

```
## 5476      0     0     0     0     0     1     0     0     0     0     0
## 5477      0     0     0     0     0     0     0     0     0     1     0
## 5478      0     0     0     0     0     0     0     0     0     0     0
## 5479      0     0     0     1     0     0     0     0     0     0     0
## 5480      0     0     0     1     0     0     0     0     0     0     0
## 5481      0     0     0     0     0     0     0     0     0     0     0
## 5482      0     0     0     0     0     0     0     0     0     0     1
## 5483      0     0     0     0     0     0     0     0     0     0     0
## 5484      0     0     0     0     0     0     0     0     0     1     0
## 5485      0     0     0     0     0     0     0     0     0     0     0
## 5486      0     1     0     0     0     0     0     0     0     0     0
## 5487      0     0     0     0     0     0     1     0     0     0     0
## 5488      0     0     0     0     0     0     0     0     0     0     0
## 5489      0     0     0     0     0     0     1     0     0     0     0
## 5490      0     0     0     0     0     0     0     1     0     0     0
## 5491      0     0     0     0     0     0     0     0     0     0     0
## 5492      0     0     0     0     0     0     0     0     0     0     0
## 5493      0     0     0     0     0     1     0     0     0     0     0
## 5494      0     0     0     0     0     0     0     0     0     0     1
## 5495      0     1     0     0     0     0     0     0     0     0     0
## 5496      0     0     0     0     0     0     0     0     0     0     0
## 5497      0     0     0     1     0     0     0     0     0     0     0
## 5498      0     0     1     0     0     0     0     0     0     0     0
## 5499      0     0     0     0     0     0     1     0     0     0     0
## 5500      0     0     0     0     0     0     0     0     0     0     0
## 5501      0     0     0     0     0     0     0     1     0     0     0
## 5502      0     0     1     0     0     0     0     0     0     0     0
## 5503      0     1     0     0     0     0     0     0     0     0     0
## 5504      0     0     0     0     0     1     0     0     0     0     0
## 5505      0     0     0     0     0     0     0     0     0     0     0
## 5506      0     0     0     0     0     1     0     0     0     0     0
## 5507      0     0     0     0     0     0     0     0     0     1     0
## 5508      0     0     0     1     0     0     0     0     0     0     0
## 5509      1     0     0     0     1     0     0     0     0     0     0
## 5510      0     0     0     0     0     1     0     0     0     0     0
## 5511      0     0     0     1     0     0     0     0     0     0     0
## 5512      0     0     0     0     0     0     0     0     0     0     0
## 5513      0     0     0     0     1     0     0     1     0     0     1
## 5514      0     0     0     0     0     0     1     0     0     0     0
## 5515      0     0     0     0     0     0     0     0     0     0     0
## 5516      0     0     0     0     0     0     0     1     0     0     0
## 5517      1     0     0     0     0     0     0     0     0     0     0
## 5518      0     0     0     0     0     0     0     0     0     0     0
## 5519      0     0     0     0     0     0     0     0     0     0     0
## 5520      0     0     0     0     0     0     1     0     0     0     0
## 5521      0     1     0     0     0     0     0     0     0     0     0
## 5522      0     0     0     0     0     0     0     0     0     0     1
## 5523      0     0     0     0     0     0     0     1     0     0     0
## 5524      0     0     0     0     0     0     0     0     1     0     0
## 5525      0     0     0     0     0     0     0     0     0     0     0
## 5526      0     0     0     0     0     0     0     0     1     0     0
## 5527      0     0     0     0     0     0     0     0     0     0     0
## 5528      0     0     0     0     0     0     0     0     0     0     0
## 5529      0     0     1     0     0     0     0     0     0     0     0
```

```
## 5530    0    1    0    0    0    0    0    0    0    0    0
## 5531    0    1    0    0    0    0    0    0    0    0    0
## 5532    0    0    0    0    0    0    0    0    0    1    0
## 5533    1    0    0    0    0    0    1    0    0    0    0
## 5534    0    0    0    0    0    0    0    0    0    0    0
## 5535    0    0    0    0    0    0    0    0    0    0    1
## 5536    0    0    0    0    0    0    0    0    0    0    0
## 5537    0    0    0    0    0    0    0    0    0    1    0
## 5538    0    0    0    0    1    0    0    0    0    0    0
## 5539    0    0    0    0    0    0    0    0    0    0    0
## 5540    0    0    0    0    0    0    0    0    0    0    0
## 5541    0    0    0    0    0    0    0    0    0    0    0
## 5542    0    0    0    0    0    0    0    0    0    0    0
## 5543    0    0    0    0    1    0    0    0    0    0    0
## 5544    0    0    0    1    0    0    0    0    0    0    0
## 5545    0    0    0    0    0    0    0    0    0    0    1
## 5546    0    0    0    0    0    0    0    1    0    0    0
## 5547    0    0    0    0    0    0    1    0    0    0    0
## 5548    0    0    1    0    0    0    0    0    0    0    0
## 5549    1    0    0    0    0    0    0    0    0    0    0
## 5550    0    0    0    1    0    0    0    0    0    0    0
## 5551    0    0    0    0    0    0    0    0    0    0    1
## 5552    0    0    0    0    0    0    0    0    0    1    0
## 5553    0    0    0    0    0    0    1    0    0    0    0
## 5554    0    0    0    0    0    0    0    0    0    0    0
## 5555    0    1    0    0    0    0    0    0    0    0    0
## 5556    0    0    0    1    0    0    0    0    0    0    0
## 5557    0    0    0    0    1    0    0    0    0    0    0
## 5558    0    0    0    0    0    0    1    0    0    0    0
## 5559    0    0    1    0    0    0    0    0    0    0    0
## 5560    1    0    0    0    0    0    0    0    0    0    0
## 5561    0    1    0    0    0    0    0    0    0    0    0
## 5562    0    0    0    0    0    0    0    2    0    0    0
## 5563    0    0    0    0    0    0    0    0    0    0    1
## 5564    0    0    0    1    0    0    0    0    0    0    0
## 5565    0    0    0    1    0    0    0    0    0    0    0
## 5566    0    0    0    0    1    0    0    0    0    0    0
## 5567    0    1    0    0    0    0    0    0    0    0    0
## 5568    0    0    0    0    0    0    0    0    0    0    0
## 5569    0    0    0    0    0    2    0    0    0    0    0
## 5570    0    0    0    0    0    0    0    0    0    0    0
## 5571    0    0    0    0    0    0    0    1    0    0    0
## 5572    0    0    0    0    0    0    0    0    0    0    0
## 5573    0    0    0    0    0    0    0    1    0    0    0
## 5574    0    0    0    0    0    0    0    0    0    0    0
## 5575    0    0    0    0    0    0    0    0    0    1    0
## 5576    0    0    0    0    0    0    0    0    1    0    0
## 5577    0    0    0    0    0    0    0    0    0    0    0
## 5578    0    0    0    0    0    0    0    0    0    0    0
## 5579    0    0    0    0    0    0    1    0    0    0    0
## 5580    0    0    0    0    0    0    1    0    0    0    0
## 5581    0    0    0    0    0    0    0    0    0    1    0
## 5582    0    0    0    0    0    0    0    0    0    0    0
## 5583    0    0    0    0    0    0    0    0    0    0    1
```

```
## 5584      0      0      0      0      0      0      0      0      0      0      0
## 5585      0      0      0      0      0      0      0      0      0      0      0
## 5586      0      0      0      0      0      0      0      0      0      0      0
## 5587      0      0      0      0      0      0      0      0      0      0      0
## 5588      0      0      0      0      0      1      0      0      0      0      0
## 5589      0      0      0      1      0      0      0      0      0      0      0
## 5590      0      0      0      0      0      0      0      0      0      1      0
## 5591      0      0      0      0      0      0      0      0      0      0      0
## 5592      0      0      0      1      0      0      0      0      0      0      0
## 5593      0      0      0      0      0      1      0      0      0      0      0
## 5594      0      0      0      0      1      0      0      0      0      0      0
## 5595      0      0      0      1      0      0      0      0      0      0      0
## 5596      0      0      0      0      0      0      0      0      0      0      0
## 5597      0      0      0      0      0      0      0      0      0      0      0
## 5598      0      1      0      0      0      0      0      0      0      0      0
## 5599      0      1      0      0      0      0      0      0      0      0      0
## 5600      0      0      0      0      0      0      0      0      0      0      0
## 5601      0      0      0      0      1      0      0      0      0      0      0
## 5602      0      0      0      0      0      0      0      0      0      0      0
## 5603      0      0      0      1      0      0      0      0      0      0      0
## 5604      0      0      0      0      0      1      0      0      0      0      0
## 5605      0      0      0      0      0      0      0      0      0      0      0
## 5606      1      0      0      0      0      0      0      0      0      0      0
## 5607      0      0      0      0      0      0      1      0      0      0      0
## 5608      0      0      0      1      0      0      0      0      0      0      0
## 5609      0      0      1      1      0      0      0      0      0      0      0
## 5610      0      0      0      0      1      0      0      0      0      0      0
## 5611      0      0      0      0      0      0      0      0      0      0      0
## 5612      0      0      0      0      0      0      0      0      1      0      0
## 5613      0      0      0      0      0      0      0      0      0      0      0
## 5614      0      0      0      0      0      0      0      0      0      0      0
## 5615      0      0      0      0      0      0      0      0      0      0      0
## 5616      1      0      0      0      0      0      0      0      0      0      0
## 5617      0      0      0      0      1      0      1      0      0      0      0
## 5618      0      0      0      0      0      0      0      0      0      0      0
## 5619      0      0      0      0      0      0      0      0      0      0      0
## 5620      0      0      0      1      0      0      0      0      0      0      0
## 5621      0      0      0      0      0      0      0      0      0      0      0
## 5622      0      0      0      1      0      0      0      0      0      0      0
## 5623      0      0      1      1      0      0      0      0      0      0      0
## 5624      0      0      0      0      0      0      0      0      0      0      0
## 5625      0      0      0      0      1      0      0      0      0      0      0
## 5626      0      0      0      0      0      0      0      0      0      0      0
## 5627      0      0      0      0      1      0      0      0      0      0      0
## 5628      0      0      0      0      0      0      0      0      0      0      0
## 5629      0      0      1      0      0      0      0      0      0      0      0
## 5630      0      0      0      0      0      0      0      0      0      0      0
## 5631      0      0      0      1      0      0      0      0      0      0      0
## 5632      0      1      0      0      0      0      0      0      0      0      0
## 5633      0      0      0      0      0      0      0      0      0      0      0
## 5634      0      0      0      0      0      0      0      0      0      0      0
## 5635      0      0      0      0      0      0      0      0      0      0      0
## 5636      0      0      0      1      0      0      0      0      0      0      0
## 5637      0      0      0      0      0      0      1      0      0      0      0
```

```
## 5638   0   0   0   0   0   0   0   0   0   0   0
## 5639   0   0   0   0   0   0   0   0   0   0   1
## 5640   0   0   0   1   0   0   0   0   0   0   0
## 5641   0   0   1   0   0   0   0   0   0   0   0
## 5642   0   0   0   1   0   0   0   0   0   0   0
## 5643   0   0   0   0   0   0   0   0   0   0   0
## 5644   0   0   0   0   1   0   0   0   0   0   0
## 5645   0   0   0   0   0   0   1   0   0   0   0
## 5646   0   0   0   0   0   0   0   0   0   0   1
## 5647   0   0   0   0   0   0   0   0   0   0   0
## 5648   0   0   0   0   0   0   0   0   0   0   0
## 5649   0   0   0   0   0   0   0   0   0   0   0
## 5650   0   0   0   0   0   0   0   0   0   0   0
## 5651   0   0   0   0   0   0   0   0   0   0   0
## 5652   0   0   0   0   0   0   0   1   0   0   0
## 5653   0   0   0   0   0   1   0   0   0   0   0
## 5654   0   0   0   0   0   0   0   0   0   0   0
## 5655   0   0   0   0   0   0   0   0   0   0   0
## 5656   0   0   0   0   0   0   1   0   0   0   0
## 5657   1   0   0   0   0   1   0   0   0   0   0
## 5658   0   0   0   0   0   0   0   0   0   0   0
## 5659   0   0   0   0   0   0   1   0   0   0   0
## 5660   0   0   0   0   0   0   0   0   0   0   0
## 5661   0   0   0   0   0   0   0   0   0   0   0
## 5662   0   0   0   0   0   0   0   0   0   0   0
## 5663   1   0   0   0   0   0   0   0   0   0   0
## 5664   1   0   0   0   0   0   0   0   0   0   0
## 5665   0   0   0   0   0   0   0   0   0   0   0
## 5666   0   0   0   0   0   0   0   0   0   0   0
## 5667   0   1   0   0   0   0   0   0   0   0   0
## 5668   0   0   0   0   0   0   0   0   0   0   1
## 5669   0   0   0   0   0   0   0   0   0   0   0
## 5670   0   0   0   0   0   0   1   0   0   0   0
## 5671   0   0   0   0   0   0   0   0   0   0   0
## 5672   0   0   0   0   0   0   0   0   0   0   0
## 5673   0   0   0   0   0   0   1   0   0   0   0
## 5674   0   0   0   0   0   0   0   0   0   0   0
## 5675   0   0   0   0   0   0   0   0   0   0   0
## 5676   0   0   1   0   0   0   0   0   0   0   0
## 5677   0   1   0   0   0   0   0   0   0   0   0
## 5678   0   0   0   0   0   0   0   0   0   0   0
## 5679   0   0   0   0   0   0   0   0   0   0   0
## 5680   0   0   0   0   0   2   0   0   0   0   0
## 5681   0   0   0   0   0   0   0   0   0   0   0
## 5682   0   0   0   0   0   0   0   0   0   0   0
## 5683   0   0   0   0   0   0   0   0   1   0   0
## 5684   0   0   0   0   0   0   0   0   0   0   0
## 5685   0   0   0   0   0   0   0   0   0   0   0
## 5686   0   0   0   0   0   0   1   0   0   0   0
## 5687   0   0   0   0   0   0   0   0   0   0   0
## 5688   0   0   0   0   0   0   0   0   0   0   0
## 5689   0   0   0   1   0   0   0   0   0   0   0
## 5690   0   0   0   0   0   0   0   0   0   0   0
## 5691   0   0   0   0   0   0   0   0   0   1   0
```

```
## 5692    0    0    1    0    0    0    0    0    0    0    0
## 5693    0    0    1    0    0    0    0    0    0    0    0
## 5694    0    0    0    0    0    0    0    1    0    0    0
## 5695    0    0    1    0    0    0    0    0    0    0    0
## 5696    0    0    0    0    0    0    0    0    0    1    0
## 5697    1    0    0    0    0    0    0    0    0    0    0
## 5698    0    0    0    0    0    0    0    0    0    0    0
## 5699    0    0    0    0    0    0    0    0    0    0    0
## 5700    0    0    0    0    0    0    0    0    0    0    0
## 5701    0    0    0    0    1    0    0    0    0    0    0
## 5702    0    0    0    0    0    0    0    0    0    1    0
## 5703    0    0    0    0    0    0    1    0    0    0    0
## 5704    0    0    0    0    0    0    0    0    0    0    0
## 5705    0    0    0    0    0    0    0    0    0    0    0
## 5706    0    0    0    0    0    0    0    0    0    0    0
## 5707    0    0    1    0    0    0    0    0    0    0    0
## 5708    0    0    0    0    0    0    0    0    0    0    0
## 5709    0    0    0    0    0    0    1    0    0    0    0
## 5710    0    0    0    0    0    0    0    0    0    0    0
## 5711    0    0    0    0    0    0    0    0    0    0    0
## 5712    0    0    0    0    0    0    1    0    0    0    0
## 5713    0    0    0    0    0    0    0    0    0    0    0
## 5714    0    0    0    0    0    0    0    0    0    0    0
## 5715    0    0    0    0    0    0    2    0    0    0    0
## 5716    0    0    0    0    0    0    1    0    0    0    0
## 5717    0    0    0    0    1    0    0    0    0    0    0
## 5718    0    0    0    0    1    0    0    0    0    0    0
## 5719    0    0    0    0    0    0    0    0    0    0    0
## 5720    0    0    0    0    0    1    0    0    0    0    0
## 5721    0    0    0    0    0    0    0    0    0    0    0
## 5722    0    0    0    0    0    0    1    0    0    0    0
## 5723    0    1    0    0    0    0    0    0    0    0    0
## 5724    0    0    0    0    0    0    1    0    0    0    0
## 5725    0    0    0    0    0    0    0    1    0    0    0
## 5726    0    0    0    0    0    0    0    0    0    0    0
## 5727    0    0    0    0    0    0    0    0    0    0    0
## 5728    0    1    0    0    0    0    0    0    0    0    0
## 5729    0    0    0    0    0    0    1    0    0    0    0
## 5730    0    0    0    0    1    0    0    0    0    1    0
## 5731    0    0    0    0    0    0    0    0    0    0    0
## 5732    0    0    0    0    0    0    0    0    0    0    0
## 5733    0    0    0    0    0    0    1    0    0    1    0
## 5734    0    0    0    0    0    0    0    0    0    0    0
## 5735    0    0    1    0    0    0    1    0    0    0    0
## 5736    0    0    0    0    0    0    0    0    0    0    0
## 5737    0    0    0    0    0    0    0    1    0    0    0
## 5738    0    0    0    0    0    0    0    0    0    0    0
## 5739    0    0    0    0    0    0    0    0    0    0    0
## 5740    0    0    0    0    0    0    0    0    0    0    0
## 5741    0    0    0    0    1    0    0    0    0    0    0
## 5742    1    0    0    0    0    0    0    0    0    0    0
## 5743    0    0    0    0    0    0    1    0    0    0    0
## 5744    0    0    0    0    0    0    0    0    0    0    0
## 5745    0    0    0    1    0    0    0    0    0    0    0
```

```
## 5746      0    0    0    0    0    0    0    0    0    0    0
## 5747      0    0    0    0    1    0    0    0    0    0    0
## 5748      0    0    0    0    0    1    0    0    0    0    0
## 5749      0    0    0    0    0    0    0    0    0    0    0
## 5750      0    0    0    0    0    0    0    0    0    0    1
## 5751      0    0    0    0    0    0    1    0    0    0    0
## 5752      0    0    0    0    0    0    0    0    0    0    1
## 5753      0    0    0    0    0    0    0    0    0    0    0
## 5754      0    0    0    0    1    0    1    0    0    0    0
## 5755      0    0    0    0    0    0    1    0    0    0    0
## 5756      0    0    0    0    0    0    0    0    0    1    0
## 5757      0    0    1    0    0    0    0    0    0    0    0
## 5758      0    0    0    1    0    0    0    0    0    0    0
## 5759      0    0    0    0    1    0    0    0    0    0    0
## 5760      1    0    0    0    0    0    0    0    0    0    0
## 5761      0    0    1    0    0    0    0    0    0    0    0
## 5762      0    0    0    0    0    0    0    0    0    1    0
## 5763      0    1    0    0    0    0    0    0    0    0    0
## 5764      0    0    0    0    0    0    0    0    0    0    0
## 5765      0    0    0    0    0    0    0    0    0    0    0
## 5766      0    0    0    0    0    0    0    0    0    0    0
## 5767      0    0    0    0    0    0    0    0    0    0    0
## 5768      0    0    0    0    0    0    0    0    0    0    0
## 5769      0    0    0    1    0    0    0    0    0    0    0
## 5770      0    0    0    0    0    0    0    0    0    0    0
## 5771      0    0    0    0    0    0    0    0    0    0    0
## 5772      0    0    0    0    0    0    2    0    0    0    0
## 5773      0    0    0    0    0    0    0    0    0    0    0
## 5774      0    0    0    0    0    0    0    0    0    0    0
## 5775      0    0    0    0    0    0    1    0    0    0    0
## 5776      0    0    0    0    0    0    0    1    0    0    0
## 5777      0    1    0    0    0    0    0    0    0    0    0
## 5778      0    1    0    0    0    0    0    0    0    0    0
## 5779      0    0    0    0    0    0    0    0    0    0    0
## 5780      0    0    0    1    0    0    0    0    0    0    0
## 5781      0    0    0    0    0    0    1    2    0    0    0
## 5782      0    0    0    0    0    0    0    0    0    0    0
## 5783      0    0    0    0    0    0    0    0    0    0    0
## 5784      0    0    0    0    0    0    0    1    0    0    0
## 5785      0    0    1    0    0    0    0    0    0    0    0
## 5786      0    0    0    0    0    0    0    0    0    0    0
## 5787      0    0    0    0    0    0    0    0    0    0    0
## 5788      1    0    0    0    0    0    1    0    0    0    0
## 5789      0    0    0    0    0    0    0    0    0    0    0
## 5790      0    0    0    0    0    0    1    0    0    0    0
## 5791      0    0    0    1    0    0    0    0    0    0    0
## 5792      0    0    0    0    0    0    0    0    0    0    0
## 5793      0    0    0    0    0    0    0    0    0    0    1
## 5794      0    0    0    1    0    0    0    0    0    0    0
## 5795      0    0    0    0    0    1    0    0    0    0    0
## 5796      0    0    0    1    0    0    0    0    0    0    0
## 5797      0    0    0    0    0    0    1    0    0    0    0
## 5798      0    0    0    0    0    1    0    0    0    0    0
## 5799      0    0    0    0    0    0    1    0    0    0    0
```

```
## 5800    0    0    0    0    0    0    0    0    0    1    0
## 5801    0    0    0    1    0    0    0    0    0    0    0
## 5802    0    0    0    0    0    1    0    0    0    0    0
## 5803    0    0    0    0    0    0    0    0    0    0    0
## 5804    0    0    0    0    0    0    0    1    0    0    0
## 5805    0    0    0    1    0    0    0    0    0    0    0
## 5806    0    0    0    0    0    0    0    0    0    0    0
## 5807    0    0    0    0    0    0    1    0    0    0    0
## 5808    0    0    0    0    0    0    0    0    0    0    0
## 5809    1    2    0    0    0    0    0    0    0    0    0
## 5810    0    0    1    0    0    0    0    0    0    0    0
## 5811    0    0    0    0    0    0    0    0    1    0    0
## 5812    0    0    0    0    0    0    0    0    0    0    0
## 5813    0    0    0    0    0    0    0    0    0    0    0
## 5814    0    0    0    0    0    0    1    0    0    0    0
## 5815    0    0    0    0    0    0    0    0    0    0    0
## 5816    0    0    0    0    0    0    0    0    0    0    0
## 5817    0    0    0    0    0    0    0    0    0    0    0
## 5818    0    0    0    1    0    0    0    1    0    0    0
## 5819    1    0    0    0    0    0    0    0    0    0    0
## 5820    0    0    0    0    0    0    0    0    0    0    0
## 5821    0    0    0    0    0    0    1    0    0    0    0
## 5822    0    0    0    0    0    0    1    0    0    0    0
## 5823    0    0    0    2    0    1    0    0    0    0    0
## 5824    0    0    0    0    0    0    0    0    0    0    0
## 5825    0    0    0    0    0    0    0    1    0    0    0
## 5826    0    0    0    0    0    0    0    0    0    0    0
## 5827    0    1    0    0    0    0    0    0    0    0    0
## 5828    0    0    0    1    0    0    0    0    0    0    0
## 5829    0    0    0    0    0    0    1    0    0    0    0
## 5830    0    1    0    0    0    0    0    0    0    0    0
## 5831    0    0    0    0    0    0    0    0    0    0    0
## 5832    0    0    0    0    0    0    0    0    0    0    0
## 5833    0    0    0    0    0    0    0    0    0    0    0
## 5834    0    0    0    0    0    0    0    1    0    1    0
## 5835    0    0    0    0    0    0    0    0    0    0    0
## 5836    0    0    0    2    0    0    0    0    0    0    0
## 5837    0    0    0    0    0    0    0    0    0    0    0
## 5838    0    0    0    0    0    0    0    1    0    0    0
## 5839    0    0    0    0    0    0    0    0    0    0    0
## 5840    0    0    0    0    0    1    0    0    0    0    0
## 5841    0    0    0    0    1    0    0    0    0    0    0
## 5842    0    0    0    0    0    0    1    0    0    0    0
## 5843    0    0    0    0    0    1    0    0    0    0    0
## 5844    0    0    0    0    0    0    0    0    0    0    0
## 5845    0    0    0    0    1    0    0    0    0    0    0
## 5846    0    0    0    0    0    0    0    0    0    0    0
## 5847    0    0    0    0    0    1    0    0    0    0    0
## 5848    0    0    0    0    0    0    0    0    0    0    0
## 5849    1    0    0    0    0    0    0    0    0    0    0
## 5850    0    0    0    0    0    0    1    0    0    0    0
## 5851    0    0    0    0    0    0    0    0    0    0    0
## 5852    0    0    0    0    0    0    0    0    0    0    0
## 5853    0    0    0    0    0    0    0    0    0    0    0
```

```
## 5854     0    0    0    0    0    0    0    0    0    0    0
## 5855     0    0    0    0    0    0    0    0    0    0    0
## 5856     0    0    0    0    0    0    0    0    0    0    0
## 5857     0    0    0    0    0    0    0    1    0    0    0
## 5858     0    0    0    0    0    0    0    1    0    0    0
## 5859     0    0    0    0    0    0    1    1    0    0    0
## 5860     0    0    0    0    0    0    0    0    0    1    0
## 5861     0    0    0    0    0    0    1    0    0    0    0
## 5862     0    0    0    0    0    0    0    0    0    0    0
## 5863     0    0    0    1    0    0    0    0    0    0    0
## 5864     0    0    0    0    0    0    0    0    0    0    0
## 5865     0    0    0    0    0    0    0    0    0    0    0
## 5866     0    0    0    0    0    0    0    0    0    0    1
## 5867     0    0    0    1    0    0    0    0    0    0    0
## 5868     0    0    0    0    0    0    0    0    1    0    0
## 5869     0    0    0    0    0    0    0    0    0    0    0
## 5870     0    0    0    0    0    0    0    0    0    0    0
## 5871     0    0    0    0    1    0    0    0    0    1    0
## 5872     0    0    0    0    0    0    0    0    0    0    0
## 5873     0    0    0    0    0    0    0    0    0    0    0
## 5874     0    0    0    0    0    0    0    1    0    0    0
## 5875     0    0    0    0    0    0    0    0    1    0    0
## 5876     0    0    0    0    0    0    0    0    0    0    0
## 5877     0    0    0    0    0    0    0    0    0    1    0
## 5878     0    0    0    0    0    0    1    0    0    0    0
## 5879     0    0    0    0    0    0    0    0    0    0    0
## 5880     0    1    0    0    0    0    0    0    0    0    0
## 5881     0    0    0    0    1    0    0    0    0    0    0
## 5882     0    0    0    0    0    0    0    1    0    0    0
## 5883     0    0    0    0    0    0    0    0    0    0    0
## 5884     0    0    0    0    0    0    0    0    0    1    0
## 5885     0    0    0    0    0    0    0    0    0    0    0
## 5886     0    0    0    0    0    0    1    0    0    0    0
## 5887     0    0    0    0    0    0    0    0    0    0    0
## 5888     0    0    0    0    0    0    0    0    0    0    0
## 5889     0    1    0    0    0    0    0    0    0    0    0
## 5890     1    0    0    0    0    0    0    0    0    0    0
## 5891     0    0    0    0    1    0    0    0    0    0    0
## 5892     0    0    0    0    0    0    0    0    0    0    0
## 5893     0    0    0    0    0    1    0    0    0    0    0
## 5894     0    1    0    0    0    0    0    0    0    0    0
## 5895     0    1    0    0    0    0    0    0    0    0    0
## 5896     0    0    0    0    0    0    0    0    0    0    0
## 5897     0    0    2    0    0    0    0    0    0    0    0
## 5898     0    0    0    0    1    0    0    0    0    0    0
## 5899     0    1    0    0    0    0    0    0    0    0    0
## 5900     0    0    0    0    0    0    0    0    0    0    0
## 5901     0    0    0    0    0    0    0    0    0    1    0
## 5902     0    1    0    0    0    0    0    0    0    0    0
## 5903     0    0    0    0    3    0    0    0    0    0    0
## 5904     0    0    0    0    0    0    0    0    0    0    0
## 5905     0    0    0    0    1    0    0    0    0    0    0
## 5906     0    0    0    1    0    0    0    0    0    0    0
## 5907     0    0    0    0    0    0    0    0    0    0    0
```

```
## 5908    1    0    0    0    0    0    0    0    0    0    0
## 5909    0    0    0    0    0    1    0    0    0    0    0
## 5910    0    0    0    0    1    0    0    0    0    0    0
## 5911    0    0    0    0    0    0    0    0    0    0    0
## 5912    1    0    0    0    0    0    0    0    0    0    0
## 5913    0    0    1    0    0    0    0    0    0    0    0
## 5914    0    0    1    0    0    0    0    0    0    0    0
## 5915    0    0    0    0    0    0    0    0    0    0    0
## 5916    0    1    0    0    1    0    0    0    0    0    0
## 5917    0    0    0    0    0    0    0    0    0    0    0
## 5918    0    0    0    0    1    0    0    0    0    0    0
## 5919    0    0    0    0    0    0    0    0    0    0    0
## 5920    0    0    0    1    0    0    1    0    0    1    0
## 5921    0    0    0    0    0    0    1    0    0    0    0
## 5922    0    0    0    0    0    0    1    0    0    0    0
## 5923    0    0    0    0    0    0    1    1    0    0    0
## 5924    0    0    0    0    0    0    1    0    0    0    0
## 5925    0    0    0    0    0    0    0    0    0    1    0
## 5926    0    0    0    0    0    0    2    0    0    0    0
## 5927    0    0    0    0    0    0    0    0    0    1    0
## 5928    0    1    0    0    0    0    0    0    0    0    0
## 5929    0    0    0    0    0    0    1    0    0    0    0
## 5930    0    0    0    1    0    0    0    0    0    0    0
## 5931    1    0    0    0    0    0    0    0    0    0    0
## 5932    0    0    0    0    0    0    0    0    0    0    0
## 5933    0    0    0    0    1    0    0    0    0    0    0
## 5934    0    0    0    0    0    0    0    0    1    0    0
## 5935    0    0    0    0    0    0    0    0    0    0    0
## 5936    0    0    1    0    0    0    0    0    0    0    0
## 5937    0    0    0    0    0    0    0    0    0    0    0
## 5938    0    0    1    0    0    0    0    0    0    0    0
## 5939    0    1    0    0    0    0    0    0    0    0    0
## 5940    0    0    0    0    0    1    0    0    0    0    0
## 5941    0    0    0    0    0    0    0    1    0    0    0
## 5942    0    0    1    0    0    0    0    0    0    0    0
## 5943    0    0    1    0    0    0    0    0    0    0    0
## 5944    0    0    0    0    0    0    0    0    0    0    0
## 5945    0    0    0    0    0    0    0    0    0    0    0
## 5946    0    1    0    0    0    1    0    0    0    0    0
## 5947    1    0    0    0    0    0    0    0    0    0    0
## 5948    0    0    0    1    0    0    0    0    0    0    0
## 5949    0    0    0    0    0    0    0    0    0    0    0
## 5950    0    0    0    1    0    0    0    0    0    0    0
## 5951    0    0    2    0    0    0    0    0    0    0    0
## 5952    0    0    0    0    0    0    1    0    0    0    0
## 5953    0    0    0    0    1    0    0    0    0    0    0
## 5954    0    0    0    1    0    0    0    0    0    0    0
## 5955    0    0    0    0    0    1    0    0    0    0    0
## 5956    0    0    0    0    1    0    0    0    0    0    0
## 5957    0    0    1    0    0    1    0    0    0    0    0
## 5958    0    0    1    1    0    0    0    0    0    0    0
## 5959    0    0    0    0    1    0    0    0    0    0    0
## 5960    0    0    1    0    0    0    0    0    0    0    0
## 5961    0    1    0    0    0    0    0    0    0    0    0
```

```
## 5962      0    0    0    0    0    0    0    0    0    0    0
## 5963      0    0    0    0    0    0    0    0    0    0    0
## 5964      0    0    0    0    0    0    0    0    0    0    0
## 5965      0    0    0    0    0    0    0    0    0    0    0
## 5966      0    0    0    0    0    0    0    0    0    0    0
## 5967      0    0    0    0    0    0    0    0    0    0    0
## 5968      0    0    0    1    0    0    0    0    0    0    0
## 5969      1    0    0    0    0    0    1    0    0    0    0
## 5970      1    0    0    0    0    0    0    0    0    0    0
## 5971      0    0    0    1    0    0    0    0    0    0    0
## 5972      0    0    0    0    0    0    0    0    0    0    0
## 5973      0    0    2    0    0    0    0    0    0    0    0
## 5974      1    0    0    0    0    0    0    0    0    0    0
## 5975      0    0    0    0    1    0    0    1    0    0    0
## 5976      0    0    0    0    0    0    0    0    0    0    0
## 5977      0    0    0    0    0    1    0    0    0    0    0
## 5978      0    0    0    0    0    0    1    0    0    0    0
## 5979      1    0    0    0    0    0    0    0    0    0    0
## 5980      0    0    0    0    0    0    0    0    0    0    0
## 5981      0    0    0    0    0    0    0    0    0    0    0
## 5982      0    0    0    0    0    3    0    0    0    0    0
## 5983      0    0    0    0    0    0    0    0    0    0    0
## 5984      0    0    0    0    0    0    0    0    0    0    0
## 5985      0    0    0    0    0    0    1    0    0    0    0
## 5986      0    0    0    0    0    0    0    0    0    0    0
## 5987      0    0    0    1    0    0    0    0    0    0    0
## 5988      0    0    0    0    0    0    0    0    0    0    0
## 5989      0    0    0    0    0    0    0    1    0    0    0
## 5990      0    0    0    0    0    0    0    0    0    0    0
## 5991      0    0    0    0    0    0    0    0    0    0    0
## 5992      0    0    0    0    0    0    0    0    0    0    0
## 5993      0    0    0    0    0    0    0    0    0    0    0
## 5994      0    0    0    1    0    0    0    0    0    0    0
## 5995      0    0    0    0    0    0    0    0    0    0    0
## 5996      0    0    0    0    0    0    0    1    0    0    0
## 5997      0    0    0    1    0    0    0    0    0    0    0
## 5998      0    0    0    0    0    1    0    0    0    0    0
## 5999      0    0    0    0    0    0    0    0    0    0    0
## 6000      0    0    0    0    0    0    0    0    0    0    0
## 6001      0    0    1    0    0    0    0    0    0    0    0
## 6002      0    0    0    0    0    0    0    0    0    0    0
## 6003      0    0    0    1    0    0    0    0    0    0    0
## 6004      0    0    0    1    0    0    0    0    0    0    0
## 6005      0    0    0    0    0    0    0    0    0    0    0
## 6006      0    0    0    0    0    0    0    0    0    0    0
## 6007      0    0    0    0    0    0    0    0    0    0    0
## 6008      0    0    0    0    0    0    0    0    0    0    0
## 6009      0    0    0    0    0    0    0    0    0    0    0
## 6010      0    0    0    0    0    0    0    0    0    0    0
## 6011      0    0    0    0    0    0    1    1    0    0    0
## 6012      0    0    0    0    0    0    0    0    0    0    0
## 6013      0    1    0    0    0    0    0    0    0    0    0
## 6014      0    0    0    1    0    0    0    0    0    0    0
## 6015      0    0    0    0    0    0    0    0    0    1    0
```

```
## 6016     0     0     0     0     0     0     0     0     0     0     0
## 6017     0     0     0     0     0     0     0     0     0     0     0
## 6018     0     0     0     0     0     0     0     0     0     0     0
## 6019     0     0     0     0     0     0     0     0     0     0     0
## 6020     0     0     0     0     0     0     0     1     0     0     0
## 6021     0     0     0     0     0     0     0     1     0     0     0
## 6022     0     0     1     0     0     0     0     0     0     0     0
## 6023     0     0     0     0     0     0     0     0     0     1     0
## 6024     1     0     0     0     0     0     0     0     0     0     0
## 6025     0     0     0     0     0     0     0     0     0     0     0
## 6026     0     0     1     0     0     0     0     0     0     0     0
## 6027     0     0     0     0     0     0     0     0     1     0     0
## 6028     0     0     0     0     0     0     0     0     0     1     0
## 6029     0     1     0     0     0     0     0     0     0     0     0
## 6030     0     0     0     0     0     0     1     0     0     0     0
## 6031     0     0     0     0     0     0     0     0     0     0     0
## 6032     0     0     0     0     0     0     0     0     0     0     0
## 6033     0     0     0     0     0     0     0     0     0     0     0
## 6034     0     0     0     0     0     0     0     0     0     0     0
## 6035     0     0     0     0     0     0     0     0     0     1     0
## 6036     0     0     0     0     0     0     0     0     0     0     0
## 6037     0     0     0     0     1     0     0     0     0     0     0
## 6038     0     0     0     0     0     0     1     0     0     0     0
## 6039     0     0     0     0     0     0     0     0     0     0     0
## 6040     0     0     0     0     0     0     0     0     0     0     0
## 6041     0     0     0     0     0     0     0     0     0     0     0
## 6042     0     0     0     0     0     0     0     0     0     0     0
## 6043     0     0     0     0     1     0     0     0     0     0     0
## 6044     0     0     0     1     0     0     0     0     1     0     0
## 6045     0     0     0     0     0     0     0     0     0     0     0
## 6046     0     0     0     0     0     0     0     0     0     0     0
## 6047     0     0     0     0     0     0     0     0     0     0     1
## 6048     0     0     0     0     0     0     0     0     1     0     0
## 6049     0     0     0     0     1     0     0     1     0     0     0
## 6050     0     0     0     0     0     0     0     1     0     0     0
## 6051     0     0     0     0     0     0     0     0     0     0     0
## 6052     0     0     0     0     0     0     0     0     0     1     0
## 6053     0     0     0     0     0     0     0     0     0     0     1
## 6054     0     0     0     0     0     0     0     0     0     1     0
## 6055     0     0     0     0     0     0     0     0     0     1     0
## 6056     0     0     0     0     0     0     0     0     0     0     0
## 6057     0     0     1     0     0     0     0     0     0     0     0
## 6058     1     0     0     1     0     0     0     1     0     0     0
## 6059     0     0     0     1     0     0     0     0     0     0     0
## 6060     0     0     0     0     0     0     0     0     0     1     0
## 6061     0     0     0     0     0     0     0     0     0     0     0
## 6062     0     0     0     0     0     0     0     0     0     0     0
## 6063     0     0     0     0     0     0     0     0     0     0     0
## 6064     0     0     0     0     0     0     0     0     0     0     1
## 6065     0     0     0     0     0     0     0     0     0     0     0
## 6066     0     0     0     0     0     0     0     0     0     0     0
## 6067     0     0     0     0     0     0     0     0     0     0     0
## 6068     0     0     0     0     0     0     0     0     0     0     0
## 6069     0     0     0     0     0     0     1     0     0     0     0
```

```
## 6070    0    0    0    0    0    0    0    1    0    0    0
## 6071    0    0    0    0    0    0    0    0    1    0    0
## 6072    0    0    0    0    0    0    1    0    0    0    0
## 6073    0    0    0    0    0    0    0    0    1    0    0
## 6074    0    0    0    0    0    0    1    0    0    0    0
## 6075    0    0    0    0    0    0    0    0    0    0    0
## 6076    0    1    0    0    0    0    0    0    0    0    0
## 6077    0    0    0    1    0    1    0    0    0    0    0
## 6078    0    0    0    0    0    0    1    0    0    0    0
## 6079    0    0    0    0    0    0    1    0    0    0    0
## 6080    0    0    0    0    0    0    0    0    0    0    0
## 6081    0    1    0    0    0    0    0    0    0    0    0
## 6082    1    0    0    0    0    0    0    0    0    0    0
## 6083    0    0    0    0    0    0    1    0    0    0    0
## 6084    0    0    0    0    0    0    0    0    1    0    0
## 6085    0    0    0    0    1    0    0    0    0    0    0
## 6086    0    0    0    1    0    0    0    0    0    0    0
## 6087    0    0    0    0    0    0    0    0    0    0    0
## 6088    0    0    0    0    0    0    0    0    0    0    0
## 6089    0    0    0    0    0    0    0    0    0    0    0
## 6090    0    0    0    0    0    0    0    0    0    0    0
## 6091    0    0    0    0    0    0    1    0    0    0    0
## 6092    0    0    0    0    0    0    1    0    0    0    0
## 6093    0    0    0    0    0    0    0    0    0    0    0
## 6094    0    0    0    0    0    0    0    0    0    0    0
## 6095    0    0    0    0    0    0    0    0    0    0    0
## 6096    0    0    0    0    0    0    0    0    1    0    0
## 6097    0    0    0    0    0    0    0    0    0    0    0
## 6098    0    0    0    0    0    1    0    0    0    0    0
## 6099    0    0    0    0    1    0    0    0    0    0    0
## 6100    0    0    0    0    0    0    0    0    0    0    0
## 6101    0    0    0    0    0    0    1    1    0    0    0
## 6102    0    0    0    0    0    0    0    0    0    0    0
## 6103    0    0    0    0    1    0    0    0    0    0    0
## 6104    0    0    0    0    0    0    0    0    0    0    0
## 6105    1    0    0    0    0    0    0    0    0    0    0
## 6106    0    0    0    0    0    0    0    0    0    0    1
## 6107    0    0    0    0    1    0    0    0    0    0    0
## 6108    0    0    0    0    0    0    0    0    0    0    0
## 6109    0    0    0    0    0    0    0    0    0    0    0
## 6110    0    0    0    0    0    0    0    0    0    0    0
## 6111    0    0    0    0    0    0    0    1    0    0    0
## 6112    0    0    0    0    0    0    0    0    0    0    0
## 6113    0    0    0    0    0    0    0    0    0    0    0
## 6114    0    0    0    0    0    0    0    0    0    0    0
## 6115    0    0    0    0    0    0    0    1    0    0    0
## 6116    0    0    0    0    0    0    0    0    0    0    0
## 6117    0    0    0    1    0    0    0    0    0    0    0
## 6118    0    0    0    0    0    0    0    0    0    0    1
## 6119    0    0    0    0    0    0    0    0    0    0    0
## 6120    0    0    0    0    0    0    1    0    0    0    0
## 6121    1    0    0    0    0    0    0    0    0    0    0
## 6122    0    1    1    0    0    0    0    0    0    0    0
## 6123    0    0    1    0    0    0    0    0    0    0    0
```

```
## 6124     0     0     0     0     0     0     0     0     0     1     0
## 6125     0     0     1     0     0     0     0     0     0     0     0
## 6126     0     0     0     1     0     0     0     0     0     0     0
## 6127     0     0     0     0     0     0     0     0     0     0     0
## 6128     0     0     0     0     0     0     0     0     0     0     0
## 6129     0     0     0     0     0     0     0     0     0     0     0
## 6130     0     0     0     0     0     0     1     0     0     0     0
## 6131     0     0     0     0     0     0     0     0     0     0     0
## 6132     0     0     0     0     0     0     0     1     0     0     0
## 6133     0     0     0     0     0     0     0     0     0     0     0
## 6134     0     0     0     0     0     0     0     0     0     0     0
## 6135     0     0     0     0     0     0     0     0     0     0     0
## 6136     0     0     0     0     0     0     0     0     0     0     0
## 6137     0     0     0     0     0     0     0     0     0     0     0
## 6138     0     0     0     0     0     0     0     0     1     0     0
## 6139     0     0     0     0     0     0     0     0     2     0     0
## 6140     0     0     0     0     0     0     1     0     0     0     0
## 6141     0     0     1     0     0     0     0     0     0     0     0
## 6142     0     1     0     0     0     0     0     0     0     0     0
## 6143     0     0     0     0     1     0     0     0     0     0     0
## 6144     0     0     0     0     0     0     0     0     0     0     0
## 6145     0     0     1     0     0     0     0     0     0     0     0
## 6146     0     0     0     1     0     0     0     0     0     0     0
## 6147     0     1     0     0     0     0     0     0     0     0     0
## 6148     0     0     0     0     1     0     0     0     0     0     0
## 6149     0     0     0     0     0     0     1     0     0     0     0
## 6150     0     0     0     0     0     0     1     0     0     0     0
## 6151     0     0     0     0     1     0     0     0     0     0     0
## 6152     0     0     0     0     1     0     0     0     0     0     0
## 6153     0     0     0     0     0     0     0     0     0     0     0
## 6154     0     0     0     0     1     0     0     0     0     0     0
## 6155     0     0     0     0     0     0     0     0     0     0     0
## 6156     0     0     0     0     0     0     1     0     0     0     0
## 6157     0     0     0     0     0     0     0     0     0     0     0
## 6158     0     0     0     0     0     0     0     0     0     0     0
## 6159     0     0     0     0     0     0     0     0     0     0     0
## 6160     0     0     0     0     0     0     0     0     0     2     0
## 6161     0     0     0     0     0     0     0     1     0     0     0
## 6162     0     0     0     0     0     0     0     0     0     0     0
## 6163     0     0     0     0     0     0     1     0     0     0     0
## 6164     0     0     0     0     0     0     0     1     0     0     0
## 6165     0     0     0     0     0     1     0     1     0     0     0
## 6166     0     1     1     0     0     0     0     0     0     0     0
## 6167     0     0     0     0     0     0     0     0     0     0     0
## 6168     0     0     0     0     0     1     0     0     0     0     0
## 6169     1     0     0     0     0     0     0     0     0     0     0
## 6170     0     1     0     0     0     0     0     0     0     0     0
## 6171     0     0     1     0     0     0     0     0     0     0     0
## 6172     0     1     0     0     0     0     0     0     0     0     0
## 6173     0     1     0     0     0     0     0     0     0     0     0
## 6174     0     1     0     0     0     0     0     0     0     0     0
## 6175     0     0     1     0     0     0     0     0     0     0     0
## 6176     0     0     1     0     0     0     0     0     0     0     0
## 6177     0     0     0     0     0     0     0     0     0     0     0
```

```
## 6178       0   0   0   0   0   0   0   0   0   0   0
## 6179       0   0   0   0   0   0   0   0   0   0   0
## 6180       0   0   0   0   0   0   0   0   0   2   0
## 6181       0   0   0   0   0   0   1   0   0   0   0
## 6182       0   0   0   1   0   0   0   0   0   0   0
## 6183       2   1   0   0   0   1   0   1   0   0   0
## 6184       0   0   1   0   0   0   0   0   0   0   0
## 6185       0   0   0   0   0   0   0   0   0   0   1
## 6186       0   0   0   0   0   0   0   2   0   0   0
## 6187       0   0   0   0   0   0   1   0   0   0   0
## 6188       0   0   0   0   0   0   0   0   1   0   0
## 6189       0   0   0   0   0   0   0   0   0   0   0
## 6190       0   1   0   0   0   0   0   0   0   0   0
## 6191       0   0   0   0   0   0   0   0   0   0   0
## 6192       0   1   0   0   0   0   0   0   0   0   0
## 6193       0   0   0   0   0   0   0   0   0   0   0
## 6194       0   1   0   0   0   0   0   0   0   0   0
## 6195       0   1   1   0   0   0   0   0   0   0   0
## 6196       0   0   0   1   0   0   1   0   0   0   0
## 6197       0   0   0   0   0   0   0   0   0   1   0
## 6198       0   0   0   0   0   0   0   0   0   0   0
## 6199       0   0   0   0   0   1   0   0   0   0   0
## 6200       0   0   0   0   1   0   0   0   0   0   0
## 6201       0   0   0   1   0   0   0   0   0   0   0
## 6202       0   0   0   1   0   0   0   0   0   0   0
## 6203       0   0   0   0   0   0   0   1   0   0   0
## 6204       0   0   1   0   0   0   0   0   0   0   0
## 6205       0   0   0   0   0   0   1   0   0   0   0
## 6206       0   0   1   0   0   0   0   0   0   0   0
## 6207       0   0   0   0   0   0   0   0   0   1   0
## 6208       0   0   0   0   0   0   0   0   0   0   1
## 6209       0   0   0   0   0   0   0   0   0   0   0
## 6210       1   0   0   0   0   0   0   0   0   0   0
## 6211       0   0   3   0   0   0   0   0   0   0   0
## 6212       0   0   0   1   0   0   0   0   0   0   0
## 6213       0   0   0   0   0   1   0   0   0   0   0
## 6214       0   0   0   0   1   0   0   0   0   0   0
## 6215       0   1   0   0   0   0   0   0   0   0   0
## 6216       0   0   0   0   1   0   0   0   0   0   0
## 6217       1   0   0   0   0   0   0   0   0   0   0
## 6218       1   0   0   0   0   0   0   0   0   0   0
## 6219       0   1   0   0   0   0   0   0   0   0   0
## 6220       1   0   0   0   0   0   0   0   0   0   0
## 6221       1   0   0   0   0   0   0   0   0   0   1
## 6222       0   1   0   0   0   0   0   0   0   0   0
## 6223       0   0   0   0   0   0   0   0   0   0   0
## 6224       0   0   0   0   0   0   0   1   0   0   0
## 6225       0   0   0   0   0   1   0   0   0   0   0
## 6226       0   0   0   0   0   0   0   0   0   0   0
## 6227       0   0   0   0   0   0   0   0   0   0   0
## 6228       1   0   0   0   0   0   0   0   0   0   0
## 6229       0   0   0   0   0   1   0   0   0   0   0
## 6230       0   0   0   0   0   0   0   0   0   0   0
## 6231       0   1   0   0   0   0   0   0   0   0   0
```

```
## 6232    1    0    0    0    0    0    0    0    0    0    0
## 6233    0    0    0    0    0    1    0    0    0    0    0
## 6234    0    0    0    0    0    0    0    0    0    0    0
## 6235    0    0    0    0    0    0    0    0    0    0    0
## 6236    0    0    0    0    0    0    0    0    0    0    0
## 6237    0    1    0    0    0    0    0    0    0    0    0
## 6238    0    0    0    0    0    0    0    0    0    0    0
## 6239    0    0    0    1    0    0    0    0    0    0    0
## 6240    0    0    0    0    0    0    0    0    0    0    0
## 6241    0    0    0    1    0    0    0    0    0    0    0
## 6242    0    1    0    0    0    0    0    0    0    0    0
## 6243    0    0    1    0    0    0    0    0    0    0    0
## 6244    1    0    0    0    0    0    0    0    0    0    0
## 6245    0    0    0    1    0    0    0    0    0    0    0
## 6246    0    0    0    1    0    0    0    0    0    0    0
## 6247    0    0    0    0    0    0    1    0    0    0    0
## 6248    0    0    0    0    0    0    0    0    0    0    0
## 6249    0    0    0    0    0    0    0    0    0    0    0
## 6250    0    0    0    0    0    0    0    0    0    0    0
## 6251    0    0    0    0    0    0    0    0    0    0    0
## 6252    0    0    0    0    0    0    0    1    0    0    0
## 6253    0    0    0    0    1    0    0    0    0    0    0
## 6254    0    1    0    0    0    0    0    0    0    0    0
## 6255    0    0    1    0    0    0    0    0    0    0    0
## 6256    0    0    0    0    0    0    0    0    0    0    0
## 6257    0    0    0    0    0    0    0    0    0    0    1
## 6258    0    0    0    0    0    0    1    0    0    0    0
## 6259    0    0    0    0    0    0    0    0    0    0    0
## 6260    0    0    0    0    0    0    0    0    0    0    0
## 6261    0    0    0    0    0    0    1    0    0    0    0
## 6262    0    0    0    0    0    0    0    0    0    0    0
## 6263    0    0    0    0    0    0    0    0    0    0    0
## 6264    0    0    0    0    0    1    0    0    0    0    0
## 6265    0    0    0    0    0    0    0    0    0    0    0
## 6266    0    0    0    0    0    1    0    0    0    0    0
## 6267    0    0    1    0    0    0    0    0    0    0    0
## 6268    0    0    0    0    0    0    0    0    0    0    0
## 6269    0    0    0    0    0    0    0    0    0    0    1
## 6270    0    0    0    0    0    0    0    0    0    0    0
## 6271    1    0    0    0    0    0    0    0    0    0    0
## 6272    0    0    0    0    1    0    0    0    0    0    0
## 6273    0    0    0    0    0    0    0    1    0    0    0
## 6274    0    0    0    1    0    0    0    0    0    0    0
## 6275    0    0    0    0    0    0    0    0    0    0    0
## 6276    0    0    0    0    1    0    0    0    0    0    0
## 6277    0    0    0    0    0    0    0    0    0    0    0
## 6278    0    0    0    0    0    0    1    0    0    0    0
## 6279    0    0    0    0    0    0    1    0    0    0    0
## 6280    0    0    0    1    0    0    0    0    0    0    0
## 6281    0    0    0    0    0    0    0    0    0    0    0
## 6282    0    0    0    0    0    0    0    0    0    0    0
## 6283    0    0    0    0    0    0    0    0    0    0    0
## 6284    0    0    0    0    0    0    0    0    0    0    0
## 6285    0    1    0    0    0    0    0    0    0    0    0
```

```
## 6286       0    0    0    0    0    0    0    0    0    0    0
## 6287       0    0    0    0    0    0    0    0    0    0    0
## 6288       0    0    0    0    0    0    0    0    0    0    0
## 6289       0    0    0    0    0    0    0    0    0    0    0
## 6290       0    0    0    0    0    0    0    0    0    0    0
## 6291       0    0    0    0    0    1    0    0    0    0    0
## 6292       0    0    0    0    0    0    0    0    0    0    0
## 6293       0    0    0    0    0    0    0    0    0    0    0
## 6294       0    0    0    0    0    0    0    0    0    0    0
## 6295       0    0    1    0    0    0    0    0    0    0    0
## 6296       0    0    0    0    0    0    0    0    0    1    0
## 6297       0    0    0    0    0    0    0    0    0    0    0
## 6298       0    0    0    0    0    0    0    0    1    0    0
## 6299       0    0    0    0    0    0    0    0    0    1    0
## 6300       1    0    0    0    0    0    0    0    0    0    0
## 6301       0    0    0    0    0    0    0    0    0    0    1
## 6302       0    0    0    0    0    0    0    0    0    0    0
## 6303       0    0    1    0    0    0    0    0    0    0    0
## 6304       0    0    0    0    0    0    0    0    0    1    0
## 6305       0    0    0    0    0    0    0    0    0    0    0
## 6306       0    0    0    0    0    0    1    0    0    0    0
## 6307       0    0    0    0    0    0    1    0    0    0    0
## 6308       0    2    0    0    0    0    0    0    0    1    0
## 6309       0    0    0    1    0    0    0    0    0    0    0
## 6310       0    0    0    0    0    0    0    0    0    0    0
## 6311       0    0    0    0    0    0    0    0    0    0    0
## 6312       0    0    0    0    0    0    0    1    0    0    0
## 6313       0    0    0    0    0    0    0    0    0    0    0
## 6314       0    0    0    0    0    0    0    0    0    0    0
## 6315       0    0    0    0    0    1    0    0    0    0    0
## 6316       0    0    0    0    0    0    1    0    0    0    0
## 6317       0    0    0    1    0    0    0    0    0    0    0
## 6318       0    0    0    0    0    0    0    0    0    0    0
## 6319       0    0    0    0    0    0    0    0    0    1    0
## 6320       0    0    0    0    0    0    0    0    0    0    0
## 6321       0    0    0    0    0    0    1    0    0    0    0
## 6322       0    0    0    0    0    0    0    0    0    0    0
## 6323       1    0    0    0    0    0    0    0    0    0    0
## 6324       0    0    0    0    0    0    0    0    0    0    0
## 6325       0    0    0    0    0    0    0    0    0    0    0
## 6326       0    0    0    0    0    0    0    0    0    0    0
## 6327       0    0    0    0    0    1    0    0    0    0    0
## 6328       0    0    0    0    0    0    0    0    0    0    0
## 6329       0    0    0    0    0    0    0    0    0    0    0
## 6330       0    0    0    0    0    0    0    0    0    0    0
## 6331       0    0    0    0    0    0    0    0    0    0    0
## 6332       0    0    0    0    0    0    0    0    0    0    0
## 6333       0    0    0    0    0    0    0    0    0    0    0
## 6334       0    0    0    0    0    0    0    0    0    0    0
## 6335       0    0    0    0    0    0    0    0    0    0    0
## 6336       0    0    0    0    0    0    0    0    0    0    0
## 6337       0    0    0    0    0    0    0    0    0    0    0
## 6338       0    0    0    0    0    0    0    0    0    0    0
## 6339       0    0    0    0    0    0    0    0    0    0    0
```

```
## 6340    1    0    0    0    0    0    0    0    0    0    0
## 6341    1    0    0    0    0    0    0    0    0    0    0
## 6342    0    0    0    0    0    0    0    0    0    0    0
## 6343    0    0    0    0    0    0    0    0    2    0    0
## 6344    0    0    0    0    0    0    0    0    0    0    0
## 6345    0    0    0    0    0    0    0    0    1    0    0
## 6346    0    1    0    0    0    0    0    0    0    0    0
## 6347    0    0    0    0    0    0    0    0    2    0    0
## 6348    0    0    0    0    0    0    1    0    0    0    0
## 6349    0    0    0    0    0    0    0    0    0    0    0
## 6350    0    0    0    0    0    0    0    0    0    0    0
## 6351    0    0    0    0    0    0    0    0    0    0    0
## 6352    0    0    0    0    0    0    0    0    0    0    0
## 6353    0    0    0    0    0    0    0    0    0    0    0
## 6354    0    0    0    1    0    0    0    0    0    0    0
## 6355    0    0    0    0    0    0    0    0    0    0    1
## 6356    0    0    0    0    0    0    0    0    0    0    0
## 6357    0    0    0    0    0    0    0    0    0    0    0
## 6358    0    0    0    0    0    0    0    1    0    0    0
## 6359    0    0    0    0    0    0    0    0    0    0    0
## 6360    0    0    0    0    0    0    0    0    0    0    0
## 6361    0    0    0    1    0    0    0    0    0    0    0
## 6362    0    0    0    1    0    0    0    0    0    0    0
## 6363    0    0    0    0    0    0    1    0    0    0    0
## 6364    0    0    0    1    0    0    0    0    0    0    0
## 6365    0    0    0    0    0    0    0    1    0    0    0
## 6366    0    0    0    0    2    0    0    0    0    0    0
## 6367    1    0    0    0    0    0    0    0    0    0    0
## 6368    0    0    0    0    0    0    0    0    0    0    0
## 6369    0    0    0    0    0    0    0    0    0    0    1
## 6370    0    0    0    0    0    0    1    0    0    0    0
## 6371    0    0    0    0    0    0    0    0    0    0    0
## 6372    0    0    0    0    0    0    0    0    0    0    0
## 6373    0    0    0    0    0    0    0    0    0    0    0
## 6374    0    0    0    0    0    0    0    0    0    0    0
## 6375    0    0    0    0    0    0    0    0    0    0    0
## 6376    0    0    1    0    0    0    0    0    0    0    0
## 6377    0    0    0    0    0    0    0    0    0    0    0
## 6378    0    0    0    1    0    0    0    0    0    0    0
## 6379    0    0    0    0    0    0    0    0    0    0    0
## 6380    0    0    0    0    0    0    0    0    0    0    0
## 6381    0    0    0    0    0    0    0    0    0    0    0
## 6382    0    0    0    0    0    0    0    0    0    0    1
## 6383    1    0    0    0    0    0    0    0    0    0    0
## 6384    0    0    0    0    0    0    0    0    0    0    0
## 6385    0    0    0    0    0    1    0    1    0    0    0
## 6386    0    1    0    0    0    0    0    0    0    0    0
## 6387    0    1    0    0    0    0    0    0    0    0    0
## 6388    0    0    0    0    0    1    0    0    0    0    0
## 6389    0    1    0    0    0    0    0    0    0    0    0
## 6390    0    0    0    0    0    0    0    0    0    0    0
## 6391    0    0    0    0    0    0    0    0    0    0    0
## 6392    0    0    0    0    1    0    0    0    0    0    0
## 6393    0    0    0    0    0    0    0    1    0    0    0
```

```
## 6394    0    0    0    0    0    0    1    0    0    0    0
## 6395    0    0    0    0    0    0    0    0    0    0    1
## 6396    0    0    0    0    0    0    1    0    0    0    0
## 6397    0    1    0    1    0    0    0    0    0    0    0
## 6398    0    0    1    0    0    0    0    0    0    0    0
## 6399    0    0    0    0    0    0    0    0    0    0    0
## 6400    0    0    0    0    0    0    1    0    0    0    0
## 6401    0    0    0    1    0    0    0    0    0    0    0
## 6402    0    0    0    0    0    0    0    0    0    0    0
## 6403    0    0    0    0    0    0    0    0    0    0    0
## 6404    0    0    0    0    1    0    0    0    0    1    0
## 6405    0    0    0    0    0    0    0    0    0    1    0
## 6406    0    0    0    1    0    0    0    0    0    0    0
## 6407    0    0    0    0    0    0    0    0    0    1    0
## 6408    0    0    0    0    0    0    0    0    0    0    0
## 6409    0    0    0    0    0    0    0    0    0    0    0
## 6410    0    0    0    0    0    2    0    0    0    0    0
## 6411    0    0    0    0    1    0    0    0    0    0    0
## 6412    0    0    0    0    0    1    0    0    0    0    0
## 6413    0    0    0    0    0    0    0    0    0    0    0
## 6414    0    0    1    0    0    0    0    0    0    0    0
## 6415    0    0    0    0    0    0    0    0    0    0    0
## 6416    0    0    1    0    0    0    0    0    0    0    0
## 6417    0    0    0    0    1    0    0    0    0    0    0
## 6418    0    0    0    0    0    0    0    0    0    0    0
## 6419    0    0    0    0    0    0    0    0    0    0    0
## 6420    0    0    0    0    0    0    0    0    0    0    0
## 6421    0    0    0    0    0    0    0    1    0    0    0
## 6422    0    0    0    0    0    0    0    0    0    0    0
## 6423    0    0    0    0    0    0    0    0    0    0    0
## 6424    0    0    0    0    0    0    0    0    0    0    0
## 6425    0    0    0    0    0    0    0    0    0    0    0
## 6426    0    0    0    0    0    0    0    1    0    0    0
## 6427    0    0    0    0    0    1    0    0    0    0    0
## 6428    0    0    0    0    0    0    0    0    0    0    0
## 6429    0    0    0    0    0    0    1    0    0    0    0
## 6430    1    0    0    0    0    0    0    0    0    0    0
## 6431    1    0    0    0    0    0    0    0    0    0    0
## 6432    0    0    0    0    0    0    0    1    0    0    0
## 6433    0    0    0    1    0    0    0    0    0    0    0
## 6434    0    0    0    0    0    0    0    1    0    0    0
## 6435    0    0    0    1    0    0    0    0    0    0    0
## 6436    0    0    0    0    0    0    0    0    0    1    0
## 6437    0    0    0    0    0    0    0    0    0    0    0
## 6438    0    0    0    0    0    0    0    0    0    0    0
## 6439    0    0    0    0    0    0    0    0    0    0    0
## 6440    0    0    0    0    0    0    0    1    0    0    0
## 6441    0    0    0    0    0    0    1    0    0    0    0
## 6442    0    0    0    0    0    0    1    0    0    0    0
## 6443    0    0    0    0    0    0    0    0    1    0    0
## 6444    1    0    0    0    0    0    0    0    0    0    0
## 6445    1    0    0    0    0    0    0    0    0    0    0
## 6446    0    0    0    1    0    0    0    0    0    0    0
## 6447    0    0    0    0    0    0    0    0    0    0    0
```

```
## 6448    1    0    0    0    0    0    0    0    0    0    0
## 6449    0    0    0    0    0    0    0    0    0    0    0
## 6450    0    0    0    0    0    0    0    0    0    0    0
## 6451    0    0    0    0    0    0    0    0    0    0    0
## 6452    0    0    0    0    0    0    0    0    0    0    0
## 6453    0    0    0    0    0    0    0    0    0    0    0
## 6454    0    0    0    0    0    0    0    0    0    0    0
## 6455    0    0    0    0    0    0    0    0    0    1    0
## 6456    0    0    0    0    0    0    0    0    0    1    0
## 6457    0    0    0    0    0    0    2    0    0    0    0
## 6458    0    0    0    0    0    0    0    0    0    0    0
## 6459    0    0    0    0    0    0    0    0    0    0    0
## 6460    0    0    0    0    1    0    0    0    0    1    0
## 6461    0    0    0    0    0    0    1    0    0    0    0
## 6462    0    0    0    0    0    0    0    0    0    0    0
## 6463    0    0    0    0    0    0    0    0    0    0    0
## 6464    0    0    0    0    1    0    0    0    0    0    0
## 6465    0    0    0    0    0    0    0    0    0    0    0
## 6466    0    0    0    0    1    0    0    0    0    0    0
## 6467    0    0    0    0    0    0    0    0    2    0    0
## 6468    0    0    1    0    0    0    0    0    0    0    0
## 6469    0    0    0    0    0    0    0    0    0    0    0
## 6470    0    0    0    0    0    0    0    0    0    0    0
## 6471    0    0    0    0    0    0    1    0    0    0    0
## 6472    0    0    0    0    0    0    0    0    1    0    0
## 6473    0    0    0    0    0    0    1    0    0    0    0
## 6474    0    0    0    0    0    0    0    0    0    0    1
## 6475    0    0    0    0    0    0    1    0    0    0    0
## 6476    0    0    0    0    0    1    0    0    0    0    0
## 6477    0    0    0    0    0    1    0    0    0    0    0
## 6478    0    0    0    0    0    0    0    1    0    0    0
## 6479    0    0    0    0    1    0    0    0    0    0    0
## 6480    0    0    0    0    0    0    0    0    0    1    0
## 6481    0    0    0    0    0    0    0    0    0    0    0
## 6482    0    0    0    0    0    0    0    0    0    0    0
## 6483    0    0    0    0    1    0    0    0    0    0    0
## 6484    0    0    0    0    0    0    0    0    0    0    0
## 6485    0    0    0    0    0    0    0    0    0    0    0
## 6486    0    0    0    0    0    0    0    0    1    0    0
## 6487    0    0    0    0    0    0    0    0    0    0    0
## 6488    0    0    0    0    0    0    0    0    0    0    0
## 6489    0    0    0    0    1    0    0    0    0    0    0
## 6490    0    0    0    1    0    0    0    0    0    0    0
## 6491    0    0    0    0    0    0    0    0    0    0    0
## 6492    0    1    0    0    0    0    0    0    0    0    0
## 6493    0    0    0    0    0    0    0    0    0    0    0
## 6494    0    0    0    0    0    0    0    0    0    0    0
## 6495    0    0    0    1    0    0    0    0    0    0    0
## 6496    0    0    0    0    0    0    0    0    0    0    0
## 6497    0    0    0    0    0    0    0    0    0    0    0
## 6498    0    0    0    0    1    0    0    0    0    0    0
## 6499    0    0    0    0    0    1    1    0    0    0    0
## 6500    0    0    0    0    0    0    0    0    0    0    0
## 6501    0    0    0    0    0    1    0    0    0    0    0
```

```
## 6502        0    0    0    0    0    0    0    0    0    0    0
## 6503        0    0    0    0    0    0    1    1    0    0    0
## 6504        0    0    0    0    0    0    0    0    0    0    0
## 6505        0    0    0    0    0    0    0    0    1    0    0
## 6506        0    1    0    0    0    0    0    0    0    0    0
## 6507        0    1    0    0    0    0    0    0    0    0    0
## 6508        0    0    0    0    0    0    0    0    0    0    0
## 6509        1    0    0    0    0    0    0    0    0    0    0
## 6510        0    1    0    0    0    0    0    0    0    0    0
## 6511        0    0    0    0    0    0    0    0    1    0    0
## 6512        0    1    1    0    0    0    0    0    0    0    0
## 6513        0    1    0    0    0    0    0    0    0    0    0
## 6514        0    0    1    0    1    0    0    0    0    0    0
## 6515        0    1    0    0    0    0    0    0    0    0    0
## 6516        0    1    0    0    0    0    0    0    0    0    0
## 6517        0    0    1    0    0    0    0    0    0    0    0
## 6518        0    0    1    0    0    0    0    0    0    0    0
## 6519        1    0    0    0    0    0    0    0    0    0    0
## 6520        0    0    0    0    0    0    1    0    0    0    0
## 6521        0    0    1    0    0    0    0    0    0    0    0
## 6522        0    0    0    0    0    0    1    0    0    0    0
## 6523        1    0    0    0    0    0    0    0    0    0    0
## 6524        0    0    0    0    0    0    0    0    1    0    0
## 6525        0    0    1    0    0    0    0    0    0    0    0
## 6526        0    0    0    0    0    0    0    0    0    0    1
## 6527        0    0    0    0    0    0    0    0    0    0    1
## 6528        0    0    0    1    0    0    0    0    0    0    0
## 6529        0    0    0    0    0    0    0    0    0    1    0
## 6530        0    0    0    0    0    0    0    0    1    0    0
## 6531        0    0    1    0    0    0    0    0    0    0    0
## 6532        0    1    0    0    0    0    0    0    0    0    0
## 6533        0    0    0    0    0    0    0    0    0    0    0
## 6534        0    0    0    0    0    0    0    0    0    0    0
## 6535        0    0    0    0    1    0    0    0    0    0    0
## 6536        0    0    0    0    1    0    0    0    0    0    0
## 6537        0    0    1    0    0    0    0    0    0    0    0
## 6538        0    0    0    0    0    0    0    1    0    0    0
## 6539        0    1    0    0    1    0    0    0    0    0    0
## 6540        0    1    0    0    0    0    0    0    0    0    0
## 6541        0    0    0    0    0    0    1    0    0    0    0
## 6542        0    0    0    0    0    0    0    0    0    0    0
## 6543        0    0    1    0    0    0    0    0    0    0    0
## 6544        0    0    0    0    0    0    0    0    0    0    0
## 6545        0    0    0    0    0    0    0    0    0    0    0
## 6546        0    0    0    0    0    0    0    0    0    0    0
## 6547        0    0    0    0    0    0    1    0    0    0    0
## 6548        0    0    0    0    0    0    1    0    0    0    0
## 6549        0    0    1    0    0    0    0    0    0    0    0
## 6550        0    0    1    0    0    0    0    0    0    0    0
## 6551        0    0    0    0    0    0    0    0    0    0    0
## 6552        0    0    0    0    1    0    0    0    0    0    0
## 6553        0    0    0    0    0    0    0    0    0    0    0
## 6554        0    0    1    0    0    0    0    0    0    0    0
## 6555        0    0    0    0    0    0    0    0    0    0    0
```

```
## 6556    0    0    0    0    0    0    0    0    0    0    0
## 6557    0    1    0    0    0    0    0    0    0    0    0
## 6558    0    0    0    2    0    0    0    0    0    0    0
## 6559    0    1    0    0    0    0    1    0    0    0    0
## 6560    0    0    0    1    0    0    0    0    0    0    1
## 6561    0    0    0    0    0    0    0    0    0    0    1
## 6562    0    0    0    0    0    0    0    0    0    0    0
## 6563    0    0    0    0    0    0    0    0    0    0    0
## 6564    0    0    0    0    0    0    1    0    0    0    0
## 6565    0    0    0    0    0    0    0    0    0    0    0
## 6566    0    0    0    0    0    0    0    0    0    0    0
## 6567    0    0    0    1    0    0    0    0    0    0    0
## 6568    0    0    0    0    0    0    0    0    0    0    0
## 6569    0    0    0    1    0    0    0    0    0    0    0
## 6570    0    0    0    1    0    0    1    0    0    0    0
## 6571    0    0    0    0    0    0    0    0    0    0    0
## 6572    0    0    0    0    0    0    0    0    0    0    0
## 6573    0    0    0    0    1    0    0    0    0    0    0
## 6574    0    0    0    0    0    1    0    0    0    0    0
## 6575    2    0    0    0    0    0    0    0    0    0    0
## 6576    0    1    0    0    0    0    0    0    0    0    0
## 6577    0    0    0    0    0    0    0    0    0    0    0
## 6578    0    0    0    0    0    0    0    0    0    0    0
## 6579    0    0    0    0    0    0    0    0    0    0    0
## 6580    0    0    0    0    0    0    1    0    0    0    0
## 6581    0    0    0    0    0    0    0    0    0    0    0
## 6582    0    0    0    0    0    0    0    0    0    0    0
## 6583    0    0    0    0    1    0    0    0    0    0    0
## 6584    0    0    0    0    0    0    0    0    0    0    0
## 6585    0    0    0    0    0    0    0    0    0    0    1
## 6586    0    0    0    0    0    0    0    0    0    0    0
## 6587    0    0    0    0    0    0    1    0    0    0    0
## 6588    0    0    0    0    0    1    0    0    0    0    0
## 6589    0    0    0    0    0    0    0    1    0    0    0
## 6590    0    0    0    0    0    0    0    0    0    0    0
## 6591    0    0    2    0    0    0    0    0    0    0    0
## 6592    0    0    0    0    0    0    0    0    0    0    0
## 6593    0    0    0    0    0    0    0    0    1    0    0
## 6594    0    0    0    0    1    0    0    0    0    0    0
## 6595    0    0    0    0    0    0    0    0    0    0    0
## 6596    0    0    0    0    0    0    0    0    0    1    0
## 6597    0    0    0    0    0    1    0    0    0    0    0
## 6598    0    0    0    0    0    0    0    2    0    0    0
## 6599    0    0    0    0    0    0    0    1    0    0    0
## 6600    0    0    0    0    1    0    0    0    0    0    0
## 6601    0    0    0    0    0    0    0    0    0    0    0
## 6602    0    0    0    0    0    0    0    0    0    0    0
## 6603    0    0    1    0    0    0    0    0    0    0    0
## 6604    0    0    0    0    1    0    0    0    0    0    0
## 6605    0    0    0    0    0    0    0    0    0    0    0
## 6606    0    0    0    0    0    0    0    0    0    1    0
## 6607    0    0    0    1    1    0    0    0    0    0    0
## 6608    0    0    0    0    0    0    1    0    0    0    0
## 6609    0    0    0    0    0    1    0    0    0    0    0
```

```
## 6610      0      1      0      0      0      0      0      0      0      0      0
## 6611      0      0      0      0      0      1      0      0      0      0      0
## 6612      0      0      0      0      0      0      0      0      0      0      0
## 6613      0      0      0      0      0      1      0      0      0      0      0
## 6614      0      0      0      2      0      0      0      0      0      0      0
## 6615      0      0      0      0      1      0      0      0      0      0      0
## 6616      0      0      0      1      0      0      1      0      0      0      0
## 6617      0      0      0      0      1      0      0      0      0      0      0
## 6618      0      0      0      0      0      0      0      0      0      0      0
## 6619      0      2      0      0      0      0      0      0      0      0      0
## 6620      0      0      0      0      0      0      1      0      0      0      0
## 6621      0      0      0      0      0      0      1      0      0      0      0
## 6622      0      2      0      0      0      0      0      0      0      0      1
## 6623      0      0      0      0      0      0      1      0      0      0      0
## 6624      0      0      0      1      0      0      0      0      0      0      0
## 6625      0      0      0      0      0      1      0      0      0      0      0
## 6626      0      0      0      1      0      0      0      0      0      0      0
## 6627      0      0      0      0      0      0      1      0      0      0      0
## 6628      0      0      0      1      0      0      0      0      0      0      0
## 6629      0      0      0      0      1      0      0      0      0      0      0
## 6630      0      0      0      0      0      0      0      0      1      0      0
## 6631      0      0      0      0      0      0      0      0      1      0      0
## 6632      0      0      0      0      0      0      0      0      0      0      0
## 6633      0      0      0      0      1      0      0      0      0      0      0
## 6634      0      0      0      0      0      0      0      0      0      0      1
## 6635      0      0      0      0      0      0      0      0      0      0      0
## 6636      0      0      0      0      0      0      0      0      0      0      0
## 6637      0      1      0      0      0      0      0      0      0      0      0
## 6638      0      0      0      1      0      0      0      0      0      0      0
## 6639      0      0      0      1      0      0      0      0      0      0      0
## 6640      0      0      0      0      0      0      0      1      0      0      0
## 6641      0      0      0      1      0      0      0      0      0      0      0
## 6642      0      0      0      0      0      0      0      0      0      0      0
## 6643      0      0      0      0      0      0      1      0      0      0      0
## 6644      0      0      0      0      1      0      0      0      0      0      0
## 6645      0      0      0      0      0      0      1      0      0      0      0
## 6646      0      0      0      1      0      0      0      0      0      0      0
## 6647      0      0      0      0      0      0      0      0      0      0      1
## 6648      0      0      0      0      0      0      1      0      0      0      0
## 6649      1      0      0      0      0      0      0      0      0      0      0
## 6650      0      0      1      0      0      0      0      0      0      0      0
## 6651      0      0      1      0      0      0      0      0      0      0      0
## 6652      0      0      0      0      0      0      1      0      0      0      0
## 6653      0      1      0      0      0      0      0      0      0      0      0
## 6654      0      0      0      0      0      0      0      0      0      0      0
## 6655      0      0      0      0      0      0      0      0      1      0      0
## 6656      0      0      0      0      0      0      0      0      0      0      0
## 6657      0      0      0      0      0      0      0      0      0      0      0
## 6658      0      0      0      1      0      0      0      0      0      0      0
## 6659      0      0      0      0      0      0      0      0      0      1      0
## 6660      0      0      0      0      0      0      0      0      0      0      0
## 6661      0      0      0      0      0      0      0      0      0      0      1
## 6662      0      0      0      0      0      0      1      0      0      0      0
## 6663      0      1      0      0      0      0      0      0      0      0      0
```

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```
## 6664      0    0    0    0    0    0    0    0    0    0    0
## 6665      0    0    0    0    0    0    0    0    0    0    0
## 6666      0    0    0    0    0    0    0    0    0    0    0
## 6667      0    0    0    0    0    0    0    0    0    0    0
## 6668      0    1    0    0    0    0    0    0    0    0    0
## 6669      0    0    0    0    0    0    0    0    0    0    0
## 6670      0    0    0    0    0    1    0    0    0    0    0
## 6671      0    0    0    0    0    0    0    0    0    0    0
## 6672      0    0    0    0    0    0    0    0    0    0    0
## 6673      0    0    0    0    0    0    0    0    0    0    0
## 6674      0    0    0    0    0    0    0    0    0    0    0
## 6675      0    0    0    0    0    0    1    0    0    0    0
## 6676      0    0    0    0    0    0    1    0    0    0    0
## 6677      0    0    0    0    0    0    0    0    0    0    0
## 6678      0    0    0    0    0    0    0    0    0    0    0
## 6679      0    0    0    0    0    0    0    0    0    0    0
## 6680      0    0    0    0    0    0    0    0    0    0    0
## 6681      0    0    0    0    1    0    0    0    0    0    0
## 6682      0    0    0    0    1    0    0    0    0    0    0
## 6683      0    0    0    0    0    0    0    0    0    0    0
## 6684      0    0    0    0    0    0    0    0    0    0    0
## 6685      0    0    0    0    0    0    0    0    0    0    0
## 6686      0    0    0    0    0    0    0    0    1    0    0
## 6687      0    0    0    0    0    0    0    0    0    0    0
## 6688      0    0    0    0    0    0    0    0    1    0    0
## 6689      0    0    0    0    0    0    0    0    0    0    0
## 6690      0    0    0    0    0    0    1    0    0    0    0
## 6691      0    0    0    0    0    0    0    0    0    0    0
## 6692      0    0    0    1    0    0    0    0    0    0    0
## 6693      0    0    0    0    0    0    0    2    0    0    0
## 6694      1    0    0    0    0    0    0    0    0    0    0
## 6695      0    0    0    0    0    0    0    0    0    0    0
## 6696      0    0    0    0    0    0    0    0    0    0    0
## 6697      0    0    0    0    1    0    0    0    0    0    0
## 6698      1    0    0    0    0    0    0    0    0    0    0
## 6699      0    0    0    0    0    1    0    0    0    0    0
## 6700      0    0    0    0    0    0    0    0    0    0    0
## 6701      0    0    0    0    0    0    0    0    1    0    0
## 6702      0    0    0    0    0    0    0    0    0    0    0
## 6703      0    0    0    0    0    0    1    0    0    0    0
## 6704      0    0    0    1    0    0    0    0    0    0    0
## 6705      0    0    0    0    0    0    0    0    1    0    0
## 6706      0    0    0    0    0    0    0    0    1    0    0
## 6707      0    0    0    0    0    0    0    0    0    0    0
## 6708      0    0    0    0    0    0    0    0    0    0    0
## 6709      0    0    1    0    0    0    0    0    0    0    0
## 6710      0    0    0    0    0    0    0    0    0    0    0
## 6711      0    0    0    0    0    0    2    0    0    0    0
## 6712      0    0    0    0    0    0    0    0    0    0    0
## 6713      0    0    0    0    0    0    1    0    0    0    0
## 6714      0    0    0    0    0    0    0    0    0    0    0
## 6715      0    0    0    0    1    0    0    0    0    0    0
## 6716      0    0    0    0    0    0    0    0    0    0    0
## 6717      0    0    0    0    0    0    0    0    0    0    0
```

```
## 6718     0     1     0     0     0     0     0     0     0     0     0
## 6719     0     0     0     0     0     0     0     0     0     0     0
## 6720     0     0     0     0     0     0     0     0     0     0     1
## 6721     0     0     0     0     0     0     0     0     0     0     0
## 6722     0     1     0     0     0     0     0     0     0     0     0
## 6723     0     0     0     0     0     1     0     0     0     0     0
## 6724     0     0     0     0     0     0     0     0     0     0     0
## 6725     0     0     1     0     0     0     0     0     0     0     0
## 6726     0     0     1     0     0     0     0     0     0     0     0
## 6727     0     0     0     0     0     0     1     0     0     0     0
## 6728     0     0     0     0     0     1     0     0     0     0     0
## 6729     0     0     0     0     0     0     0     0     0     0     0
## 6730     0     1     0     0     0     0     0     0     0     0     0
## 6731     0     0     0     1     0     0     0     0     0     0     0
## 6732     0     0     0     0     0     0     0     0     0     0     0
## 6733     0     0     0     1     0     0     0     0     0     0     0
## 6734     0     0     0     0     1     0     0     0     0     0     0
## 6735     0     0     0     0     0     0     1     0     0     0     0
## 6736     0     0     0     0     0     0     0     0     0     1     0
## 6737     0     0     1     0     0     0     0     0     0     0     0
## 6738     0     0     0     0     0     0     1     0     0     0     0
## 6739     0     0     0     0     0     0     0     0     1     0     0
## 6740     1     0     0     0     0     0     0     0     0     0     0
## 6741     0     0     0     0     0     0     0     0     0     0     0
## 6742     0     0     0     0     0     0     0     0     0     0     0
## 6743     0     0     0     0     0     0     0     0     0     0     0
## 6744     0     0     0     0     0     0     0     0     0     0     0
## 6745     0     0     1     0     0     0     0     0     0     0     0
## 6746     0     0     0     0     0     0     0     0     0     0     0
## 6747     0     0     0     0     1     0     0     0     0     0     0
## 6748     0     0     1     0     0     0     0     0     0     0     0
## 6749     0     0     0     0     1     0     0     0     0     0     0
## 6750     0     0     0     0     0     0     0     0     0     0     0
## 6751     0     0     0     0     0     0     0     0     0     0     0
## 6752     1     0     0     0     0     0     0     0     0     0     0
## 6753     0     0     0     0     0     0     0     0     0     0     0
## 6754     1     0     0     0     0     0     0     0     0     0     0
## 6755     0     0     0     0     0     0     0     0     0     0     0
## 6756     0     0     0     0     0     0     0     0     0     0     0
## 6757     0     0     0     0     0     0     0     0     0     0     0
## 6758     0     0     0     0     0     0     0     0     0     0     0
## 6759     0     0     0     0     0     0     0     0     0     0     0
## 6760     0     0     0     0     0     0     0     0     0     0     0
## 6761     0     0     0     0     0     0     0     0     0     0     0
## 6762     0     0     0     0     0     0     0     0     0     0     0
## 6763     0     0     0     0     0     0     0     0     0     0     0
## 6764     0     0     0     0     0     0     0     0     0     0     0
## 6765     0     0     0     0     0     0     0     0     0     0     0
## 6766     0     0     0     0     0     0     1     0     0     0     0
## 6767     0     0     0     0     0     0     0     0     0     0     0
## 6768     0     0     0     0     0     0     0     0     0     0     1
## 6769     0     0     0     0     0     0     0     0     1     0     0
## 6770     1     0     0     0     0     0     0     0     0     0     0
## 6771     0     0     0     0     0     0     0     1     0     0     0
```

```
## 6772       0    0    0    0    1    0    0    0    0    0    0
## 6773       0    0    1    0    0    0    0    0    0    0    0
## 6774       1    0    0    0    0    0    0    0    0    0    0
## 6775       0    0    0    0    1    0    0    0    0    0    0
## 6776       0    0    0    0    0    0    0    0    0    0    0
## 6777       0    0    0    0    0    0    0    0    0    0    0
## 6778       0    0    0    0    0    0    0    0    0    0    0
## 6779       0    0    1    0    0    0    0    0    0    0    0
## 6780       0    0    0    0    1    0    0    0    0    0    0
## 6781       0    0    0    0    1    0    0    0    0    0    0
## 6782       0    0    0    0    0    0    0    0    0    0    0
## 6783       0    0    0    0    0    0    0    0    0    0    0
## 6784       0    0    0    0    0    0    0    0    0    0    0
## 6785       0    0    0    0    0    0    1    0    0    0    0
## 6786       2    0    0    0    0    0    0    0    0    0    0
## 6787       0    0    0    0    1    0    0    0    0    0    0
## 6788       0    0    0    0    0    0    0    1    0    0    0
## 6789       0    0    0    0    0    0    0    0    0    0    0
## 6790       0    0    0    0    0    0    0    1    0    0    0
## 6791       0    0    0    0    0    0    0    0    0    0    0
## 6792       0    0    0    0    1    0    0    1    0    0    0
## 6793       0    0    0    0    0    0    0    0    0    0    0
## 6794       0    0    0    0    1    0    0    0    0    0    0
## 6795       0    0    0    0    0    0    0    0    0    0    0
## 6796       0    0    0    0    0    0    0    0    0    0    0
## 6797       0    1    0    0    0    0    0    0    0    0    0
## 6798       0    0    0    0    0    0    0    0    0    0    0
## 6799       0    0    0    0    0    0    0    0    0    0    0
## 6800       0    0    0    0    0    0    0    0    0    0    0
## 6801       0    0    0    0    0    3    0    0    0    0    0
## 6802       0    1    1    0    0    0    0    0    0    0    0
## 6803       0    0    0    0    0    0    0    0    0    0    0
## 6804       0    0    0    0    0    0    0    0    0    0    0
## 6805       0    0    0    0    0    0    0    0    0    0    0
## 6806       0    0    0    0    0    0    1    0    0    0    0
## 6807       0    0    0    0    0    0    0    0    0    0    0
## 6808       0    0    0    0    0    0    0    0    0    0    0
## 6809       1    0    0    0    0    0    0    0    0    0    0
## 6810       0    0    0    0    0    0    1    0    0    0    0
## 6811       0    0    0    0    0    0    0    0    0    0    0
## 6812       0    0    0    0    0    0    0    0    0    0    0
## 6813       0    0    0    0    0    0    0    0    1    0    0
## 6814       0    0    0    0    1    0    0    0    0    0    0
## 6815       0    0    0    0    0    0    0    0    0    0    0
## 6816       0    0    0    0    0    2    0    0    0    0    0
## 6817       0    0    0    0    0    0    0    0    0    0    0
## 6818       0    1    0    0    0    0    0    0    0    0    0
## 6819       0    0    0    0    0    0    0    0    0    0    0
## 6820       0    0    1    0    0    0    0    0    0    0    0
## 6821       0    0    1    0    0    0    0    0    0    0    0
## 6822       0    0    0    0    0    0    0    0    0    0    0
## 6823       0    0    0    0    0    0    0    0    0    0    0
## 6824       0    0    0    0    0    0    0    0    0    0    0
## 6825       0    1    0    0    0    0    0    0    0    0    0
```

```
## 6826      0    0    0    0    1    0    0    0    0    0    0
## 6827      0    0    0    0    0    0    0    0    0    1    0
## 6828      0    0    1    0    0    0    0    0    0    0    0
## 6829      1    0    0    0    0    0    0    0    0    0    0
## 6830      0    0    0    0    0    0    0    0    0    0    0
## 6831      1    0    0    0    0    1    0    0    0    0    0
## 6832      0    0    0    0    0    0    1    0    0    0    0
## 6833      0    0    0    0    0    0    0    0    0    0    0
## 6834      0    0    0    0    0    0    0    0    0    0    0
## 6835      0    0    0    0    0    0    0    0    0    0    0
## 6836      0    0    0    0    0    0    0    0    0    0    0
## 6837      0    0    0    0    0    0    0    0    0    0    0
## 6838      0    0    0    0    0    0    0    0    0    0    0
## 6839      0    0    0    0    0    0    0    0    0    0    0
## 6840      1    0    0    0    0    0    0    0    0    0    0
## 6841      0    0    0    0    0    0    0    0    0    0    0
## 6842      0    1    0    0    0    0    0    0    0    0    0
## 6843      0    1    0    0    0    0    0    0    0    0    0
## 6844      0    0    0    0    0    0    0    0    0    0    0
## 6845      1    0    0    0    0    0    0    0    0    0    0
## 6846      0    0    0    1    0    0    0    0    0    0    0
## 6847      0    0    0    1    0    0    0    0    0    0    0
## 6848      0    1    0    0    0    0    0    0    0    0    0
## 6849      0    0    1    1    0    0    0    0    0    0    0
## 6850      1    0    0    0    0    0    0    0    0    0    0
## 6851      0    0    0    0    0    1    0    0    0    0    0
## 6852      0    0    0    0    0    0    0    0    0    0    0
## 6853      0    0    0    0    1    0    0    0    0    0    0
## 6854      0    0    0    0    0    0    0    0    0    0    0
## 6855      0    0    0    0    0    0    0    0    0    0    0
## 6856      0    0    0    0    0    0    0    0    0    0    0
## 6857      0    0    0    0    0    0    0    0    0    0    0
## 6858      0    0    0    0    0    0    1    0    0    0    0
## 6859      1    0    0    0    0    0    0    0    0    0    0
## 6860      0    0    0    0    0    0    0    0    0    0    0
## 6861      0    0    0    0    0    0    0    1    0    0    0
## 6862      0    0    0    0    0    0    0    0    1    0    0
## 6863      0    0    0    1    0    0    0    0    0    0    0
## 6864      0    0    0    0    0    0    0    0    0    0    0
## 6865      0    1    0    0    0    0    0    0    0    0    0
## 6866      0    1    0    0    0    0    0    0    0    0    0
## 6867      0    0    1    0    1    0    0    0    0    0    0
## 6868      0    0    0    0    0    0    0    0    0    1    0
## 6869      0    0    0    0    0    0    0    0    0    0    0
## 6870      0    0    0    0    0    0    0    0    0    0    0
## 6871      0    0    0    0    0    0    0    0    0    0    0
## 6872      0    0    0    0    0    0    0    0    0    1    0
## 6873      0    1    0    0    0    0    0    0    0    0    0
## 6874      0    0    0    0    0    0    0    0    0    1    0
## 6875      0    0    0    0    0    0    0    0    0    0    0
## 6876      0    0    0    0    0    0    0    0    0    0    0
## 6877      0    0    0    0    0    0    0    0    0    0    0
## 6878      0    0    0    0    0    0    1    0    0    0    0
## 6879      0    0    0    0    0    0    0    0    0    1    1
```

```
## 6880    0    0    0    0    0    0    0    0    0    0    0
## 6881    0    0    0    0    0    0    0    1    0    0    0
## 6882    0    0    0    0    0    0    0    0    0    0    0
## 6883    0    0    0    0    0    0    0    0    0    0    0
## 6884    0    0    0    0    0    0    0    0    0    0    0
## 6885    0    0    0    0    0    0    0    0    0    0    0
## 6886    1    0    0    0    0    0    0    0    0    0    0
## 6887    0    0    0    0    1    0    0    0    0    0    0
## 6888    0    0    0    0    0    0    0    1    0    0    0
## 6889    0    0    0    0    0    0    0    0    1    0    1
## 6890    0    0    0    0    0    0    0    0    0    0    0
## 6891    0    0    0    0    0    0    0    0    0    1    0
## 6892    0    0    0    0    0    0    0    0    0    0    0
## 6893    0    0    0    0    0    0    1    0    0    0    0
## 6894    0    1    0    0    0    0    0    0    0    0    0
## 6895    0    0    0    0    0    0    1    0    0    0    0
## 6896    0    0    0    0    0    0    0    1    0    0    0
## 6897    0    0    0    0    0    0    1    0    0    0    0
## 6898    0    0    0    0    0    0    0    0    0    1    0
## 6899    1    0    0    0    0    0    0    0    0    0    0
## 6900    0    0    0    0    0    0    0    0    0    0    0
## 6901    0    0    0    0    0    0    0    0    0    0    0
## 6902    0    0    0    0    0    0    1    0    0    0    0
## 6903    0    0    0    0    0    0    0    0    0    1    0
## 6904    0    0    0    0    0    0    0    0    0    0    0
## 6905    1    0    0    0    0    0    0    0    0    0    0
## 6906    0    0    0    0    0    0    0    0    0    0    0
## 6907    0    0    0    0    0    0    0    0    0    0    0
## 6908    0    0    0    0    1    1    0    0    0    0    0
## 6909    0    0    0    0    0    0    0    0    0    0    0
## 6910    0    0    0    0    0    0    0    1    0    0    0
## 6911    0    0    1    0    0    0    0    0    0    0    0
## 6912    0    0    0    0    0    0    0    0    0    0    0
## 6913    0    0    0    0    0    0    0    0    0    0    0
## 6914    0    0    0    0    1    0    0    0    0    0    0
## 6915    0    0    0    0    0    0    0    0    0    0    0
## 6916    1    0    0    0    0    0    0    0    0    0    0
## 6917    0    0    0    0    0    0    0    0    0    0    0
## 6918    0    0    0    0    0    0    0    0    0    0    0
## 6919    0    0    0    0    0    0    0    1    0    0    0
## 6920    0    0    0    1    0    0    0    0    0    0    0
## 6921    0    0    0    0    0    0    0    1    0    0    0
## 6922    0    0    0    0    0    0    0    0    0    1    0
## 6923    1    0    0    0    0    1    0    0    0    0    0
## 6924    0    0    0    0    0    0    0    0    0    0    0
## 6925    0    0    0    0    0    0    1    0    0    0    0
## 6926    0    0    0    0    0    0    0    2    0    0    0
## 6927    0    0    0    0    0    0    0    0    0    0    0
## 6928    0    0    1    0    0    0    0    0    0    0    0
## 6929    0    0    0    0    0    0    0    0    0    0    0
## 6930    0    0    0    0    1    0    0    0    0    0    0
## 6931    0    0    0    0    0    0    0    0    0    0    0
## 6932    1    0    1    0    0    0    0    0    0    0    0
## 6933    0    0    1    0    0    0    0    0    0    0    0
```

```
## 6934      0    0    0    0    0    0    0    0    0    0    0
## 6935      0    0    0    0    0    0    0    0    0    0    0
## 6936      0    0    0    0    0    0    0    0    0    0    0
## 6937      0    1    0    0    0    0    0    0    0    0    0
## 6938      1    0    0    0    0    0    0    0    0    0    0
## 6939      0    0    0    0    0    0    0    0    0    0    0
## 6940      0    0    0    0    0    0    0    0    0    1    0
## 6941      0    0    0    0    0    0    1    0    0    0    0
## 6942      0    0    0    0    0    0    0    0    0    1    0
## 6943      0    0    0    0    0    0    1    0    0    0    0
## 6944      0    0    0    1    0    0    0    0    0    0    0
## 6945      0    0    0    0    0    0    0    0    0    0    0
## 6946      0    0    0    0    0    0    0    0    0    0    0
## 6947      0    0    1    0    0    0    0    0    0    0    0
## 6948      0    0    0    0    0    0    0    0    1    0    0
## 6949      0    1    0    0    0    0    0    0    0    0    0
## 6950      0    1    0    0    0    0    0    0    0    0    0
## 6951      1    0    0    0    0    0    0    0    0    0    0
## 6952      0    0    0    0    0    0    0    0    0    0    0
## 6953      0    0    0    0    0    0    0    0    0    0    0
## 6954      0    0    0    0    0    0    0    0    0    0    0
## 6955      0    0    0    0    0    0    0    0    0    0    0
## 6956      0    0    0    1    0    0    0    1    0    0    0
## 6957      1    0    0    0    0    0    0    0    0    0    0
## 6958      0    0    0    0    0    0    0    0    0    0    0
## 6959      0    0    1    0    0    0    0    0    0    0    0
## 6960      0    0    0    0    0    0    0    0    0    0    0
## 6961      0    0    0    0    0    0    0    0    0    1    0
## 6962      0    0    0    0    0    0    0    0    0    0    0
## 6963      0    1    0    0    0    0    0    0    0    0    0
## 6964      0    0    0    0    0    0    0    0    0    0    0
## 6965      0    0    0    0    0    0    0    0    1    0    0
## 6966      0    0    0    0    0    0    0    0    0    0    0
## 6967      0    0    0    0    0    0    0    0    0    0    0
## 6968      0    0    0    0    0    0    0    0    0    0    0
## 6969      0    0    0    0    0    0    0    0    0    0    0
## 6970      0    0    0    0    0    0    0    0    0    0    0
## 6971      0    0    1    0    0    0    0    0    0    0    0
## 6972      0    0    0    0    1    0    0    0    0    0    0
## 6973      0    0    0    0    1    0    0    0    0    0    0
## 6974      0    0    0    0    0    0    0    2    0    0    0
## 6975      0    0    0    0    0    0    0    0    0    0    0
## 6976      0    0    0    0    0    0    0    0    0    0    0
## 6977      0    0    0    1    0    0    0    0    0    0    0
## 6978      0    0    0    1    0    0    0    0    0    0    0
## 6979      0    0    0    0    0    0    0    0    0    0    0
## 6980      0    0    0    0    0    0    0    0    0    0    0
## 6981      0    0    0    0    0    0    0    0    0    0    0
## 6982      0    0    0    0    0    0    0    0    0    0    0
## 6983      0    0    0    1    0    0    0    0    0    0    0
## 6984      0    0    0    0    0    0    0    0    0    0    0
## 6985      0    0    1    0    0    0    0    0    0    0    0
## 6986      0    0    1    0    0    0    0    0    0    0    0
## 6987      0    1    0    0    0    0    0    0    0    0    0
```

```
## 6988    0    0    0    1    0    0    0    0    0    0    0
## 6989    0    0    1    0    0    0    0    0    0    0    0
## 6990    0    0    0    0    1    0    0    0    0    0    0
## 6991    0    0    0    1    0    0    0    0    0    0    0
## 6992    0    1    0    0    0    0    0    0    0    0    0
## 6993    0    0    0    0    0    0    0    0    0    0    0
## 6994    0    0    0    0    0    0    0    0    0    1    0
## 6995    0    0    0    1    0    0    0    0    0    0    0
## 6996    0    0    0    0    0    0    0    0    0    0    0
## 6997    0    1    0    0    0    0    0    0    0    0    0
## 6998    0    0    0    1    0    0    0    0    0    0    0
## 6999    0    0    0    0    0    0    0    0    0    1    0
## 7000    1    0    0    0    0    0    0    0    0    0    0
## 7001    1    0    0    0    0    0    0    0    0    0    0
## 7002    0    0    0    0    0    0    0    0    0    0    0
## 7003    0    0    0    0    1    0    0    0    0    0    0
## 7004    0    0    0    0    1    0    0    0    0    0    0
## 7005    0    0    0    0    0    0    0    0    0    0    0
## 7006    0    0    0    0    0    0    0    0    0    0    0
## 7007    0    0    0    0    0    0    0    0    0    0    0
## 7008    0    0    0    0    0    0    0    0    0    0    0
## 7009    0    0    0    0    0    0    0    0    1    0    0
## 7010    0    0    0    0    0    0    1    0    0    0    0
## 7011    0    0    0    0    0    0    0    0    0    0    0
## 7012    0    0    0    0    0    0    1    0    0    0    0
## 7013    0    1    0    0    0    0    0    0    0    0    0
## 7014    0    0    0    0    0    0    0    1    0    0    0
## 7015    0    0    0    0    0    0    0    0    0    0    0
## 7016    0    0    0    0    0    0    1    0    0    0    0
## 7017    0    0    0    0    0    0    0    0    0    0    0
## 7018    0    0    0    0    0    0    0    0    0    0    0
## 7019    0    0    0    0    0    0    0    0    0    0    0
## 7020    0    0    0    0    0    0    0    0    0    0    0
## 7021    0    0    0    0    0    0    0    0    0    0    0
## 7022    0    0    2    0    0    0    0    0    0    0    0
## 7023    0    0    0    0    1    0    0    0    0    0    0
## 7024    0    0    1    0    0    0    0    0    0    0    0
## 7025    0    0    0    0    0    0    0    0    0    0    0
## 7026    0    0    0    0    0    0    0    0    0    0    1
## 7027    0    1    0    0    0    0    0    0    0    0    0
## 7028    0    0    0    0    0    0    0    0    0    0    0
## 7029    0    0    0    0    0    0    0    0    0    0    0
## 7030    0    0    0    0    0    0    0    0    0    0    0
## 7031    0    0    0    0    0    0    0    0    0    0    0
## 7032    0    1    0    0    0    0    0    0    0    0    0
## 7033    0    0    0    0    0    0    0    0    0    0    1
## 7034    0    1    0    0    0    0    0    0    0    0    0
## 7035    0    1    0    0    0    0    0    0    0    0    0
## 7036    0    0    1    0    0    0    0    0    0    0    0
## 7037    0    0    0    0    0    0    0    0    0    0    1
## 7038    0    1    0    0    0    0    0    0    0    0    0
## 7039    0    1    0    0    0    0    0    0    0    0    2
## 7040    0    0    0    0    0    0    0    0    2    0    0
## 7041    0    0    0    1    0    0    0    0    0    0    0
```

```
## 7042      0    0    0    0    0    0    0    0    0    1    0
## 7043      0    0    0    2    0    0    0    0    0    0    0
## 7044      0    0    0    0    0    0    0    0    0    0    0
## 7045      0    0    0    0    0    0    0    0    0    0    0
## 7046      0    0    0    0    0    0    0    0    0    0    1
## 7047      0    0    0    0    0    0    0    0    0    0    0
## 7048      0    0    0    0    0    0    0    0    0    0    0
## 7049      0    0    0    0    1    0    0    0    0    0    0
## 7050      0    0    0    0    0    0    0    0    1    0    1
## 7051      0    0    0    0    0    0    0    0    0    0    1
## 7052      0    0    0    0    0    0    0    0    0    0    0
## 7053      0    0    0    0    0    0    0    0    1    0    0
## 7054      0    0    1    1    1    0    0    0    0    0    0
## 7055      0    1    0    0    0    0    0    0    0    0    0
## 7056      0    0    0    0    0    0    0    0    0    0    0
## 7057      0    0    0    0    0    0    0    0    1    0    0
## 7058      0    0    0    0    0    0    0    0    0    0    0
## 7059      0    0    0    0    0    1    2    0    0    0    0
## 7060      0    0    0    0    0    0    0    0    0    0    0
## 7061      0    1    0    0    0    0    0    0    0    0    0
## 7062      0    0    0    0    0    0    2    1    0    1    0
## 7063      0    0    0    1    0    0    0    0    0    0    0
## 7064      0    0    1    0    0    0    0    0    0    0    0
## 7065      1    0    0    0    0    0    0    0    0    0    0
## 7066      0    0    0    0    0    0    1    1    0    0    0
## 7067      0    0    0    1    0    0    0    0    0    0    0
## 7068      0    0    0    0    0    0    0    0    1    0    1
## 7069      0    0    0    0    0    0    0    0    2    0    0
## 7070      0    0    0    0    0    0    0    0    0    0    0
## 7071      0    0    0    1    0    0    0    0    0    0    0
## 7072      0    0    0    0    0    0    0    0    0    0    0
## 7073      0    0    0    1    0    0    0    0    0    0    0
## 7074      0    0    0    0    0    0    0    0    0    0    0
## 7075      0    0    0    0    0    0    0    0    0    0    0
## 7076      0    0    0    0    0    0    0    0    0    1    0
## 7077      0    0    0    0    1    0    0    0    0    0    0
## 7078      1    0    0    0    0    0    0    0    0    0    0
## 7079      0    1    0    0    0    0    0    0    0    0    0
## 7080      0    0    0    0    0    0    1    0    0    0    0
## 7081      0    0    0    0    0    0    0    0    0    0    0
## 7082      0    1    0    0    0    0    0    0    0    0    0
## 7083      0    0    0    0    0    0    0    0    0    0    0
## 7084      0    0    0    0    0    0    0    0    0    0    0
## 7085      0    0    0    0    0    0    0    0    0    0    1
## 7086      0    0    0    0    0    0    0    0    0    0    1
## 7087      0    0    0    0    0    0    0    0    0    0    0
## 7088      0    0    0    0    0    0    1    0    0    0    0
## 7089      0    0    1    0    0    0    0    0    0    0    0
## 7090      0    0    0    0    0    0    0    0    0    0    0
## 7091      0    0    0    0    0    0    0    0    0    0    0
## 7092      0    0    0    0    0    0    0    0    0    0    0
## 7093      0    0    0    0    0    0    0    0    0    0    0
## 7094      0    0    0    0    0    0    0    0    0    0    1
## 7095      0    0    0    0    0    1    0    0    0    0    0
```

```
## 7096      0    0    0    0    0    0    0    0    0    0    0
## 7097      0    0    0    0    0    0    1    0    0    0    0
## 7098      0    0    0    0    0    0    0    1    0    0    0
## 7099      0    0    0    0    0    0    0    1    0    0    0
## 7100      0    0    0    0    0    0    0    0    0    1    0
## 7101      0    0    0    1    0    0    0    0    0    0    0
## 7102      0    1    0    0    0    0    0    0    0    0    0
## 7103      0    0    0    0    0    0    0    0    0    0    0
## 7104      0    0    0    0    0    0    0    0    0    0    0
## 7105      0    0    0    0    0    0    1    0    0    0    0
## 7106      1    0    0    0    0    0    0    0    0    0    0
## 7107      0    0    0    0    0    0    1    0    0    0    0
## 7108      0    1    0    0    0    0    0    0    0    0    0
## 7109      1    0    0    0    0    0    0    0    0    0    0
## 7110      0    0    0    0    0    0    0    0    0    0    0
## 7111      0    0    0    0    0    0    1    0    0    0    0
## 7112      0    0    1    0    0    0    0    0    0    0    0
## 7113      0    0    0    1    0    0    0    0    0    0    0
## 7114      0    0    0    0    0    0    0    0    0    0    1
## 7115      0    1    0    0    0    0    0    0    0    0    0
## 7116      0    0    0    0    0    0    0    0    0    1    0
## 7117      0    0    0    0    0    0    0    0    0    0    0
## 7118      0    0    0    0    0    0    0    0    0    0    0
## 7119      0    0    0    0    0    0    0    0    0    0    0
## 7120      0    0    0    0    0    0    0    0    0    0    1
## 7121      0    0    0    0    0    0    0    0    1    0    0
## 7122      0    0    0    0    0    0    1    0    0    0    0
## 7123      0    0    0    0    0    0    0    0    1    0    0
## 7124      0    0    0    0    0    0    0    0    0    0    0
## 7125      0    0    0    0    0    0    0    0    0    0    0
## 7126      0    0    0    0    0    0    0    1    0    0    0
## 7127      0    1    0    0    0    0    0    0    0    0    0
## 7128      0    0    0    0    0    0    0    0    0    0    0
## 7129      0    0    0    1    0    0    0    0    0    0    0
## 7130      0    0    0    0    0    0    0    0    0    0    0
## 7131      0    0    1    0    0    0    0    0    0    0    0
## 7132      0    0    0    0    0    0    0    0    0    0    0
## 7133      0    0    0    0    0    0    0    0    1    0    0
## 7134      0    0    0    0    0    0    0    0    0    0    0
## 7135      0    0    0    0    0    0    0    0    0    0    0
## 7136      0    0    1    0    0    0    0    0    0    0    0
## 7137      0    0    0    0    0    0    0    0    0    0    0
## 7138      0    0    0    0    0    0    0    0    0    1    0
## 7139      1    0    0    0    0    0    0    0    0    0    0
## 7140      0    0    0    0    0    0    0    0    0    0    1
## 7141      0    1    0    0    0    0    0    0    0    0    0
## 7142      0    0    0    0    0    0    0    0    0    0    0
## 7143      0    0    0    0    0    0    0    0    0    0    0
## 7144      1    0    0    0    0    0    0    0    0    0    0
## 7145      1    0    1    0    0    0    0    0    0    0    0
## 7146      0    0    0    0    0    0    0    0    0    0    0
## 7147      0    0    0    0    0    0    0    0    0    0    0
## 7148      0    0    0    0    0    1    0    0    0    0    0
## 7149      0    1    0    0    0    0    0    0    0    0    0
```

```
## 7150      0   0   0   0   0   0   0   0   0   0   0
## 7151      0   0   0   0   0   0   0   0   0   0   0
## 7152      0   0   0   0   0   0   0   0   0   0   0
## 7153      0   0   0   0   0   0   0   0   0   0   0
## 7154      0   0   0   0   0   0   0   0   0   1   0
## 7155      0   1   0   0   0   0   0   0   0   0   0
## 7156      0   0   0   0   1   0   0   0   0   0   0
## 7157      0   0   0   0   0   0   0   0   0   0   0
## 7158      0   0   0   0   0   0   0   0   0   0   0
## 7159      0   0   0   0   1   0   0   0   0   0   0
## 7160      0   0   0   0   0   0   0   0   0   0   0
## 7161      0   0   0   0   0   0   0   0   0   0   0
## 7162      0   0   0   0   0   1   0   0   0   0   0
## 7163      1   0   0   0   0   0   0   0   0   0   0
## 7164      0   0   0   0   0   0   0   0   0   0   0
## 7165      0   0   0   0   0   0   0   0   0   0   0
## 7166      0   1   0   0   0   0   0   0   0   0   0
## 7167      0   0   0   0   1   0   0   0   0   0   0
## 7168      0   0   0   0   0   0   0   0   0   1   0
## 7169      0   0   1   0   0   0   0   0   0   0   0
## 7170      0   0   0   1   0   0   0   0   0   0   0
## 7171      0   0   0   0   0   0   0   0   0   0   0
## 7172      0   0   0   0   0   0   0   0   0   0   0
## 7173      0   0   0   0   0   0   0   0   0   0   0
## 7174      0   0   0   0   0   0   0   0   0   0   0
## 7175      0   0   0   0   0   0   0   0   0   0   0
## 7176      0   1   0   0   0   0   0   0   0   0   0
## 7177      0   0   0   0   0   0   0   0   0   0   0
## 7178      0   0   0   0   0   0   0   0   0   0   0
## 7179      0   0   0   0   0   0   0   0   0   0   0
## 7180      0   0   0   0   0   0   0   0   0   0   0
## 7181      0   0   0   0   0   0   0   0   0   0   0
## 7182      0   0   0   0   0   0   0   0   0   0   0
## 7183      0   0   0   0   0   0   0   0   0   0   0
## 7184      0   0   0   0   0   0   0   0   0   0   0
## 7185      0   0   0   0   0   0   0   0   0   0   0
## 7186      0   0   0   0   0   0   0   0   0   0   0
## 7187      0   0   0   0   0   0   0   0   0   0   0
## 7188      0   0   0   0   0   0   1   0   0   0   0
## 7189      0   0   0   0   0   0   0   0   0   0   0
## 7190      0   0   0   0   0   0   0   0   0   0   0
## 7191      0   0   0   0   0   0   0   0   0   0   0
## 7192      0   0   0   0   0   0   1   0   0   0   0
## 7193      0   0   0   0   0   0   0   0   0   0   0
## 7194      0   0   0   0   0   0   0   0   0   0   0
## 7195      0   0   0   0   0   0   0   0   0   0   0
## 7196      0   0   0   0   0   0   0   0   0   0   0
## 7197      0   0   0   0   0   0   0   0   0   1   0
## 7198      0   0   0   0   0   0   0   0   0   0   1
## 7199      0   0   0   0   0   0   0   0   0   0   0
## 7200      0   0   0   0   0   0   0   0   0   0   0
## 7201      0   0   0   0   0   0   0   0   0   0   0
## 7202      0   0   0   0   0   0   0   0   0   1   0
## 7203      0   0   0   0   0   0   0   0   0   0   0
```

```
## 7204     0    0    0    0    0    0    0    0    0    0    0
## 7205     0    0    0    0    0    0    0    1    0    0    0
## 7206     0    0    0    0    0    0    1    0    0    0    0
## 7207     0    0    0    0    0    0    0    0    0    0    0
## 7208     0    0    0    0    0    0    0    0    0    0    0
## 7209     0    0    0    0    0    0    0    0    0    0    0
## 7210     0    0    0    0    0    0    0    0    0    1    0
## 7211     0    0    0    0    0    1    0    0    0    0    0
## 7212     0    0    1    0    0    0    0    0    0    0    0
## 7213     1    0    0    1    0    0    0    0    0    0    0
## 7214     0    0    1    0    0    0    0    0    0    0    0
## 7215     0    0    0    0    0    0    1    0    0    0    0
## 7216     0    1    0    0    0    0    0    0    0    0    0
## 7217     0    0    0    0    0    0    0    0    0    0    0
## 7218     0    0    0    0    0    0    0    0    1    0    0
## 7219     0    0    0    0    0    0    0    0    0    0    0
## 7220     0    0    0    1    0    0    0    0    0    0    0
## 7221     0    0    0    0    0    0    0    0    0    0    0
## 7222     0    0    1    0    0    0    0    0    0    0    0
## 7223     0    0    1    0    0    0    0    0    0    0    0
## 7224     0    0    0    0    0    0    0    0    0    0    1
## 7225     0    0    0    0    0    0    0    1    0    0    0
## 7226     0    0    0    0    0    0    0    0    0    0    0
## 7227     0    0    0    0    0    0    0    0    0    0    0
## 7228     0    0    0    0    0    0    0    0    1    0    0
## 7229     0    0    0    0    0    0    0    0    0    0    0
## 7230     0    0    0    0    0    0    0    0    2    0    0
## 7231     1    0    0    0    0    0    0    0    0    0    0
## 7232     0    0    0    0    0    0    0    0    0    1    0
## 7233     2    0    1    0    0    0    0    0    0    0    0
## 7234     0    0    0    0    1    0    0    0    0    0    0
## 7235     0    0    0    0    0    0    0    0    0    0    0
## 7236     0    0    0    0    0    0    0    0    0    0    0
## 7237     0    0    0    0    0    0    0    0    0    0    0
## 7238     0    0    1    0    0    0    0    0    0    0    0
## 7239     0    0    1    0    0    0    0    0    0    0    0
## 7240     0    0    0    0    0    0    0    0    0    0    0
## 7241     0    0    0    0    0    0    0    0    0    0    0
## 7242     0    0    0    0    1    0    0    0    0    0    0
## 7243     0    0    0    0    0    0    0    0    0    0    0
## 7244     0    0    0    0    0    0    0    0    0    0    0
## 7245     0    0    0    0    0    0    0    0    0    0    1
## 7246     0    0    0    0    0    0    0    0    0    0    0
## 7247     0    0    0    0    0    0    0    0    1    0    0
## 7248     0    0    0    0    0    0    0    0    1    0    0
## 7249     0    0    0    0    0    0    0    0    0    0    0
## 7250     0    0    1    0    0    0    0    0    0    0    0
## 7251     0    0    0    0    0    1    0    0    0    0    0
## 7252     0    0    0    0    1    0    0    0    0    0    0
## 7253     0    0    0    0    0    0    0    0    1    0    0
## 7254     0    0    1    0    0    0    0    0    0    0    0
## 7255     0    0    0    1    0    0    0    0    0    0    0
## 7256     0    0    0    0    0    0    1    0    0    0    0
## 7257     0    0    0    0    0    0    0    0    0    0    0
```

```
## 7258    0    0    0    0    1    0    0    0    0    0    0
## 7259    0    0    0    0    0    0    0    0    0    0    0
## 7260    0    0    0    0    0    0    0    0    0    0    0
## 7261    0    1    0    0    0    0    0    0    0    0    0
## 7262    0    0    0    0    0    0    1    0    0    0    0
## 7263    0    0    0    0    0    0    0    0    0    0    0
## 7264    0    0    0    0    0    0    0    0    0    0    0
## 7265    0    0    0    0    0    0    0    0    0    0    0
## 7266    0    0    0    0    0    0    0    0    0    0    0
## 7267    0    0    0    0    0    0    0    0    0    0    0
## 7268    0    0    0    0    0    0    1    0    0    0    0
## 7269    0    0    0    0    0    0    0    0    0    0    0
## 7270    0    0    1    0    0    0    0    0    0    0    0
## 7271    0    0    1    0    0    0    0    0    0    0    0
## 7272    0    0    1    0    0    0    0    0    0    0    0
## 7273    0    0    0    0    0    0    0    0    0    0    0
## 7274    0    1    0    0    0    0    0    1    0    0    0
## 7275    0    0    0    0    0    0    0    0    0    0    0
## 7276    0    1    0    0    0    0    0    0    0    0    0
## 7277    0    0    0    0    0    0    0    0    0    0    0
## 7278    0    0    0    0    0    0    0    0    0    0    0
## 7279    0    1    0    0    0    0    0    0    0    0    0
## 7280    1    0    0    0    0    0    0    0    0    0    0
## 7281    0    0    0    0    0    0    0    0    0    0    0
## 7282    0    0    0    0    0    0    0    0    1    0    0
## 7283    0    0    0    0    0    0    1    0    0    0    0
## 7284    0    0    0    0    0    1    0    0    1    0    0
## 7285    0    0    0    0    0    0    0    0    0    0    0
## 7286    0    1    0    0    0    0    0    0    0    0    0
## 7287    0    0    0    1    0    0    0    0    0    0    0
## 7288    0    0    0    0    1    0    0    0    0    0    0
## 7289    0    0    1    0    0    0    0    0    0    0    0
## 7290    0    0    0    0    0    1    0    0    0    0    0
## 7291    0    0    0    0    0    0    0    0    0    0    0
## 7292    0    0    0    0    0    0    0    0    0    0    0
## 7293    0    0    0    0    0    0    0    0    0    0    0
## 7294    0    0    0    0    1    0    0    0    0    0    0
## 7295    0    0    0    0    0    0    0    0    0    0    0
## 7296    0    0    0    0    0    0    0    0    0    0    0
## 7297    1    0    0    0    0    0    0    0    0    0    0
## 7298    0    0    0    0    0    0    0    0    0    0    0
## 7299    0    0    0    0    0    0    0    0    0    0    0
## 7300    0    1    0    0    0    0    0    0    0    0    0
## 7301    0    0    0    0    0    0    0    0    0    0    0
## 7302    0    0    0    1    0    0    0    0    0    0    0
## 7303    0    0    0    0    0    1    0    0    0    0    0
## 7304    0    0    0    0    0    0    0    0    0    0    0
## 7305    0    0    0    0    0    0    0    0    0    0    0
## 7306    0    0    0    0    0    0    0    0    0    0    0
## 7307    0    0    0    0    1    0    0    0    0    0    0
## 7308    0    0    1    0    0    0    0    0    0    0    0
## 7309    0    0    1    0    0    0    0    0    0    0    0
## 7310    0    0    0    0    0    0    0    0    0    0    0
## 7311    0    0    0    0    0    0    1    0    0    0    0
```

```
## 7312        0    0    0    1    0    0    0    0    0    0    0
## 7313        0    0    0    0    0    0    0    0    0    0    0
## 7314        0    0    1    0    0    0    0    0    0    0    0
## 7315        0    0    0    0    0    0    1    0    0    0    0
## 7316        0    0    0    0    0    0    0    0    0    0    0
## 7317        0    0    0    0    0    0    1    0    0    0    0
## 7318        0    0    0    0    0    0    0    0    0    0    0
## 7319        0    0    0    0    0    0    0    0    0    0    0
## 7320        0    0    0    0    0    0    0    0    0    0    0
## 7321        0    0    0    0    0    0    1    0    0    0    0
## 7322        0    0    0    0    0    0    0    0    0    0    1
## 7323        0    0    1    0    0    0    0    0    0    0    0
## 7324        0    1    0    0    0    0    0    0    0    0    0
## 7325        0    0    0    0    0    0    0    0    0    0    0
## 7326        0    0    0    0    0    0    0    0    0    0    0
## 7327        0    0    0    0    0    0    0    0    0    0    0
## 7328        0    0    0    0    0    0    1    0    0    0    0
## 7329        0    1    0    0    0    0    0    0    0    0    0
## 7330        0    0    0    0    0    0    0    0    0    0    0
## 7331        0    0    0    0    0    0    0    0    0    0    0
## 7332        0    0    0    0    0    0    0    0    0    0    0
## 7333        0    0    0    0    0    0    1    0    0    0    0
## 7334        1    0    0    0    0    0    0    0    0    0    0
## 7335        1    0    0    0    0    0    0    0    0    0    0
## 7336        0    0    0    0    0    0    0    0    0    0    0
## 7337        0    0    1    0    0    0    0    0    0    0    0
## 7338        0    1    0    0    0    0    0    0    0    0    0
## 7339        0    0    0    0    0    0    0    0    0    0    0
## 7340        0    0    0    0    0    0    0    0    0    0    0
## 7341        0    0    0    0    0    0    0    0    0    0    0
## 7342        0    0    1    0    0    0    0    0    0    0    0
## 7343        0    0    0    0    0    0    0    0    0    1    0
## 7344        0    1    0    0    1    0    1    0    0    0    0
## 7345        0    1    0    0    0    0    0    0    0    0    0
## 7346        0    0    0    0    0    0    0    0    0    0    0
## 7347        0    0    0    0    0    0    0    0    0    1    0
## 7348        0    0    0    0    0    0    0    0    0    0    0
## 7349        0    0    0    0    0    0    0    0    0    0    0
## 7350        1    0    0    0    0    0    0    1    0    0    0
## 7351        0    0    0    0    0    0    0    0    0    0    0
## 7352        0    0    0    1    0    0    0    0    0    0    0
## 7353        0    1    0    1    0    0    0    0    0    0    0
## 7354        0    0    0    0    0    0    1    0    0    0    0
## 7355        0    0    0    0    1    0    0    1    0    0    0
## 7356        0    0    0    0    1    0    0    0    0    0    0
## 7357        2    0    0    0    0    0    0    0    0    0    0
## 7358        0    0    0    0    0    0    0    0    0    0    0
## 7359        0    0    0    0    0    0    1    0    0    0    0
## 7360        0    0    0    0    0    0    0    0    0    0    0
## 7361        0    1    0    0    0    0    0    0    0    0    0
## 7362        0    0    0    0    0    0    0    0    0    0    0
## 7363        0    0    0    0    0    0    0    0    0    0    0
## 7364        0    0    0    0    0    0    0    0    0    0    0
## 7365        0    0    0    0    0    0    0    0    0    0    1
```

```
## 7366    0    0    0    0    0    0    0    0    1    0    0
## 7367    0    0    0    1    0    0    0    0    0    0    0
## 7368    0    0    0    0    0    0    0    0    0    1    0
## 7369    1    0    0    0    0    0    0    0    0    0    0
## 7370    1    0    0    0    0    0    0    0    0    0    0
## 7371    0    0    0    0    0    0    0    0    0    0    0
## 7372    0    0    0    0    0    0    0    0    0    0    0
## 7373    0    0    1    0    0    0    0    0    0    0    0
## 7374    0    0    0    0    0    0    0    0    0    0    0
## 7375    0    0    0    0    0    0    0    0    0    0    0
## 7376    0    0    0    0    0    0    0    0    0    0    0
## 7377    0    0    0    1    0    0    0    0    0    0    0
## 7378    0    0    0    1    0    0    0    0    0    0    0
## 7379    0    0    0    0    0    0    0    0    1    0    0
## 7380    0    0    0    0    0    0    0    0    0    0    0
## 7381    0    0    0    1    0    0    0    0    0    0    0
## 7382    0    0    0    0    0    0    0    0    0    0    0
## 7383    0    0    0    0    0    0    0    0    0    0    0
## 7384    1    0    0    0    0    0    0    0    0    0    0
## 7385    0    0    0    1    0    0    0    0    0    0    0
## 7386    0    0    0    1    0    0    0    0    0    0    0
## 7387    0    0    0    0    0    1    0    0    0    0    0
## 7388    0    0    1    0    0    0    0    0    0    0    0
## 7389    1    0    1    0    0    0    0    0    0    0    0
## 7390    0    1    0    0    0    0    0    0    0    0    0
## 7391    0    0    0    0    0    0    0    0    0    0    0
## 7392    0    0    0    1    0    0    0    0    0    0    0
## 7393    0    0    1    0    0    0    0    0    0    0    0
## 7394    0    0    0    0    0    0    1    0    0    0    0
## 7395    0    0    0    0    0    0    0    0    0    0    0
## 7396    0    1    0    0    0    0    0    0    0    0    0
## 7397    0    0    0    0    0    0    0    0    0    0    0
## 7398    0    0    0    0    0    0    0    0    0    0    0
## 7399    0    0    0    0    0    0    0    0    0    0    0
## 7400    1    0    0    0    0    0    0    0    0    0    0
## 7401    0    0    0    0    0    0    2    0    0    0    0
## 7402    0    0    0    0    0    0    0    0    0    0    0
## 7403    0    0    0    0    1    0    0    0    0    0    0
## 7404    0    0    0    0    0    0    0    0    0    0    0
## 7405    0    0    0    0    0    0    0    0    0    0    0
## 7406    1    0    0    0    0    0    0    0    0    0    0
## 7407    0    0    0    0    0    0    0    0    0    0    0
## 7408    0    0    0    0    0    0    0    0    0    0    0
## 7409    0    0    0    0    0    0    0    0    0    0    0
## 7410    0    0    0    0    0    0    0    0    0    1    0
## 7411    0    0    0    0    0    0    0    0    0    0    0
## 7412    0    0    0    0    0    0    0    0    0    0    0
## 7413    0    0    1    0    0    0    0    0    0    0    0
## 7414    0    0    0    1    0    0    0    0    0    0    0
## 7415    0    1    0    0    0    0    0    0    0    0    0
## 7416    0    0    0    0    0    0    0    0    0    0    0
## 7417    0    0    1    0    0    0    0    0    0    0    0
## 7418    0    0    0    1    0    0    0    0    0    0    0
## 7419    0    1    0    0    0    0    0    0    0    0    0
```

```
## 7420       0    0    0    0    0    0    0    0    0    0    0
## 7421       1    0    0    0    0    0    0    0    0    0    0
## 7422       0    0    0    0    0    0    0    0    0    0    0
## 7423       0    0    0    0    0    1    0    0    0    0    0
## 7424       0    0    0    0    0    0    0    0    0    0    0
## 7425       0    0    0    0    0    0    0    0    0    0    0
## 7426       0    0    0    0    0    0    0    0    0    0    0
## 7427       0    0    0    0    0    0    0    0    0    0    0
## 7428       0    0    0    0    0    0    0    0    0    0    0
## 7429       0    0    0    0    0    0    0    0    0    0    1
## 7430       0    0    0    0    0    0    1    0    0    0    0
## 7431       0    0    0    0    0    0    1    0    0    0    0
## 7432       0    0    0    1    0    0    0    0    0    0    0
## 7433       1    0    0    1    0    0    0    0    0    0    0
## 7434       0    0    0    0    0    0    0    1    0    0    0
## 7435       0    0    0    0    0    0    0    0    0    0    0
## 7436       0    0    1    0    0    0    0    1    0    0    0
## 7437       0    0    0    0    0    0    0    0    0    0    0
## 7438       0    0    0    0    0    0    0    0    0    0    0
## 7439       0    0    0    0    0    0    0    0    0    1    0
## 7440       0    0    0    0    0    0    0    0    0    0    0
## 7441       0    0    0    0    1    0    0    0    0    0    0
## 7442       0    0    0    0    0    0    0    0    0    0    0
## 7443       0    0    0    0    0    0    0    0    0    0    0
## 7444       0    0    0    0    0    0    0    0    0    0    0
## 7445       0    0    0    0    0    0    0    0    0    0    0
## 7446       0    0    0    0    0    0    0    0    0    0    0
## 7447       0    0    0    0    0    0    0    0    0    0    0
## 7448       0    0    0    0    0    0    0    0    0    0    0
## 7449       0    0    0    0    0    0    0    0    0    0    0
## 7450       0    0    1    0    0    0    0    0    0    0    0
## 7451       0    0    0    0    0    0    1    0    0    0    0
## 7452       0    0    0    0    0    0    1    0    0    0    0
## 7453       0    0    0    0    0    0    0    0    0    0    0
## 7454       0    0    0    0    0    0    0    0    0    0    0
## 7455       0    1    0    0    0    0    0    0    0    0    0
## 7456       0    0    0    0    0    0    0    0    0    0    0
## 7457       0    0    0    0    0    0    1    0    0    0    0
## 7458       0    0    1    0    0    0    0    0    0    0    0
## 7459       0    0    0    0    0    0    0    0    0    0    0
## 7460       0    0    0    0    0    0    0    0    0    0    0
## 7461       0    0    1    0    0    0    0    0    0    0    0
## 7462       0    0    0    0    0    0    0    0    1    0    0
## 7463       0    0    0    0    0    0    0    0    0    0    0
## 7464       0    0    0    0    0    0    0    1    0    0    0
## 7465       0    0    0    0    0    0    0    0    0    0    0
## 7466       0    0    0    0    0    0    0    0    1    0    0
## 7467       0    0    0    0    0    0    0    0    0    0    0
## 7468       0    0    1    0    0    0    0    0    0    0    0
## 7469       0    0    0    0    0    0    0    0    1    0    0
## 7470       0    0    1    0    0    0    0    0    0    0    0
## 7471       0    0    0    0    1    0    0    0    0    0    0
## 7472       0    0    0    0    0    0    0    0    0    0    0
## 7473       0    0    0    0    0    0    0    0    0    0    0
```

```
## 7474   1   0   0   0   0   0   0   0   0   0   0
## 7475   0   0   1   0   0   0   0   0   0   0   0
## 7476   0   0   0   0   0   0   0   0   0   1   0
## 7477   0   1   0   0   0   0   0   0   0   0   0
## 7478   0   0   0   0   0   0   0   0   0   1   0
## 7479   0   0   0   1   0   0   0   0   0   0   0
## 7480   0   0   0   0   1   0   0   0   0   0   0
## 7481   0   0   0   0   0   0   0   0   0   0   0
## 7482   0   0   0   0   0   0   0   0   0   0   0
## 7483   0   0   0   1   0   0   0   0   0   0   0
## 7484   0   0   0   0   0   0   1   0   0   0   0
## 7485   0   0   0   0   0   0   0   0   0   0   0
## 7486   0   0   0   1   0   0   0   0   0   0   0
## 7487   0   0   0   0   0   0   1   0   0   0   0
## 7488   0   0   0   0   0   0   0   0   0   0   0
## 7489   0   0   1   0   0   0   0   0   0   0   0
## 7490   0   0   0   0   0   0   0   1   0   0   0
## 7491   0   0   1   0   0   0   0   0   0   0   0
## 7492   0   0   0   0   0   0   0   0   0   0   0
## 7493   0   0   0   0   0   0   0   0   0   0   0
## 7494   0   0   0   0   0   0   0   0   0   0   0
## 7495   0   0   0   0   0   0   0   1   0   0   0
## 7496   0   0   0   0   0   0   1   0   0   0   0
## 7497   0   0   0   0   0   0   0   0   0   0   0
## 7498   0   0   0   0   1   0   0   0   0   0   0
## 7499   0   0   0   0   0   0   1   0   0   0   0
## 7500   0   0   0   0   0   0   0   0   0   0   1
## 7501   0   0   0   0   0   0   0   0   0   1   0
## 7502   0   0   0   0   0   0   1   0   0   0   0
## 7503   0   0   0   0   0   0   0   0   0   0   0
## 7504   0   2   0   0   0   0   0   0   0   0   0
## 7505   0   0   0   0   0   0   0   0   0   0   0
## 7506   0   0   0   0   0   0   0   0   0   0   0
## 7507   0   0   0   0   0   0   0   0   0   0   0
## 7508   0   1   0   0   0   0   0   0   0   0   0
## 7509   0   0   0   0   0   0   0   0   0   0   0
## 7510   0   0   0   0   0   0   0   0   0   0   0
## 7511   1   0   0   0   0   0   0   0   0   0   0
## 7512   1   0   0   0   0   0   0   0   0   0   0
## 7513   0   0   0   0   0   0   0   0   0   0   0
## 7514   0   0   0   0   0   0   0   0   0   0   0
## 7515   0   0   0   0   0   0   0   0   0   0   0
## 7516   0   1   0   0   0   0   0   0   0   0   0
## 7517   0   1   0   0   0   0   0   0   0   0   0
## 7518   1   0   0   0   0   0   0   0   0   0   0
## 7519   1   0   0   0   0   0   0   0   0   0   0
## 7520   0   0   0   0   0   0   1   0   0   0   0
## 7521   1   0   0   0   0   0   0   0   0   0   0
## 7522   0   0   0   0   0   0   1   0   0   0   0
## 7523   0   0   0   0   0   0   1   0   0   0   0
## 7524   0   0   0   0   0   0   0   0   1   0   0
## 7525   0   0   0   0   0   0   0   0   0   0   0
## 7526   0   0   0   0   0   0   0   1   0   0   0
## 7527   0   0   0   0   0   0   0   0   0   0   0
```

```
## 7528    0    0    0    0    1    0    0    0    0    0    0
## 7529    0    0    0    0    0    2    0    1    0    0    0
## 7530    0    0    0    0    0    0    0    0    0    0    0
## 7531    0    0    0    0    0    0    0    1    0    0    0
## 7532    0    0    1    0    0    0    0    0    0    0    0
## 7533    0    0    0    0    0    0    0    0    0    0    1
## 7534    0    0    0    0    0    0    0    0    0    0    0
## 7535    0    0    0    0    0    0    0    0    0    0    0
## 7536    0    0    0    0    0    0    0    0    0    0    0
## 7537    0    0    0    0    1    0    0    1    0    0    0
## 7538    0    0    0    0    0    0    0    0    0    0    0
## 7539    0    0    0    0    0    0    0    0    0    0    0
## 7540    0    0    1    0    0    0    0    0    0    0    0
## 7541    1    0    0    0    0    0    0    0    0    0    0
## 7542    0    0    0    0    0    0    0    0    0    0    0
## 7543    0    0    0    0    0    0    0    0    0    1    0
## 7544    0    0    0    0    0    0    0    0    0    0    0
## 7545    0    0    0    0    0    0    0    0    0    0    0
## 7546    0    0    0    0    0    0    1    0    0    0    0
## 7547    0    0    0    0    0    0    0    0    0    0    0
## 7548    0    1    0    0    0    0    0    0    0    0    0
## 7549    0    0    0    0    0    0    0    0    0    0    0
## 7550    0    0    0    0    0    0    0    0    0    0    1
## 7551    0    0    0    0    0    0    1    0    0    0    0
## 7552    0    0    0    0    0    0    0    0    0    0    0
## 7553    0    0    0    0    0    0    1    0    0    0    0
## 7554    0    0    0    0    0    0    0    0    0    0    0
## 7555    0    0    0    0    0    0    0    3    0    0    0
## 7556    0    0    0    0    0    0    0    0    0    0    0
## 7557    0    0    1    0    0    0    0    0    0    0    0
## 7558    0    0    0    0    0    0    0    0    0    0    0
## 7559    0    0    0    0    0    0    0    0    0    0    0
## 7560    0    1    0    0    0    0    0    0    0    0    0
## 7561    0    0    0    0    0    0    0    0    1    0    0
## 7562    0    1    0    0    0    0    0    0    0    0    0
## 7563    0    1    0    0    0    0    0    0    0    0    0
## 7564    0    0    0    1    0    0    0    0    0    0    0
## 7565    0    0    0    0    0    0    0    2    0    0    0
## 7566    0    0    0    0    0    0    0    0    0    0    0
## 7567    0    0    0    0    0    0    0    0    0    0    0
## 7568    0    0    0    0    0    0    1    0    0    0    0
## 7569    0    0    0    0    0    0    0    1    0    0    0
## 7570    0    1    0    1    0    0    0    0    0    0    0
## 7571    0    0    0    0    0    0    0    0    0    0    0
## 7572    0    0    0    0    0    0    0    0    0    0    0
## 7573    0    0    0    0    0    1    0    0    0    0    0
## 7574    0    0    0    0    0    0    0    0    1    0    0
## 7575    1    0    0    0    0    0    0    0    0    0    0
## 7576    0    0    0    0    0    0    0    1    0    0    0
## 7577    0    0    0    0    0    0    0    0    0    0    0
## 7578    0    0    0    0    0    0    0    0    0    0    0
## 7579    0    0    0    0    0    0    0    0    0    0    0
## 7580    0    0    0    0    0    0    0    1    0    0    0
## 7581    0    0    0    0    0    0    0    0    1    0    0
```

```
## 7582     0    0    0    0    1    0    0    0    0    0    0
## 7583     0    0    0    0    0    0    0    0    0    0    0
## 7584     0    0    0    0    0    0    0    0    0    0    0
## 7585     0    0    0    0    0    0    0    0    0    0    0
## 7586     0    0    0    0    0    0    0    0    0    1    0
## 7587     0    0    0    0    0    0    0    0    0    0    0
## 7588     0    0    0    0    0    0    1    0    0    0    0
## 7589     0    0    0    0    0    0    0    0    0    0    0
## 7590     0    0    0    0    0    0    1    0    0    0    0
## 7591     0    0    0    0    0    0    0    0    0    1    0
## 7592     0    0    0    0    0    0    1    1    0    0    0
## 7593     0    0    0    1    0    0    0    0    0    0    0
## 7594     0    0    0    0    0    0    0    0    0    0    0
## 7595     0    0    0    0    0    0    0    0    0    0    0
## 7596     0    0    0    0    0    0    0    0    0    0    0
## 7597     0    0    0    1    0    0    0    0    0    0    0
## 7598     0    1    0    0    0    0    0    0    0    0    0
## 7599     1    0    0    0    0    0    0    0    0    0    0
## 7600     1    0    0    0    0    0    0    0    0    0    0
## 7601     0    0    1    0    0    0    0    0    0    0    0
## 7602     0    0    0    0    0    0    0    0    1    0    0
## 7603     0    0    0    0    0    0    0    0    0    0    0
## 7604     0    0    0    0    0    0    0    0    0    0    1
## 7605     0    0    0    0    0    0    0    0    0    0    0
## 7606     0    0    0    0    0    0    0    0    0    0    0
## 7607     0    0    0    0    0    0    0    0    0    0    0
## 7608     0    0    0    0    0    0    0    0    0    0    0
## 7609     0    0    0    0    2    0    0    0    0    0    0
## 7610     0    0    0    0    0    0    1    0    0    0    0
## 7611     0    0    0    1    0    0    0    0    0    0    0
## 7612     0    0    1    0    0    0    0    0    0    0    0
## 7613     0    0    0    0    0    0    0    0    0    1    0
## 7614     0    0    0    0    0    0    0    0    0    0    0
## 7615     0    0    0    0    0    0    0    0    1    0    0
## 7616     0    0    0    0    0    0    1    0    0    0    0
## 7617     0    0    0    0    1    0    0    0    0    0    0
## 7618     0    0    0    0    0    0    1    0    0    0    0
## 7619     0    0    1    0    0    0    0    0    0    0    0
## 7620     0    0    0    0    0    0    1    0    0    0    0
## 7621     0    0    0    0    0    0    0    0    0    0    0
## 7622     0    0    0    0    0    0    0    0    0    0    0
## 7623     0    0    0    0    0    0    0    0    0    0    0
## 7624     0    0    0    0    0    0    0    0    0    0    0
## 7625     0    0    0    0    0    0    0    0    0    0    0
## 7626     0    0    0    0    1    0    0    0    0    0    0
## 7627     1    0    0    0    0    0    0    0    0    0    0
## 7628     0    0    0    0    1    0    0    0    0    0    0
## 7629     0    0    0    1    0    0    0    1    0    0    0
## 7630     0    0    0    0    0    0    0    0    0    0    0
## 7631     0    0    0    0    0    0    0    0    0    0    0
## 7632     0    0    0    1    0    0    0    0    0    0    0
## 7633     0    0    0    0    0    0    0    0    0    0    0
## 7634     0    0    0    0    0    1    0    0    0    0    0
## 7635     0    0    0    0    1    0    0    0    0    0    0
```

```
## 7636    1    1    0    0    0    0    0    0    0    0    0
## 7637    0    0    0    0    0    0    1    0    0    0    0
## 7638    0    0    0    0    0    0    0    0    0    1    0
## 7639    0    0    0    0    0    0    0    0    0    0    0
## 7640    0    0    0    0    0    0    0    0    0    0    0
## 7641    0    0    0    0    0    0    0    0    0    0    1
## 7642    0    0    0    0    0    0    0    1    0    0    0
## 7643    0    0    0    0    0    0    0    0    0    0    0
## 7644    0    0    1    0    0    0    0    0    0    0    0
## 7645    0    0    0    0    0    0    0    0    0    0    0
## 7646    0    0    0    1    0    0    0    0    0    0    0
## 7647    0    0    0    1    0    0    0    0    0    0    0
## 7648    0    0    0    0    0    0    0    0    0    0    0
## 7649    0    0    0    0    0    0    0    0    0    0    0
## 7650    0    0    0    0    0    1    0    0    0    0    0
## 7651    0    0    0    0    0    0    0    0    0    0    0
## 7652    0    0    0    0    0    0    0    0    0    0    0
## 7653    0    0    0    0    1    0    0    0    0    0    0
## 7654    0    0    0    0    1    0    0    0    0    0    0
## 7655    0    0    0    0    0    0    0    0    0    0    0
## 7656    0    0    0    0    1    0    0    0    0    0    0
## 7657    0    0    0    0    0    0    0    0    0    0    0
## 7658    1    0    0    0    0    0    0    0    0    0    0
## 7659    0    0    0    0    0    0    1    0    0    0    0
## 7660    0    0    0    0    0    0    1    0    0    0    0
## 7661    0    0    0    0    0    0    0    0    1    0    0
## 7662    0    0    0    0    0    0    0    0    0    0    0
## 7663    0    0    0    0    0    0    0    0    0    0    0
## 7664    0    1    0    0    0    0    0    0    0    0    0
## 7665    0    0    0    1    0    0    0    0    0    0    0
## 7666    0    0    0    2    0    0    0    0    0    0    0
## 7667    0    0    0    0    0    0    0    0    0    1    0
## 7668    0    0    0    0    0    0    0    1    0    0    0
## 7669    0    0    0    0    0    0    0    0    0    0    0
## 7670    0    0    0    0    0    0    0    0    0    0    0
## 7671    0    0    1    0    0    0    0    0    0    0    0
## 7672    0    0    0    0    0    0    0    0    0    0    0
## 7673    1    0    0    0    0    0    0    0    0    0    0
## 7674    0    0    0    0    0    0    0    0    0    0    1
## 7675    0    0    0    0    0    0    1    0    0    0    0
## 7676    0    0    0    0    0    0    0    0    0    0    0
## 7677    0    0    1    0    0    0    0    0    0    0    0
## 7678    0    0    0    0    0    0    0    0    0    0    0
## 7679    0    0    0    1    0    0    0    0    0    0    0
## 7680    0    0    0    0    0    0    0    0    0    0    0
## 7681    0    0    0    0    0    0    0    0    0    0    0
## 7682    0    0    0    0    0    0    0    1    0    1    0
## 7683    1    0    0    0    0    0    0    0    0    0    0
## 7684    0    0    0    0    0    0    0    0    0    0    1
## 7685    0    0    0    0    0    0    0    0    0    0    0
## 7686    0    0    0    0    0    0    0    1    0    0    0
## 7687    0    0    0    0    0    0    1    0    0    0    0
## 7688    0    0    0    0    0    0    1    0    0    0    0
## 7689    0    0    0    3    0    0    0    0    0    0    0
```

```
## 7690      0    0    0    0    0    0    0    0    0    0    0
## 7691      0    0    0    0    0    2    0    0    0    0    0
## 7692      0    0    0    0    0    0    1    0    0    0    0
## 7693      0    0    0    0    0    0    0    0    0    0    0
## 7694      0    0    0    0    0    1    0    0    0    0    0
## 7695      0    0    0    0    1    0    0    0    0    0    0
## 7696      1    0    0    0    0    0    0    0    0    0    0
## 7697      0    0    0    0    0    0    1    0    0    0    0
## 7698      0    0    0    0    0    0    0    0    0    0    0
## 7699      0    0    0    0    0    0    0    0    0    0    0
## 7700      0    0    0    0    0    0    0    0    0    1    0
## 7701      0    0    0    1    0    0    0    0    0    0    0
## 7702      0    0    0    0    1    0    1    0    0    0    0
## 7703      0    0    0    0    0    0    0    0    0    0    0
## 7704      0    0    1    0    0    0    0    0    0    0    0
## 7705      0    0    0    0    0    0    0    2    0    0    0
## 7706      0    0    0    0    0    0    0    0    0    0    0
## 7707      0    0    0    0    1    0    0    0    0    0    0
## 7708      0    1    0    0    0    0    0    0    0    0    0
## 7709      0    0    0    0    0    0    0    0    0    1    0
## 7710      0    0    0    0    0    0    0    0    0    0    0
## 7711      0    0    0    0    0    0    1    0    0    1    0
## 7712      0    0    0    0    0    0    0    0    2    0    0
## 7713      0    0    0    0    0    0    0    0    0    0    0
## 7714      0    0    0    0    0    0    0    0    0    1    0
## 7715      0    0    0    0    1    0    0    0    0    0    0
## 7716      0    0    0    0    0    0    0    0    0    0    0
## 7717      0    0    0    0    0    0    0    0    0    0    0
## 7718      0    0    0    0    0    0    1    0    0    0    0
## 7719      0    1    0    1    0    0    0    0    0    0    0
## 7720      0    0    0    0    0    0    0    0    0    0    0
## 7721      0    0    0    0    0    0    0    0    0    0    0
## 7722      0    1    0    0    0    0    0    0    0    0    0
## 7723      0    0    0    0    0    0    0    0    0    0    0
## 7724      0    0    0    0    0    0    0    1    0    0    0
## 7725      0    0    0    0    0    0    0    0    0    0    0
## 7726      0    1    0    0    0    0    0    0    0    0    0
## 7727      0    0    0    0    0    0    1    0    0    0    0
## 7728      1    0    0    0    0    0    0    0    0    0    0
## 7729      1    0    0    0    0    0    0    0    0    0    0
## 7730      0    0    0    0    0    1    0    0    0    0    0
## 7731      0    0    0    0    0    0    0    0    0    1    0
## 7732      0    0    0    0    0    0    0    0    0    0    0
## 7733      0    0    0    0    0    0    0    0    0    0    0
## 7734      0    0    0    0    0    0    1    0    0    0    0
## 7735      0    0    0    0    1    0    0    0    0    0    0
## 7736      0    0    0    0    1    0    0    0    0    0    0
## 7737      0    0    0    0    0    1    0    0    0    0    0
## 7738      0    0    0    0    0    0    0    0    0    0    0
## 7739      0    0    0    0    0    0    1    0    0    0    0
## 7740      0    0    0    0    0    0    0    0    0    0    0
## 7741      0    1    0    0    0    0    0    0    0    0    0
## 7742      0    0    0    0    0    0    0    0    0    0    0
## 7743      0    0    0    1    0    0    0    0    0    0    0
```

```
## 7744      0    0    0    0    0    0    0    0    0    0    0
## 7745      0    0    0    0    0    0    0    0    0    0    0
## 7746      0    0    0    0    0    0    0    0    0    0    0
## 7747      0    0    0    0    0    0    0    0    0    0    0
## 7748      0    0    0    0    0    0    0    0    0    0    0
## 7749      0    0    0    0    0    0    0    0    0    0    0
## 7750      0    0    0    0    0    0    0    0    0    0    0
## 7751      0    0    0    0    0    0    0    0    0    0    0
## 7752      0    0    0    0    0    0    0    0    0    0    0
## 7753      0    0    0    0    0    0    0    0    0    0    0
## 7754      0    0    0    0    2    0    0    0    0    0    0
## 7755      0    0    0    0    1    0    0    0    0    0    0
## 7756      0    0    0    0    0    0    0    0    0    0    0
## 7757      1    0    0    0    0    0    0    0    0    0    0
## 7758      0    0    0    0    0    0    0    0    0    0    0
## 7759      0    0    0    0    0    0    0    0    0    0    0
## 7760      0    0    0    0    0    0    0    0    0    0    0
## 7761      0    0    0    0    0    0    0    0    0    0    0
## 7762      0    0    0    0    0    0    0    0    0    0    0
## 7763      0    0    0    0    0    0    0    0    0    0    0
## 7764      0    0    0    0    0    0    0    0    0    0    0
## 7765      0    0    0    0    0    0    0    0    0    0    0
## 7766      0    0    0    0    0    0    0    0    0    0    0
## 7767      0    0    0    0    0    0    0    0    0    0    0
## 7768      0    0    0    0    0    0    0    1    0    0    0
## 7769      0    0    0    0    0    0    0    0    1    0    0
## 7770      0    0    0    0    0    0    0    0    0    0    0
## 7771      0    0    0    0    0    0    1    0    0    0    0
## 7772      0    0    0    0    0    0    0    0    0    0    0
## 7773      0    1    0    0    0    0    0    0    0    0    0
## 7774      0    0    1    0    0    0    0    0    0    0    0
## 7775      0    0    0    0    0    0    0    0    0    1    0
## 7776      0    0    0    0    0    0    0    0    0    3    0
## 7777      0    0    1    0    0    0    0    0    0    0    0
## 7778      1    0    0    0    0    0    0    0    0    0    0
## 7779      0    0    1    0    0    0    0    0    0    0    0
## 7780      0    0    0    0    0    0    0    0    0    0    0
## 7781      1    0    0    0    0    0    0    0    0    0    0
## 7782      0    0    1    0    0    0    0    0    0    0    0
## 7783      0    1    0    0    0    0    0    0    0    0    0
## 7784      0    0    0    0    0    0    1    0    0    0    0
## 7785      0    0    0    0    0    0    0    0    0    0    0
## 7786      0    0    0    0    0    0    0    0    1    0    0
## 7787      0    0    1    0    0    0    0    0    0    0    0
## 7788      0    0    0    0    0    0    1    0    0    0    0
## 7789      0    0    1    0    0    0    0    0    0    0    0
## 7790      0    0    0    0    0    0    0    0    0    0    0
## 7791      0    0    0    0    0    0    0    0    0    0    0
## 7792      0    0    0    1    0    0    0    0    0    0    0
## 7793      0    0    0    0    0    0    0    0    0    0    1
## 7794      0    1    0    0    0    0    0    0    0    0    0
## 7795      0    0    0    0    0    0    0    0    0    0    0
## 7796      0    0    0    1    0    0    0    0    0    0    0
## 7797      0    0    0    0    0    0    0    0    0    0    0
```

```
## 7798    0    1    0    0    0    0    0    0    0    0    0
## 7799    0    0    0    0    0    0    0    0    0    0    0
## 7800    0    0    0    1    0    0    0    0    0    0    0
## 7801    0    0    0    0    0    0    0    0    0    0    0
## 7802    0    0    0    0    0    0    0    0    0    0    0
## 7803    0    0    0    0    0    0    1    0    0    0    0
## 7804    0    0    0    0    0    0    0    0    0    0    0
## 7805    0    1    0    0    0    0    0    0    0    0    0
## 7806    0    0    2    0    0    0    0    0    0    0    0
## 7807    0    0    1    0    0    0    0    0    0    0    0
## 7808    0    1    0    0    0    0    0    0    0    0    0
## 7809    0    1    0    0    0    0    0    0    0    0    0
## 7810    0    0    0    0    0    0    0    0    0    0    0
## 7811    0    1    0    0    0    0    0    0    0    0    0
## 7812    1    0    0    0    0    0    0    0    0    0    0
## 7813    0    0    0    0    1    0    0    0    0    0    0
## 7814    0    0    0    0    0    0    1    0    0    0    0
## 7815    0    0    1    0    0    0    0    0    0    0    0
## 7816    0    0    0    0    0    0    0    0    0    0    0
## 7817    0    1    1    0    1    0    0    0    0    0    0
## 7818    0    0    0    0    0    0    0    0    0    0    0
## 7819    0    0    0    0    1    0    0    0    0    0    0
## 7820    0    0    0    0    0    0    0    0    0    0    0
## 7821    0    0    0    0    0    0    1    0    0    0    0
## 7822    0    0    0    0    0    0    1    0    0    0    0
## 7823    0    0    0    0    0    0    0    0    0    0    0
## 7824    0    0    0    0    0    0    0    0    0    0    0
## 7825    0    0    1    0    0    0    0    0    0    0    0
## 7826    0    0    1    0    0    0    0    0    0    0    0
## 7827    1    0    1    0    0    0    0    0    0    0    0
## 7828    0    0    0    0    0    0    0    0    0    0    0
## 7829    0    0    1    0    0    0    0    0    0    0    0
## 7830    0    0    0    0    0    0    0    0    0    0    0
## 7831    0    0    0    1    0    0    0    0    0    0    0
## 7832    0    0    0    0    0    0    0    0    0    0    0
## 7833    0    0    0    0    0    0    1    0    0    0    0
## 7834    0    0    0    0    0    0    0    0    0    0    0
## 7835    0    0    0    0    0    0    0    0    0    0    0
## 7836    1    0    0    0    0    0    0    0    0    0    0
## 7837    0    0    0    0    0    0    0    0    0    0    0
## 7838    0    0    0    0    0    0    0    0    1    0    0
## 7839    0    0    0    0    1    0    0    0    0    0    0
## 7840    0    0    0    0    1    0    0    0    0    0    0
## 7841    0    0    0    0    1    0    0    0    0    0    0
## 7842    0    0    0    0    0    0    0    0    0    1    0
## 7843    0    0    0    0    0    0    0    0    0    0    0
## 7844    0    0    0    0    0    0    0    0    0    0    0
## 7845    0    0    0    0    0    0    0    0    0    0    0
## 7846    0    0    1    0    0    0    0    0    0    0    0
## 7847    0    0    0    0    0    0    0    0    0    0    0
## 7848    0    0    0    0    0    0    0    0    0    0    0
## 7849    0    0    0    0    0    0    1    0    0    0    0
## 7850    0    0    0    0    0    0    0    0    0    1    0
## 7851    0    0    0    0    0    0    0    1    0    0    0
```

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```
## 7852      0    0    0    0    0    0    0    0    0    1    0
## 7853      0    0    0    0    0    0    0    0    0    0    0
## 7854      0    0    1    0    0    0    0    0    0    0    0
## 7855      0    0    0    0    0    0    0    0    0    0    0
## 7856      0    0    0    0    1    0    0    0    0    0    0
## 7857      0    0    0    0    0    0    0    0    0    1    0
## 7858      0    0    0    0    0    0    0    0    0    1    0
## 7859      0    0    0    0    0    0    0    0    0    0    0
## 7860      0    0    0    0    0    0    0    0    0    0    0
## 7861      0    0    1    0    0    0    0    0    0    0    0
## 7862      1    0    0    0    0    0    0    0    0    0    0
## 7863      0    0    0    0    0    0    0    0    0    0    0
## 7864      0    0    0    0    0    0    0    0    0    0    0
## 7865      0    0    0    0    0    0    0    0    0    0    1
## 7866      0    0    1    0    0    0    0    0    0    0    0
## 7867      0    0    0    0    0    0    0    0    0    1    0
## 7868      0    0    0    0    0    0    0    0    0    0    0
## 7869      0    0    0    0    0    0    0    0    0    0    1
## 7870      0    0    0    0    0    0    0    0    0    0    0
## 7871      0    0    0    0    0    0    0    0    0    1    1
## 7872      0    0    0    0    0    0    0    0    0    0    0
## 7873      0    0    0    0    0    0    0    1    0    0    0
## 7874      0    0    0    0    0    0    0    0    0    0    0
## 7875      0    1    0    1    0    0    0    0    0    0    0
## 7876      0    0    0    0    0    0    0    0    0    0    0
## 7877      0    0    0    0    0    0    0    0    0    0    0
## 7878      0    0    0    0    0    0    0    0    0    1    1
## 7879      0    0    0    0    0    0    1    0    0    0    0
## 7880      0    0    0    0    0    0    0    0    1    0    0
## 7881      0    0    0    0    0    0    1    0    0    0    0
## 7882      0    0    0    0    1    0    0    0    0    0    0
## 7883      1    0    0    0    0    0    0    0    0    0    0
## 7884      1    0    0    0    0    0    0    0    0    0    1
## 7885      0    0    0    0    1    0    0    0    0    0    0
## 7886      0    0    0    0    0    1    0    0    0    0    0
## 7887      0    0    0    1    0    0    0    0    0    0    0
## 7888      0    0    0    0    0    0    0    0    0    0    1
## 7889      0    0    0    0    0    0    1    0    0    0    0
## 7890      0    0    0    0    0    0    0    0    0    0    1
## 7891      0    0    0    0    0    0    1    0    0    0    0
## 7892      0    0    0    1    0    0    0    0    0    0    0
## 7893      0    0    0    1    0    0    0    0    0    0    0
## 7894      0    0    0    1    0    0    0    0    0    0    0
## 7895      0    0    0    0    1    0    1    0    0    0    0
## 7896      0    0    0    0    0    0    0    0    0    0    0
## 7897      0    0    0    0    0    0    0    1    0    0    0
## 7898      0    0    0    0    0    0    0    1    0    0    0
## 7899      0    0    0    0    0    0    0    0    0    0    0
## 7900      0    0    0    1    0    0    0    0    0    0    0
## 7901      0    1    0    0    0    0    0    0    0    0    0
## 7902      1    0    0    0    0    0    0    0    0    0    0
## 7903      0    0    0    0    0    0    0    0    0    0    1
## 7904      0    0    0    0    0    0    0    0    0    0    0
## 7905      0    0    0    0    0    0    0    0    0    0    0
```

```
## 7906      0    0    0    0    0    0    1    0    0    0    0
## 7907      0    0    0    0    0    0    1    0    0    0    0
## 7908      0    0    0    0    0    0    0    0    0    0    0
## 7909      0    0    0    0    0    0    0    1    0    0    0
## 7910      0    0    0    0    0    0    1    0    0    0    0
## 7911      0    0    0    0    0    0    0    0    0    0    0
## 7912      0    0    0    0    0    0    0    0    0    0    0
## 7913      0    0    0    0    0    0    0    0    0    0    0
## 7914      1    0    0    0    0    0    0    0    0    0    0
## 7915      0    0    0    0    0    0    0    0    0    0    0
## 7916      0    0    0    0    0    0    0    0    2    0    0
## 7917      0    0    0    0    0    0    0    0    0    1    0
## 7918      0    0    0    0    0    0    1    0    0    0    0
## 7919      0    0    0    0    0    0    0    0    0    0    0
## 7920      0    0    0    0    0    0    0    0    0    0    0
## 7921      0    0    0    0    0    0    1    0    0    0    0
## 7922      0    0    0    0    0    0    0    0    0    0    0
## 7923      0    0    0    0    0    0    1    0    0    0    0
## 7924      0    0    0    0    0    0    0    0    0    0    0
## 7925      0    0    0    0    0    0    1    0    0    0    0
## 7926      0    0    0    0    0    0    0    0    0    0    0
## 7927      0    0    0    0    0    0    0    0    0    0    0
## 7928      0    0    0    0    0    0    0    0    0    1    0
## 7929      0    0    1    0    0    0    0    0    0    0    0
## 7930      0    0    0    0    0    0    0    0    0    0    0
## 7931      0    0    0    0    0    0    1    0    0    0    0
## 7932      0    1    0    0    0    0    0    0    0    0    0
## 7933      0    0    0    0    0    0    0    0    0    1    0
## 7934      0    0    0    0    0    0    0    0    0    0    0
## 7935      0    0    0    0    0    0    0    0    0    0    0
## 7936      0    0    0    0    0    0    1    1    0    0    0
## 7937      0    0    0    0    0    0    0    0    0    0    0
## 7938      0    0    0    0    0    0    0    0    0    0    0
## 7939      0    0    0    0    0    0    0    0    1    0    0
## 7940      0    0    0    0    0    0    0    0    0    1    0
## 7941      0    0    0    0    1    0    0    0    0    0    0
## 7942      0    0    0    0    1    0    0    0    0    0    0
## 7943      0    0    0    0    1    0    0    0    0    0    0
## 7944      0    0    0    0    0    0    0    0    0    0    0
## 7945      0    0    1    0    0    0    0    0    0    0    0
## 7946      0    0    1    0    0    0    0    0    0    0    0
## 7947      0    0    0    0    0    0    0    0    0    0    0
## 7948      0    0    0    0    0    0    0    0    0    0    0
## 7949      0    0    0    0    1    0    0    0    0    0    0
## 7950      0    0    0    0    0    0    0    0    0    0    0
## 7951      0    0    0    0    0    0    0    0    0    0    0
## 7952      0    0    0    0    0    0    0    0    0    0    0
## 7953      0    0    0    0    0    0    0    0    0    0    0
## 7954      0    0    0    0    0    0    0    0    0    0    0
## 7955      0    0    0    0    0    0    0    0    0    0    0
## 7956      0    1    0    0    0    0    0    0    0    0    0
## 7957      0    0    0    0    0    0    0    0    0    0    0
## 7958      0    0    0    0    0    0    0    0    0    0    0
## 7959      0    0    0    0    0    1    0    0    0    0    0
```

```
## 7960   0   0   0   0   0   0   0   0   0   0   0
## 7961   0   0   0   0   0   0   0   0   0   1   0
## 7962   0   0   0   0   0   0   0   0   0   0   0
## 7963   0   0   0   0   0   0   0   0   0   0   0
## 7964   0   1   0   0   0   0   0   0   0   0   0
## 7965   0   0   0   0   0   0   0   0   0   1   0
## 7966   0   0   0   0   0   0   0   0   0   0   0
## 7967   0   0   0   0   0   0   0   0   0   0   0
## 7968   1   0   0   0   0   0   0   0   0   0   0
## 7969   0   0   0   0   0   0   0   0   0   0   0
## 7970   0   0   0   0   0   0   0   0   0   0   0
## 7971   0   1   0   0   0   0   0   0   0   0   0
## 7972   0   0   0   0   0   0   0   0   0   0   0
## 7973   0   0   0   0   0   0   0   0   0   0   0
## 7974   0   0   0   0   0   0   0   0   0   0   0
## 7975   0   0   0   0   0   0   0   0   0   0   0
## 7976   0   0   0   0   0   0   0   0   0   0   0
## 7977   0   1   0   0   0   0   0   0   0   0   0
## 7978   0   0   0   0   0   0   1   0   0   0   0
## 7979   0   0   0   0   0   0   0   0   0   0   0
## 7980   0   0   0   0   0   0   0   0   0   0   0
## 7981   0   0   0   0   0   0   0   0   1   0   0
## 7982   0   0   0   0   0   0   0   0   0   0   0
## 7983   0   0   0   0   0   0   0   0   1   0   0
## 7984   0   0   0   0   1   0   0   0   0   0   0
## 7985   0   0   0   0   0   0   0   0   0   0   0
## 7986   0   0   0   0   0   0   0   0   0   0   0
## 7987   0   0   1   0   0   0   0   0   0   0   0
## 7988   0   1   0   0   0   0   0   0   0   0   0
## 7989   0   0   1   0   0   0   0   0   0   0   0
## 7990   0   0   0   0   1   0   0   0   0   0   0
## 7991   0   0   0   0   0   0   0   0   0   0   0
## 7992   0   0   0   1   0   0   0   0   0   0   0
## 7993   0   0   0   0   0   0   0   0   0   0   0
## 7994   0   0   0   0   0   0   0   0   0   0   0
## 7995   0   0   0   0   0   0   0   0   0   0   1
## 7996   0   0   0   0   0   0   0   0   0   0   0
## 7997   0   0   0   0   0   0   0   0   0   0   0
## 7998   0   0   0   2   0   0   0   0   0   0   0
## 7999   0   0   0   0   0   0   0   0   0   0   0
## 8000   0   0   0   0   0   0   0   1   0   0   0
## 8001   0   0   0   0   0   0   0   0   0   0   0
## 8002   0   0   0   0   0   0   0   0   0   0   0
## 8003   1   0   0   0   0   0   0   0   0   0   0
## 8004   0   0   0   0   0   1   0   0   0   0   0
## 8005   0   0   0   0   0   0   0   0   0   0   0
## 8006   1   1   0   0   0   0   0   0   0   0   0
## 8007   0   0   0   0   0   0   1   0   0   0   0
## 8008   0   0   0   0   0   0   1   0   0   0   0
## 8009   0   0   0   0   1   0   0   0   0   0   0
## 8010   0   0   0   1   0   0   0   0   0   0   0
## 8011   1   0   0   0   0   0   0   0   0   0   0
## 8012   0   0   0   0   1   0   0   0   0   0   0
## 8013   0   0   0   0   0   1   0   0   0   0   0
```

```
## 8014      0    0    0    0    0    0    0    0    0    0    0
## 8015      0    0    0    0    0    0    0    0    0    0    0
## 8016      0    0    0    0    0    0    1    0    0    0    0
## 8017      0    0    0    0    0    0    0    0    0    0    0
## 8018      0    0    0    0    0    0    0    0    0    0    0
## 8019      0    0    0    0    0    0    0    0    0    0    0
## 8020      0    0    0    0    1    0    0    0    0    0    0
## 8021      0    0    0    0    0    0    0    0    0    0    0
## 8022      0    0    0    0    0    0    0    0    0    0    1
## 8023      0    0    0    0    0    0    0    0    0    0    0
## 8024      0    0    0    0    0    1    0    0    0    0    0
## 8025      0    0    0    0    0    0    0    0    0    0    0
## 8026      0    0    0    1    1    0    0    0    0    0    0
## 8027      0    0    0    0    0    0    0    0    0    0    0
## 8028      0    0    0    0    0    0    0    0    0    1    0
## 8029      0    0    0    0    0    0    1    0    0    0    0
## 8030      0    0    0    0    0    0    0    0    0    0    0
## 8031      2    0    0    0    0    0    0    0    0    0    0
## 8032      0    0    0    0    0    0    0    0    0    0    0
## 8033      0    0    0    0    0    0    0    0    0    0    0
## 8034      0    0    0    0    0    0    0    0    0    0    0
## 8035      0    0    1    0    0    0    0    0    0    0    0
## 8036      0    0    0    0    0    0    0    0    0    0    0
## 8037      0    0    0    0    0    0    0    0    0    0    0
## 8038      0    0    0    0    0    0    0    0    0    0    0
## 8039      0    0    0    0    0    0    0    0    0    0    0
## 8040      0    0    0    0    0    0    0    0    0    0    0
## 8041      0    0    0    0    0    0    0    0    0    0    0
## 8042      0    0    0    0    0    0    0    0    0    0    0
## 8043      0    0    0    0    0    0    0    0    0    0    0
## 8044      0    0    0    0    0    0    0    0    0    0    0
## 8045      0    0    0    0    0    0    0    0    0    0    0
## 8046      0    0    0    0    0    0    0    0    0    0    0
## 8047      0    0    0    0    0    0    0    0    0    0    0
## 8048      0    0    0    0    0    0    0    0    0    0    0
## 8049      0    0    0    1    0    1    0    0    1    0    0
## 8050      0    0    0    0    0    0    0    0    0    0    0
## 8051      0    0    0    0    0    0    0    0    0    0    0
## 8052      0    0    0    0    0    0    0    0    0    1    0
## 8053      1    0    0    0    0    0    0    0    0    0    0
## 8054      0    0    0    0    0    0    0    0    0    0    0
## 8055      0    0    0    0    0    0    0    0    1    0    0
## 8056      0    0    0    0    0    0    0    0    0    0    0
## 8057      0    0    0    0    0    0    0    0    0    0    0
## 8058      0    0    0    0    0    0    0    0    0    0    0
## 8059      0    0    0    0    0    0    1    0    0    0    0
## 8060      0    0    0    0    0    0    0    0    0    0    0
## 8061      0    0    0    0    0    0    0    0    0    0    0
## 8062      0    0    0    0    0    0    0    0    0    1    0
## 8063      0    0    0    0    0    0    0    0    0    0    0
## 8064      0    1    0    0    0    0    0    0    0    0    0
## 8065      0    1    0    0    0    0    0    0    0    0    0
## 8066      0    0    0    0    0    0    0    0    0    0    0
## 8067      0    0    0    0    0    0    0    0    0    0    0
```

```
## 8068    1    0    0    0    0    0    0    0    0    0    0
## 8069    1    0    0    0    0    0    0    0    0    0    0
## 8070    0    0    0    0    0    1    0    0    0    0    0
## 8071    0    0    0    0    0    1    0    0    0    0    0
## 8072    0    1    0    0    0    0    0    0    0    0    0
## 8073    0    0    0    0    0    0    0    0    0    0    0
## 8074    0    0    0    1    0    0    0    0    0    0    0
## 8075    1    0    0    0    0    0    0    0    0    0    0
## 8076    0    0    1    0    0    0    0    0    0    0    0
## 8077    0    0    0    0    0    0    0    0    0    0    0
## 8078    0    0    0    0    0    0    0    0    1    0    0
## 8079    0    0    0    0    0    0    1    0    0    0    0
## 8080    0    0    0    0    0    0    0    0    0    0    0
## 8081    0    0    0    0    0    0    0    0    0    0    0
## 8082    0    0    0    0    0    0    0    0    0    0    0
## 8083    1    0    1    0    0    0    0    0    0    0    0
## 8084    0    0    0    0    0    1    0    0    0    0    0
## 8085    0    0    0    0    0    0    0    0    0    0    0
## 8086    0    0    0    0    0    0    0    0    0    0    0
## 8087    0    0    0    0    0    0    0    0    0    0    0
## 8088    0    0    0    0    0    0    0    0    0    0    0
## 8089    0    1    0    0    0    0    0    0    0    0    0
## 8090    0    0    0    0    0    0    0    0    1    0    0
## 8091    0    0    0    0    0    0    1    0    0    0    0
## 8092    0    0    0    1    0    0    0    0    0    0    1
## 8093    0    0    0    1    0    0    1    0    0    0    0
## 8094    0    0    0    0    0    0    0    0    0    0    0
## 8095    0    0    0    1    0    0    0    0    0    0    0
## 8096    0    0    0    0    0    0    0    0    0    0    0
## 8097    0    0    0    0    0    0    0    0    0    0    0
## 8098    0    0    0    0    0    0    0    0    0    0    0
## 8099    0    0    0    0    0    2    0    0    0    0    0
## 8100    0    0    0    0    0    0    1    0    0    0    0
## 8101    0    0    0    0    0    0    0    0    1    0    0
## 8102    0    0    0    0    0    0    0    0    0    0    0
## 8103    0    0    0    0    0    0    0    0    0    1    0
## 8104    0    0    0    1    0    0    0    1    0    0    0
## 8105    0    0    1    0    0    0    0    0    0    0    0
## 8106    0    0    0    0    0    0    0    0    0    0    0
## 8107    0    0    0    1    0    0    0    0    0    0    0
## 8108    0    0    0    0    0    0    0    0    0    0    0
## 8109    0    0    0    0    0    0    0    0    0    0    0
## 8110    0    0    0    0    0    0    1    0    0    0    0
## 8111    0    0    0    0    0    0    0    0    0    0    0
## 8112    0    0    0    0    0    0    0    0    0    0    0
## 8113    0    0    0    0    0    0    0    0    0    0    0
## 8114    0    0    0    0    0    0    0    0    0    0    0
## 8115    0    0    1    0    0    0    0    0    0    0    0
## 8116    0    1    0    0    0    0    0    0    0    0    0
## 8117    1    0    0    0    0    0    0    0    0    0    0
## 8118    0    0    0    0    0    0    0    0    0    0    0
## 8119    0    0    0    0    0    0    1    0    0    0    0
## 8120    0    0    0    0    0    0    0    0    0    0    1
## 8121    0    0    0    0    1    0    0    0    0    0    0
```

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```
## 8122       0    0    0    0    1    0    0    0    0    0    0
## 8123       0    0    0    0    0    0    0    0    0    0    0
## 8124       0    0    0    0    0    0    0    0    0    0    0
## 8125       0    0    0    0    0    0    0    0    0    0    0
## 8126       0    0    0    0    0    0    0    0    0    0    0
## 8127       0    1    0    0    0    0    0    0    0    0    0
## 8128       1    0    0    0    0    0    0    0    0    0    0
## 8129       0    0    0    0    0    0    0    0    0    0    1
## 8130       0    0    0    0    0    0    0    0    0    0    0
## 8131       0    0    0    0    0    0    0    0    0    0    0
## 8132       0    0    0    0    0    0    0    0    0    0    0
## 8133       0    0    0    0    0    0    2    0    1    0    0
## 8134       0    0    1    0    0    0    0    0    0    0    0
## 8135       0    0    0    0    0    0    0    0    1    0    0
## 8136       0    0    0    0    0    1    0    0    0    0    0
## 8137       0    0    0    1    0    0    0    0    0    0    0
## 8138       0    0    0    0    0    0    0    0    0    0    0
## 8139       0    0    0    0    0    0    0    0    0    0    0
## 8140       0    0    0    0    0    0    0    0    0    0    0
## 8141       0    0    1    0    0    0    0    0    0    0    0
## 8142       0    0    0    0    0    0    0    0    0    0    0
## 8143       0    0    0    0    0    0    0    1    0    0    0
## 8144       0    0    0    0    0    0    1    0    0    0    0
## 8145       0    0    0    0    0    0    0    0    0    0    0
## 8146       0    0    0    0    1    0    0    0    0    0    0
## 8147       0    0    0    0    0    0    0    0    0    0    0
## 8148       0    0    0    0    0    0    0    0    0    0    0
## 8149       0    0    0    0    0    0    0    0    0    0    1
## 8150       0    0    0    0    0    0    0    0    0    0    0
## 8151       0    0    0    0    0    0    2    0    0    0    0
## 8152       0    0    0    0    0    0    0    0    1    0    0
## 8153       1    0    0    0    0    0    0    0    0    0    0
## 8154       0    0    0    0    0    0    0    0    1    0    0
## 8155       0    0    0    0    1    0    0    0    0    0    0
## 8156       0    0    0    0    0    0    0    0    0    0    0
## 8157       1    0    0    0    0    0    0    0    0    0    0
## 8158       0    0    0    0    0    0    0    0    0    1    0
## 8159       0    0    0    0    0    0    0    0    0    0    0
## 8160       0    0    0    1    0    0    0    0    0    0    0
## 8161       0    0    0    0    0    0    0    0    0    0    0
## 8162       0    0    0    2    0    0    0    0    0    0    0
## 8163       0    0    0    1    0    0    0    0    0    0    0
## 8164       0    1    0    0    0    0    0    0    0    0    0
## 8165       0    0    0    0    0    0    0    0    0    0    0
## 8166       0    0    1    0    0    0    0    0    0    0    0
## 8167       0    0    0    0    0    0    0    0    0    0    0
## 8168       0    0    0    1    0    0    0    0    0    0    0
## 8169       0    0    0    0    0    0    0    0    0    0    0
## 8170       0    0    0    0    0    0    0    1    0    0    0
## 8171       0    0    0    0    0    0    0    0    0    1    0
## 8172       0    0    0    0    0    0    0    0    0    0    0
## 8173       0    0    0    0    0    0    0    1    0    0    0
## 8174       0    0    0    0    0    1    0    0    0    0    0
## 8175       0    0    0    0    0    1    0    0    0    0    0
```

```
## 8176      0    0    0    0    0    0    0    0    0    0    0
## 8177      0    0    0    0    0    0    0    0    0    0    0
## 8178      0    0    0    0    0    1    0    0    0    0    0
## 8179      0    0    0    0    0    0    0    0    0    0    0
## 8180      0    0    0    0    0    0    0    0    0    0    0
## 8181      0    1    0    0    0    0    0    0    0    0    0
## 8182      0    0    0    0    0    0    0    0    0    0    1
## 8183      0    0    0    0    0    0    0    0    0    0    0
## 8184      0    0    0    0    0    0    1    0    0    0    0
## 8185      0    0    0    0    0    2    0    0    0    0    0
## 8186      0    0    0    0    0    0    0    0    0    0    0
## 8187      0    0    0    0    0    0    0    0    0    0    0
## 8188      0    0    0    2    0    0    0    0    0    0    0
## 8189      1    0    0    0    0    0    0    0    0    0    0
## 8190      0    0    0    0    0    0    0    0    0    0    0
## 8191      0    0    0    1    0    0    0    0    0    0    0
## 8192      0    0    0    1    0    0    0    0    0    0    0
## 8193      0    0    0    0    0    0    0    0    0    0    0
## 8194      0    0    0    0    0    0    1    0    0    0    0
## 8195      0    0    0    0    0    0    0    0    0    0    0
## 8196      0    0    0    0    0    0    0    0    0    0    0
## 8197      0    0    0    0    0    0    0    0    0    0    0
## 8198      1    0    0    0    0    0    0    0    0    0    0
## 8199      0    0    0    1    0    0    0    0    0    0    0
## 8200      0    0    0    1    0    1    0    0    0    0    0
## 8201      0    0    0    0    0    0    0    1    0    0    0
## 8202      0    0    0    0    0    0    0    0    0    0    0
## 8203      0    0    0    1    0    0    0    0    0    0    0
## 8204      0    0    0    0    0    0    0    0    1    0    0
## 8205      0    0    0    0    0    0    0    0    0    0    0
## 8206      0    0    0    0    0    0    0    0    0    0    0
## 8207      1    0    0    0    0    0    0    1    0    0    0
## 8208      0    0    0    0    0    0    0    0    0    0    0
## 8209      0    0    0    0    0    0    0    0    0    0    0
## 8210      0    0    0    0    0    0    0    0    0    0    0
## 8211      0    0    0    0    0    0    0    0    0    0    0
## 8212      0    1    0    0    0    0    0    0    0    0    0
## 8213      0    0    0    1    0    0    0    0    0    0    0
## 8214      1    0    0    0    0    0    0    0    0    0    0
## 8215      0    0    0    0    0    0    0    0    0    0    0
## 8216      0    0    0    1    0    0    0    0    0    0    0
## 8217      0    0    0    0    0    0    0    0    0    0    0
## 8218      0    0    0    0    0    0    0    0    1    0    0
## 8219      0    0    0    0    0    0    0    0    0    0    0
## 8220      0    0    0    0    0    0    0    0    1    0    0
## 8221      1    0    0    0    0    0    0    0    0    0    0
## 8222      0    0    0    0    0    0    0    0    0    0    0
## 8223      0    0    0    0    0    0    0    0    0    1    0
## 8224      0    0    1    0    0    0    0    0    0    0    0
## 8225      0    0    0    0    0    0    0    0    0    0    0
## 8226      0    0    0    0    1    0    0    0    0    0    0
## 8227      0    0    0    0    0    0    0    0    0    0    0
## 8228      0    0    0    1    0    0    0    0    0    0    0
## 8229      0    0    0    0    0    0    0    0    0    0    0
```

```
## 8230      0    0    0    0    0    0    0    0    0    0    0
## 8231      0    0    0    0    0    0    1    0    0    0    0
## 8232      0    0    0    0    0    0    0    0    0    0    0
## 8233      0    0    0    0    0    0    1    0    0    0    0
## 8234      0    0    1    0    0    0    0    0    0    0    0
## 8235      0    1    0    0    0    0    0    0    0    0    0
## 8236      0    0    0    0    1    0    0    0    0    0    0
## 8237      0    0    1    0    0    0    0    0    0    0    0
## 8238      0    0    0    0    0    0    0    0    0    0    0
## 8239      0    0    0    1    0    0    0    0    0    0    0
## 8240      0    0    0    0    0    0    0    0    0    0    0
## 8241      0    0    0    0    0    0    1    0    0    0    0
## 8242      0    0    1    0    0    0    0    0    0    0    0
## 8243      0    0    0    0    0    0    0    0    0    0    0
## 8244      0    0    0    0    0    0    0    0    0    0    0
## 8245      0    0    0    0    0    0    0    0    0    0    0
## 8246      0    0    0    0    1    0    0    0    0    0    0
## 8247      0    0    0    0    0    0    0    0    0    0    0
## 8248      0    0    0    0    0    0    0    0    0    0    0
## 8249      0    0    0    0    0    0    0    0    0    0    0
## 8250      0    0    0    0    0    0    0    0    1    0    0
## 8251      0    0    0    0    0    0    0    0    0    0    0
## 8252      0    0    0    0    0    0    0    0    0    0    0
## 8253      0    0    0    0    0    0    1    0    0    0    0
## 8254      0    0    0    0    0    0    0    0    0    0    0
## 8255      0    0    0    0    0    0    0    0    0    0    0
## 8256      0    0    0    0    0    1    0    0    0    0    0
## 8257      0    0    0    0    1    0    0    0    0    0    0
## 8258      0    0    1    0    0    0    0    0    0    0    0
## 8259      0    0    0    0    0    0    1    0    0    0    0
## 8260      0    0    0    0    0    0    0    0    0    0    0
## 8261      0    0    0    0    0    0    0    2    0    0    0
## 8262      0    0    0    0    0    0    0    0    0    0    0
## 8263      0    1    0    0    0    0    0    0    0    0    0
## 8264      1    0    0    0    0    0    0    0    0    0    0
## 8265      0    1    0    0    0    0    0    0    0    0    0
## 8266      1    0    0    0    0    0    0    0    0    0    0
## 8267      0    0    0    0    0    0    0    0    1    0    0
## 8268      0    0    0    0    0    0    0    0    0    0    0
## 8269      0    0    0    0    0    0    0    0    0    1    0
## 8270      0    0    0    0    0    0    0    0    0    0    0
## 8271      0    0    0    0    0    0    0    0    0    0    0
## 8272      0    0    0    0    0    0    0    0    0    0    0
## 8273      0    0    1    0    0    0    0    0    0    0    0
## 8274      0    0    1    0    0    0    0    0    0    0    0
## 8275      0    0    0    0    0    0    0    0    0    1    0
## 8276      0    0    0    0    0    0    0    0    0    0    0
## 8277      0    0    0    0    0    0    1    0    0    0    0
## 8278      0    0    0    0    0    0    0    0    0    1    0
## 8279      0    0    0    0    0    0    0    0    0    0    0
## 8280      0    1    0    0    0    0    0    0    0    0    0
## 8281      0    0    0    0    0    0    0    0    0    0    0
## 8282      0    0    0    0    1    0    0    0    0    0    0
## 8283      0    0    0    0    0    0    1    0    0    0    0
```

```
## 8284    0    0    0    0    0    0    0    1    0    0    0
## 8285    0    1    0    0    0    0    0    0    0    0    0
## 8286    0    0    0    0    0    0    0    0    0    0    0
## 8287    0    0    0    0    0    0    0    0    0    0    1
## 8288    0    0    0    1    0    0    0    0    0    0    0
## 8289    0    0    0    0    0    0    0    0    0    0    0
## 8290    0    1    0    0    0    0    0    0    0    0    0
## 8291    0    1    0    0    0    0    0    0    0    0    0
## 8292    0    0    0    0    0    0    0    0    0    0    0
## 8293    0    0    0    0    0    0    0    0    0    0    0
## 8294    0    0    0    0    0    0    1    0    0    0    0
## 8295    0    0    0    0    0    0    1    0    0    0    0
## 8296    0    0    0    0    0    0    0    0    0    0    0
## 8297    0    0    0    0    0    0    0    0    0    0    0
## 8298    0    0    0    0    0    0    0    0    0    1    0
## 8299    1    0    0    0    0    0    0    0    0    0    0
## 8300    0    0    0    0    0    0    0    0    0    1    0
## 8301    0    0    0    0    0    0    1    0    0    0    0
## 8302    0    0    0    1    0    0    0    0    0    0    0
## 8303    0    0    0    0    0    0    0    0    0    0    0
## 8304    0    0    0    0    0    0    0    0    0    0    0
## 8305    0    1    0    0    0    0    0    0    0    0    0
## 8306    0    1    0    0    0    0    0    0    0    0    0
## 8307    0    0    0    0    0    0    0    0    1    0    0
## 8308    0    0    0    0    0    0    0    0    0    0    0
## 8309    0    0    0    0    0    0    0    0    0    0    0
## 8310    0    1    0    0    0    0    0    0    0    0    0
## 8311    0    0    0    0    0    0    0    0    0    0    0
## 8312    0    0    0    0    0    0    0    0    0    0    0
## 8313    0    0    0    0    0    0    0    0    0    0    0
## 8314    0    0    0    0    0    0    0    0    0    0    0
## 8315    0    0    0    0    0    0    0    0    0    0    0
## 8316    0    0    0    0    0    0    0    0    0    0    0
## 8317    0    0    0    0    0    0    0    0    0    0    0
## 8318    0    0    0    0    0    0    0    0    1    0    0
## 8319    0    0    0    0    0    0    0    0    0    0    0
## 8320    0    0    0    0    0    0    0    0    0    0    0
## 8321    0    0    0    0    0    0    0    0    0    1    0
## 8322    0    0    0    1    0    0    0    0    0    0    0
## 8323    1    0    0    0    0    0    0    0    0    0    0
## 8324    0    0    0    0    1    0    0    0    0    0    0
## 8325    0    0    0    0    0    1    0    0    0    0    0
## 8326    0    0    0    1    0    0    0    0    0    0    0
## 8327    0    0    0    0    0    0    0    0    0    0    0
## 8328    1    0    0    0    0    0    0    0    0    0    0
## 8329    0    0    0    0    0    0    0    0    0    0    0
## 8330    0    0    0    0    0    0    1    0    0    0    0
## 8331    0    0    0    0    1    0    0    0    0    0    0
## 8332    0    0    0    0    1    0    0    0    0    0    0
## 8333    0    1    1    0    0    0    0    0    0    0    0
## 8334    0    0    0    0    0    0    0    0    0    0    0
## 8335    1    0    0    0    0    0    0    0    0    0    0
## 8336    0    0    0    1    0    0    0    0    0    0    0
## 8337    0    0    0    0    1    0    0    0    0    0    0
```

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```
## 8338     0     0     0     0     0     0     0     0     0     0     0
## 8339     0     0     0     1     0     0     0     0     0     0     0
## 8340     0     0     0     0     0     0     0     0     0     0     0
## 8341     0     0     1     0     0     0     0     0     0     0     0
## 8342     0     0     0     0     0     0     0     0     0     0     0
## 8343     0     0     0     0     0     0     0     0     0     0     0
## 8344     0     0     0     0     0     2     0     0     0     0     0
## 8345     0     0     0     0     0     0     1     0     0     0     0
## 8346     0     0     0     0     0     0     0     0     0     0     0
## 8347     0     0     0     0     0     0     0     0     0     0     0
## 8348     0     0     0     0     0     0     0     0     0     0     0
## 8349     0     1     0     0     0     0     0     0     0     0     0
## 8350     0     1     0     0     0     0     0     0     0     0     0
## 8351     0     0     0     0     0     0     0     0     0     0     0
## 8352     0     0     0     0     0     0     0     0     0     0     0
## 8353     0     0     0     0     0     0     0     0     0     0     0
## 8354     0     0     0     0     2     0     0     0     0     0     0
## 8355     0     0     0     0     0     0     0     1     0     0     0
## 8356     0     0     0     0     0     0     1     0     0     0     0
## 8357     0     0     0     0     0     0     0     0     0     0     0
## 8358     0     0     0     0     0     0     2     0     0     0     0
## 8359     0     0     0     0     0     0     0     0     0     0     0
## 8360     0     0     0     0     0     0     0     0     0     0     0
## 8361     0     0     0     0     0     0     0     0     0     0     0
## 8362     0     0     0     0     0     0     0     0     0     0     0
## 8363     0     0     0     0     0     0     1     0     0     0     0
## 8364     0     0     0     0     0     0     0     0     1     0     0
## 8365     0     0     0     1     0     0     0     0     0     0     0
## 8366     0     0     0     0     0     0     0     0     0     0     0
## 8367     0     0     0     0     0     0     0     0     0     0     0
## 8368     0     0     0     0     0     0     0     0     0     0     0
## 8369     0     0     0     0     1     0     0     0     0     0     0
## 8370     0     0     0     0     0     0     0     0     0     0     0
## 8371     0     0     0     0     0     0     0     0     0     0     0
## 8372     0     1     0     0     0     0     0     0     0     0     0
## 8373     0     0     0     0     0     0     0     0     0     0     1
## 8374     0     0     0     0     0     0     0     0     0     0     0
## 8375     0     0     0     0     0     0     0     1     0     0     0
## 8376     0     1     0     0     0     0     0     0     0     0     0
## 8377     0     0     0     0     0     0     0     0     0     0     0
## 8378     0     0     0     0     0     0     0     0     0     0     0
## 8379     0     0     0     0     0     0     0     0     0     0     0
## 8380     0     0     0     0     0     0     0     0     0     0     0
## 8381     0     0     0     0     0     0     0     0     0     0     0
## 8382     0     0     0     0     0     0     0     0     0     0     0
## 8383     0     0     0     0     0     1     0     0     0     0     0
## 8384     0     0     0     0     0     0     0     1     0     0     0
## 8385     0     0     0     0     0     0     0     0     0     0     0
## 8386     0     0     0     0     0     0     0     0     0     0     0
## 8387     0     0     0     0     0     1     0     0     0     0     0
## 8388     0     0     0     0     0     0     1     0     0     0     0
## 8389     0     0     0     0     1     0     0     0     0     0     0
## 8390     0     0     0     0     0     0     0     0     1     0     0
## 8391     0     0     0     0     0     0     0     0     1     0     0
```

```
## 8392    1    0    0    0    0    0    0    0    0    0    0
## 8393    0    0    0    0    0    0    0    0    0    0    0
## 8394    0    0    0    0    0    0    0    0    0    0    0
## 8395    0    0    0    0    0    0    1    0    0    0    0
## 8396    0    0    0    0    0    0    0    0    0    0    0
## 8397    0    0    0    0    0    0    0    0    0    0    0
## 8398    1    0    0    0    0    0    0    0    0    0    0
## 8399    0    0    0    0    0    0    0    0    0    0    0
## 8400    0    0    0    0    0    0    0    0    0    0    0
## 8401    0    0    0    0    0    0    0    0    0    0    0
## 8402    0    0    0    0    0    0    0    0    1    0    0
## 8403    0    1    0    0    0    0    0    0    0    0    0
## 8404    0    0    0    0    1    0    0    0    0    0    0
## 8405    0    0    0    0    0    0    1    0    0    0    0
## 8406    0    0    1    0    0    0    0    0    0    0    0
## 8407    0    0    0    0    0    0    1    0    0    0    0
## 8408    0    0    0    0    0    0    0    0    0    0    0
## 8409    0    0    0    0    0    0    0    0    0    0    0
## 8410    0    0    0    0    0    0    0    0    0    0    0
## 8411    0    0    0    0    0    0    0    0    0    0    0
## 8412    0    0    0    0    0    0    0    0    0    1    1
## 8413    0    0    0    0    0    0    0    0    0    0    0
## 8414    0    0    0    0    0    0    0    0    0    0    0
## 8415    0    0    1    0    0    0    0    0    0    0    0
## 8416    0    1    0    0    0    0    0    0    0    0    0
## 8417    0    0    0    1    0    0    0    0    0    0    0
## 8418    0    0    0    0    0    0    0    0    0    0    0
## 8419    0    0    0    0    0    0    0    0    0    1    0
## 8420    0    1    0    0    0    0    0    0    0    0    0
## 8421    0    0    0    0    0    1    0    0    0    0    0
## 8422    0    1    0    0    0    0    0    0    0    0    0
## 8423    0    0    0    0    0    0    0    1    0    0    0
## 8424    0    0    0    0    0    0    0    0    0    0    0
## 8425    0    0    0    0    0    0    0    0    0    0    0
## 8426    0    0    1    0    0    0    0    0    0    0    0
## 8427    0    0    0    0    0    0    0    0    0    1    0
## 8428    0    0    1    0    0    0    0    0    0    0    0
## 8429    0    0    0    0    0    0    0    0    0    0    0
## 8430    0    0    0    0    0    0    0    1    0    0    0
## 8431    0    0    0    0    0    0    0    0    0    0    0
## 8432    0    0    0    0    0    0    0    0    0    0    0
## 8433    0    0    0    0    0    1    0    0    0    0    0
## 8434    0    0    0    0    0    0    0    0    0    0    0
## 8435    0    0    0    0    0    0    0    0    0    1    0
## 8436    0    0    0    0    0    0    0    0    0    1    0
## 8437    0    0    0    0    0    0    0    0    0    0    0
## 8438    1    0    0    0    0    0    0    0    0    0    0
## 8439    0    0    0    1    0    0    0    0    0    0    0
## 8440    0    0    0    0    0    0    0    0    0    1    0
## 8441    0    0    0    0    0    0    0    0    0    0    0
## 8442    0    0    0    0    0    0    0    0    0    0    0
## 8443    0    0    0    0    0    0    0    0    0    0    0
## 8444    0    0    0    2    0    0    0    0    0    0    0
## 8445    1    0    0    0    0    0    0    0    0    0    0
```

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```
## 8446      0    0    0    0    0    0    0    0    0    0    0
## 8447      0    0    0    0    0    0    0    0    0    0    0
## 8448      0    0    0    0    1    0    0    0    0    0    0
## 8449      0    0    0    0    0    0    0    0    0    0    0
## 8450      1    0    0    0    0    0    0    0    0    0    0
## 8451      0    0    0    0    0    0    0    0    0    0    1
## 8452      0    0    0    0    0    0    0    0    0    0    0
## 8453      0    0    0    0    0    0    0    0    0    0    0
## 8454      0    0    0    0    0    0    0    0    0    0    0
## 8455      0    0    0    0    1    0    0    0    0    0    0
## 8456      0    0    0    0    0    1    0    0    0    0    0
## 8457      0    0    0    0    0    1    0    0    0    0    0
## 8458      0    0    0    0    0    0    0    0    0    0    0
## 8459      0    0    0    0    0    0    0    0    0    0    1
## 8460      0    0    0    0    0    0    0    0    1    0    0
## 8461      0    0    0    0    0    0    0    0    0    0    0
## 8462      0    0    0    0    0    0    0    0    0    0    0
## 8463      0    0    0    0    0    1    0    0    0    0    0
## 8464      0    0    0    1    0    0    0    0    0    2    0
## 8465      0    0    0    0    0    0    0    0    0    0    1
## 8466      0    0    0    2    0    0    0    0    0    0    0
## 8467      0    0    0    0    0    0    0    0    0    0    0
## 8468      0    0    0    0    0    0    0    0    0    1    0
## 8469      0    0    0    2    0    0    0    0    0    0    0
## 8470      0    0    0    0    0    0    0    0    0    0    0
## 8471      0    0    0    0    0    0    0    0    0    0    0
## 8472      0    0    0    0    0    0    0    0    0    0    0
## 8473      0    0    0    0    0    0    0    0    0    0    0
## 8474      0    0    0    0    0    0    0    0    0    0    0
## 8475      0    0    0    0    0    0    0    0    0    0    0
## 8476      0    0    0    0    0    0    0    0    0    0    0
## 8477      0    0    0    0    0    0    0    0    0    0    0
## 8478      0    0    0    0    0    0    0    0    0    1    0
## 8479      0    0    0    0    0    0    0    0    0    0    0
## 8480      0    0    0    0    0    0    0    0    0    0    0
## 8481      0    0    0    0    0    0    0    0    0    0    0
## 8482      0    0    0    0    0    0    0    0    0    0    0
## 8483      0    0    0    0    0    0    0    0    0    0    0
## 8484      0    0    0    0    0    0    0    0    0    0    0
## 8485      0    0    0    0    0    0    0    0    0    0    0
## 8486      0    0    0    0    0    0    0    0    0    0    0
## 8487      0    0    0    1    0    0    0    0    0    0    0
## 8488      0    0    0    1    0    0    0    0    0    1    0
## 8489      0    0    0    0    0    0    0    0    0    0    0
## 8490      0    0    0    0    0    0    0    0    0    0    0
## 8491      0    0    0    0    0    0    0    0    0    0    0
## 8492      0    0    0    0    0    0    1    0    0    0    1
## 8493      0    0    0    0    0    0    0    0    0    0    0
## 8494      0    0    0    0    0    0    0    0    0    0    0
## 8495      0    0    0    0    0    0    0    0    0    0    0
## 8496      0    0    0    0    0    1    0    0    0    0    0
## 8497      0    0    0    0    1    0    0    0    0    0    0
## 8498      0    0    0    0    0    0    0    0    0    0    0
## 8499      0    0    0    0    0    0    0    0    0    0    0
```

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```
## 8500      0    0    0    2    0    0    0    0    0    0    0
## 8501      0    0    0    0    0    0    0    0    0    0    0
## 8502      0    0    0    0    0    1    0    0    0    0    0
## 8503      0    0    0    0    1    0    0    0    0    0    0
## 8504      0    0    0    0    0    0    0    0    0    1    0
## 8505      0    0    0    0    0    0    0    0    0    0    0
## 8506      0    0    0    0    0    0    0    0    0    0    0
## 8507      0    0    0    0    0    0    0    0    0    0    0
## 8508      0    0    0    0    0    1    0    0    0    0    0
## 8509      0    0    0    0    0    0    0    0    0    0    0
## 8510      0    0    0    0    0    0    0    0    0    0    0
## 8511      0    0    0    0    0    0    0    0    0    0    0
## 8512      0    0    0    0    1    0    0    0    0    0    0
## 8513      0    0    0    0    0    0    0    0    0    0    0
## 8514      0    0    0    0    0    0    0    0    0    0    0
## 8515      1    0    0    0    0    0    0    0    0    0    0
## 8516      0    0    0    0    0    0    0    0    0    1    0
## 8517      0    0    0    0    0    0    0    0    0    0    0
## 8518      0    0    0    0    0    0    0    0    0    0    0
## 8519      0    0    0    0    0    0    0    0    0    0    0
## 8520      0    0    0    0    0    0    0    0    0    0    0
## 8521      0    0    0    0    0    0    0    0    0    0    0
## 8522      0    0    0    0    0    0    0    0    0    0    0
## 8523      0    0    0    0    0    0    0    1    0    0    0
## 8524      0    0    0    0    0    0    0    0    0    0    0
## 8525      0    0    0    0    0    0    0    0    0    0    0
## 8526      0    0    0    0    0    0    0    0    0    0    0
## 8527      0    0    0    0    0    0    0    2    0    0    0
## 8528      0    0    0    0    0    0    0    0    0    0    0
## 8529      0    0    0    0    0    0    0    0    0    0    0
## 8530      0    0    0    0    0    0    1    0    0    0    0
## 8531      0    0    0    1    0    0    0    0    0    0    0
## 8532      0    0    0    0    0    0    0    0    0    0    0
## 8533      0    0    0    0    0    0    0    1    0    0    0
## 8534      0    0    1    0    0    0    0    0    0    0    0
## 8535      0    0    0    0    1    0    0    0    0    0    0
## 8536      0    0    0    0    0    0    0    0    0    0    0
## 8537      0    0    0    0    0    0    0    0    0    0    0
## 8538      0    0    0    0    0    0    0    0    0    1    0
## 8539      0    0    1    0    0    0    0    0    0    0    0
## 8540      0    0    0    0    0    0    0    0    0    0    0
## 8541      0    0    0    0    0    0    0    0    0    0    0
## 8542      0    0    0    0    0    0    0    0    0    0    0
## 8543      0    0    0    0    0    0    0    2    0    0    0
## 8544      0    0    0    0    0    0    0    0    1    0    0
## 8545      0    0    0    0    0    0    1    0    0    0    0
## 8546      0    0    0    0    0    0    1    0    0    0    0
## 8547      0    0    0    0    0    0    1    0    0    0    0
## 8548      0    0    0    0    0    0    1    0    0    0    0
## 8549      0    0    0    0    0    0    0    0    0    0    0
## 8550      0    0    0    0    0    0    0    0    0    1    0
## 8551      0    0    0    0    0    0    0    0    1    0    0
## 8552      0    0    0    1    0    0    0    0    0    0    0
## 8553      0    0    0    0    0    0    0    0    1    0    0
```

```
## 8554    0    0    0    0    0    0    0    0    0    0    0
## 8555    0    0    0    0    0    0    0    0    0    1    0
## 8556    0    0    0    0    0    0    0    0    0    0    0
## 8557    0    0    0    0    0    0    0    0    0    0    1
## 8558    0    0    0    0    0    0    0    0    0    0    0
## 8559    0    0    0    0    0    0    0    0    1    0    0
## 8560    0    0    0    0    0    1    0    0    0    0    0
## 8561    0    0    0    0    0    0    0    0    1    0    0
## 8562    0    0    0    0    0    0    0    0    0    0    1
## 8563    0    0    0    0    0    0    1    0    0    0    0
## 8564    0    0    0    0    0    0    0    0    0    0    0
## 8565    0    0    0    0    0    0    0    0    0    2    0
## 8566    0    0    0    0    1    0    0    0    0    0    0
## 8567    0    0    0    0    0    0    0    0    0    0    0
## 8568    0    0    0    0    2    0    0    0    0    1    0
## 8569    0    0    0    0    0    1    0    0    0    0    0
## 8570    0    0    0    0    0    0    0    0    0    1    0
## 8571    0    0    0    0    0    0    0    1    0    0    0
## 8572    0    1    0    0    0    0    0    0    0    0    0
## 8573    0    0    0    0    0    0    0    0    0    0    1
## 8574    0    0    0    1    0    0    0    0    0    0    0
## 8575    0    0    0    0    0    0    0    0    0    0    0
## 8576    0    0    0    0    0    0    0    0    0    0    0
## 8577    0    0    0    0    0    0    0    0    0    0    0
## 8578    0    0    0    0    0    0    0    0    1    0    0
## 8579    0    0    1    0    0    0    0    0    0    0    0
## 8580    0    0    0    1    0    0    0    0    0    0    0
## 8581    0    0    0    0    0    0    0    0    0    0    0
## 8582    0    0    0    0    0    0    0    0    0    0    0
## 8583    0    0    0    0    0    0    0    0    0    0    0
## 8584    0    0    0    0    0    0    0    0    0    0    0
## 8585    0    0    0    0    0    0    0    0    0    0    0
## 8586    0    0    0    0    0    0    0    0    0    1    0
## 8587    0    0    0    0    0    0    0    0    0    0    0
## 8588    0    0    0    0    0    0    0    0    1    0    0
## 8589    0    0    0    0    0    0    0    0    0    0    0
## 8590    0    0    0    0    0    0    0    0    0    0    0
## 8591    0    0    0    0    0    0    0    1    0    0    0
## 8592    0    0    0    0    0    0    0    0    0    0    0
## 8593    0    0    1    0    0    0    0    0    0    0    0
## 8594    0    0    0    0    0    0    0    0    0    0    0
## 8595    0    0    0    0    0    0    0    0    0    0    0
## 8596    0    0    0    0    0    0    1    1    1    0    1
## 8597    0    0    0    0    0    0    0    0    0    0    1
## 8598    0    0    1    0    0    0    0    0    0    0    0
## 8599    0    0    0    0    0    0    1    0    0    0    0
## 8600    0    0    0    0    0    0    1    0    0    0    0
## 8601    0    0    0    0    1    0    0    0    0    0    0
## 8602    0    0    0    0    0    0    0    0    0    0    0
## 8603    0    0    0    0    0    1    0    0    0    0    0
## 8604    0    0    0    0    0    1    0    0    0    0    0
## 8605    0    0    0    0    0    0    0    0    0    0    0
## 8606    0    0    0    0    0    1    0    0    0    0    0
## 8607    1    0    0    0    0    0    0    0    0    0    0
```

```
## 8608      0    0    0    0    0    0    0    0    0    0    0
## 8609      0    0    0    0    1    0    0    0    0    0    0
## 8610      0    0    0    0    0    0    0    0    0    0    0
## 8611      0    0    0    0    0    0    0    0    0    0    0
## 8612      0    0    1    0    0    0    0    0    0    0    0
## 8613      0    0    0    0    0    0    0    0    0    0    0
## 8614      0    0    0    0    0    0    0    0    0    0    0
## 8615      0    0    0    0    0    0    0    0    0    0    1
## 8616      0    0    0    0    0    0    0    0    0    0    1
## 8617      0    0    0    0    0    0    0    0    0    0    0
## 8618      0    0    0    0    0    0    0    0    0    0    0
## 8619      0    0    0    0    0    0    0    0    3    0    0
## 8620      0    0    0    0    0    0    0    0    1    0    0
## 8621      0    0    0    0    0    0    0    0    0    0    0
## 8622      0    0    0    0    0    0    1    0    0    0    0
## 8623      0    0    0    0    0    0    0    0    1    0    0
## 8624      0    0    0    0    0    0    0    0    1    0    0
## 8625      0    0    0    0    0    0    0    0    0    0    0
## 8626      0    0    0    0    0    0    0    0    0    0    0
## 8627      0    0    0    0    0    0    0    0    1    0    0
## 8628      0    0    0    0    0    0    1    0    0    0    0
## 8629      0    0    0    0    1    0    0    0    0    0    0
## 8630      0    0    0    0    0    0    0    0    0    0    0
## 8631      0    0    0    0    0    0    1    0    0    0    0
## 8632      0    0    0    0    0    0    0    0    0    0    0
## 8633      0    0    0    1    0    0    0    1    0    0    0
## 8634      0    0    0    0    0    0    0    0    0    0    0
## 8635      0    0    0    0    0    0    0    0    0    0    1
## 8636      0    0    0    0    0    0    1    0    0    0    0
## 8637      0    0    0    0    0    0    0    0    0    0    0
## 8638      0    0    0    0    0    0    0    0    0    0    0
## 8639      0    0    0    0    0    0    0    0    0    0    0
## 8640      0    0    0    0    0    0    1    0    0    0    0
## 8641      0    0    1    0    0    0    0    0    0    0    0
## 8642      0    0    0    0    0    0    0    0    0    1    0
## 8643      0    0    1    0    0    0    0    0    0    0    0
## 8644      0    0    0    0    0    0    0    0    0    0    0
## 8645      0    0    0    0    0    0    0    0    0    0    0
## 8646      0    1    0    0    0    0    0    0    0    0    0
## 8647      0    0    0    0    0    0    1    0    0    0    0
## 8648      0    0    0    0    0    0    0    0    0    0    0
## 8649      0    0    0    0    0    0    0    0    0    0    0
## 8650      0    0    0    0    0    0    1    0    0    0    0
## 8651      0    0    0    0    0    0    0    0    0    0    0
## 8652      0    0    0    0    0    0    0    0    0    0    0
## 8653      0    0    0    0    1    0    0    0    0    0    0
## 8654      0    0    0    0    0    0    0    0    0    1    0
## 8655      0    0    0    0    0    0    0    0    0    0    0
## 8656      0    0    0    0    0    0    0    0    0    0    0
## 8657      0    0    0    0    0    0    0    0    0    0    0
## 8658      0    0    0    0    0    0    0    0    0    0    0
## 8659      0    0    0    0    0    0    0    0    0    0    0
## 8660      0    0    0    0    0    0    0    0    0    0    0
## 8661      0    0    0    0    0    0    0    0    0    0    0
```

```
## 8662       0    0    0    0    0    0    1    0    0    0    0
## 8663       0    0    0    0    0    0    1    0    0    0    0
## 8664       0    0    0    0    0    0    1    0    0    0    0
## 8665       0    0    0    0    0    0    0    0    0    0    0
## 8666       0    1    0    0    0    0    0    0    0    0    0
## 8667       0    0    0    0    0    0    0    0    0    0    0
## 8668       0    0    0    0    0    0    0    0    0    0    0
## 8669       0    0    0    0    0    0    0    1    0    0    0
## 8670       0    0    0    0    0    0    0    0    0    0    0
## 8671       0    0    0    0    0    0    0    0    0    1    0
## 8672       0    0    0    0    1    0    0    0    0    0    0
## 8673       0    0    0    0    0    0    1    0    0    0    0
## 8674       0    0    0    0    1    0    0    0    0    0    0
## 8675       0    0    0    0    0    0    0    0    0    0    1
## 8676       0    0    0    0    0    0    0    0    0    0    0
## 8677       0    0    0    0    0    0    0    0    0    0    0
## 8678       0    0    0    0    0    0    0    0    0    0    1
## 8679       0    0    0    0    0    0    0    0    0    1    0
## 8680       0    0    0    0    0    0    1    0    0    0    0
## 8681       0    0    0    0    0    0    1    0    0    1    0
## 8682       0    0    0    0    0    0    0    0    0    1    0
## 8683       0    0    0    0    0    0    0    0    0    2    0
## 8684       0    0    0    0    1    0    0    0    0    0    0
## 8685       0    0    0    0    0    0    0    0    0    1    0
## 8686       0    0    0    0    0    0    0    0    0    1    0
## 8687       0    0    0    0    0    0    0    0    1    0    0
## 8688       0    0    1    0    0    0    0    0    0    0    0
## 8689       1    0    0    0    0    0    0    0    0    0    0
## 8690       0    0    0    0    0    0    0    0    0    0    1
## 8691       0    0    0    0    0    0    0    0    0    0    0
## 8692       1    0    0    0    0    0    0    0    0    0    0
## 8693       0    0    0    0    0    0    0    0    0    0    0
## 8694       0    2    0    0    0    0    0    0    0    0    0
## 8695       1    0    0    0    0    0    0    0    0    0    0
## 8696       0    0    0    0    1    0    0    0    0    0    0
## 8697       1    0    0    0    0    0    0    0    0    0    0
## 8698       1    0    0    0    0    0    0    0    0    0    0
## 8699       1    0    0    0    0    0    0    0    0    0    0
## 8700       0    1    0    0    0    0    0    0    0    0    0
## 8701       0    0    1    0    0    0    0    0    0    0    0
## 8702       0    0    0    0    0    0    0    0    0    0    0
## 8703       0    0    0    0    0    0    0    0    0    1    0
## 8704       0    0    0    0    0    0    0    0    0    0    0
## 8705       0    0    0    0    0    0    0    0    0    0    0
## 8706       0    0    0    0    0    0    0    0    0    0    0
## 8707       0    0    0    0    0    0    0    0    0    0    0
## 8708       0    1    0    0    0    0    0    0    0    0    0
## 8709       0    0    0    0    0    0    0    0    0    0    0
## 8710       0    0    0    0    0    0    0    0    0    0    0
## 8711       0    0    0    0    0    0    0    0    0    0    0
## 8712       0    0    0    0    0    0    0    1    0    0    0
## 8713       0    0    0    0    0    0    0    0    0    0    0
## 8714       0    0    0    0    0    0    1    0    0    0    0
## 8715       0    0    0    0    0    0    0    0    1    0    0
```

```
## 8716   0   0   0   0   0   0   0   0   0   0   0
## 8717   0   0   0   0   0   2   0   0   0   0   0
## 8718   0   0   0   0   1   0   0   0   0   0   0
## 8719   0   0   0   0   0   1   0   0   0   0   0
## 8720   0   0   0   0   0   0   0   0   0   0   0
## 8721   0   0   1   0   0   0   0   0   0   0   0
## 8722   1   0   0   0   0   0   0   0   0   0   0
## 8723   0   0   0   0   0   0   0   0   0   0   1
## 8724   0   0   1   0   0   0   0   0   0   0   0
## 8725   0   1   0   0   0   0   0   0   0   0   0
## 8726   0   0   0   1   0   0   0   0   0   0   0
## 8727   0   0   0   0   0   0   0   0   0   0   0
## 8728   0   0   0   0   0   0   0   1   0   0   0
## 8729   1   0   0   0   0   0   0   0   0   0   0
## 8730   0   0   0   0   0   0   0   0   0   0   1
## 8731   0   0   1   0   0   0   0   0   0   0   0
## 8732   0   0   1   0   0   0   0   0   0   0   0
## 8733   0   1   0   0   0   0   0   0   0   0   0
## 8734   0   0   0   0   0   0   0   0   0   0   0
## 8735   0   0   0   0   0   0   0   0   4   0   0
## 8736   0   0   0   0   0   0   0   0   0   0   0
## 8737   1   0   0   0   0   0   0   0   0   0   0
## 8738   0   0   1   0   0   0   0   0   0   0   0
## 8739   0   0   0   0   0   0   0   0   0   0   0
## 8740   0   0   0   1   0   0   0   0   0   0   0
## 8741   0   1   0   0   0   0   0   0   0   0   0
## 8742   0   0   0   0   0   0   0   0   0   0   0
## 8743   0   0   0   0   0   0   0   0   0   0   0
## 8744   0   0   0   0   0   0   0   0   0   0   0
## 8745   0   1   0   0   0   0   0   0   0   0   0
## 8746   0   0   0   0   0   0   1   0   1   0   0
## 8747   0   0   0   0   0   0   0   0   0   0   1
## 8748   0   0   0   0   0   0   0   0   0   0   0
## 8749   0   0   0   0   0   0   0   0   1   0   0
## 8750   0   0   0   0   0   0   0   0   0   0   0
## 8751   0   0   0   0   0   0   0   0   1   0   0
## 8752   0   0   0   0   0   0   0   0   0   0   0
## 8753   0   0   0   0   0   0   0   0   0   0   0
## 8754   1   0   0   0   0   0   0   0   0   0   0
## 8755   0   0   0   0   0   1   0   0   0   0   0
## 8756   0   0   0   0   1   0   0   0   0   0   0
## 8757   0   0   0   0   0   0   0   0   0   0   0
## 8758   0   0   0   0   0   0   0   0   0   0   0
## 8759   0   0   1   0   0   0   0   0   0   0   0
## 8760   0   0   0   0   0   0   1   0   0   0   0
## 8761   0   1   0   0   0   0   0   0   0   0   0
## 8762   0   0   0   0   0   0   1   0   0   0   0
## 8763   0   0   0   0   0   0   0   0   0   0   0
## 8764   0   0   0   0   0   0   0   1   0   0   0
## 8765   0   0   0   0   1   0   0   0   0   0   0
## 8766   0   1   0   0   0   0   0   0   0   0   0
## 8767   0   0   0   0   0   0   1   0   0   0   0
## 8768   0   0   0   0   0   0   0   0   0   0   0
## 8769   0   0   0   0   0   0   1   0   0   0   0
```

```
## 8770    1    0    2    0    0    0    0    0    0    0    0
## 8771    0    1    0    0    0    0    0    0    0    0    0
## 8772    0    1    0    0    0    0    0    0    0    0    0
## 8773    0    0    0    0    0    0    0    0    0    1    0
## 8774    0    0    0    0    1    0    0    0    0    0    0
## 8775    0    0    0    0    0    1    0    0    0    0    0
## 8776    0    0    0    0    0    0    0    0    0    0    0
## 8777    0    0    1    0    0    0    0    0    0    0    0
## 8778    0    0    0    0    0    0    0    0    0    0    0
## 8779    0    0    0    1    0    0    0    0    0    0    0
## 8780    0    0    0    0    0    0    0    0    0    1    0
## 8781    1    0    0    0    0    0    0    0    0    0    0
## 8782    0    0    0    0    0    0    0    0    0    0    0
## 8783    0    0    0    0    0    0    0    0    0    0    0
## 8784    0    0    0    0    0    0    0    0    0    0    0
## 8785    1    0    0    0    0    0    0    0    0    0    0
## 8786    0    0    0    0    0    0    0    0    0    0    0
## 8787    0    0    0    0    0    0    0    0    0    0    0
## 8788    0    0    0    0    0    0    0    0    0    0    0
## 8789    0    0    0    0    0    0    0    0    0    0    0
## 8790    0    0    0    0    0    0    0    0    0    0    0
## 8791    0    0    0    0    0    0    0    0    0    0    0
## 8792    0    0    0    0    0    0    0    0    0    0    0
## 8793    0    0    0    0    0    0    0    0    0    0    0
## 8794    0    0    0    0    0    0    0    0    0    0    0
## 8795    0    0    0    0    0    0    0    0    0    1    0
## 8796    0    0    0    0    0    0    0    0    0    0    0
## 8797    0    0    0    0    0    0    0    1    0    0    0
## 8798    0    0    0    0    1    0    0    0    0    0    0
## 8799    0    0    0    0    0    2    0    0    0    0    0
## 8800    0    0    0    0    0    0    0    0    0    0    0
## 8801    0    0    0    0    1    0    0    0    0    0    0
## 8802    0    1    0    0    0    0    0    0    0    0    0
## 8803    0    0    0    0    0    0    0    0    0    0    0
## 8804    0    0    0    0    0    0    0    1    0    0    0
## 8805    0    0    0    0    0    0    0    0    0    0    0
## 8806    0    0    0    0    0    0    0    0    0    0    1
## 8807    0    0    0    0    0    0    0    0    0    1    0
## 8808    0    0    0    0    0    0    0    0    1    0    0
## 8809    0    0    0    0    0    2    0    0    0    0    0
## 8810    0    0    0    0    0    1    0    0    0    0    0
## 8811    0    0    0    0    0    0    0    0    1    0    0
## 8812    0    0    0    0    0    0    0    0    0    1    0
## 8813    0    0    0    0    0    0    0    0    0    0    0
## 8814    0    0    1    0    0    0    0    0    0    0    0
## 8815    0    0    1    0    0    0    0    0    0    0    0
## 8816    1    0    0    0    0    0    0    0    0    0    0
## 8817    0    0    0    0    0    0    0    0    0    0    0
## 8818    0    0    0    0    0    1    0    0    0    0    0
## 8819    0    1    0    0    0    0    0    0    0    0    0
## 8820    0    1    0    0    0    0    0    0    0    0    0
## 8821    0    0    0    0    0    0    0    0    0    0    0
## 8822    0    0    0    0    0    0    0    0    0    0    0
## 8823    0    0    0    0    1    0    1    0    0    0    0
```

```
## 8824   0   0   1   0   0   0   0   0   0   0   0
## 8825   0   0   0   0   0   0   0   0   0   0   0
## 8826   0   0   0   0   0   0   0   0   0   0   0
## 8827   0   0   0   0   0   0   0   1   0   0   0
## 8828   0   0   0   0   0   0   1   0   0   0   0
## 8829   0   0   0   0   0   0   0   1   0   0   0
## 8830   0   0   0   0   0   0   0   0   0   0   0
## 8831   0   0   0   0   0   0   0   1   0   0   0
## 8832   0   0   0   0   0   0   0   0   1   0   0
## 8833   0   0   0   0   0   0   0   2   0   0   0
## 8834   0   0   0   0   0   0   1   0   0   0   0
## 8835   0   0   0   0   0   0   1   0   0   0   0
## 8836   0   0   0   0   0   0   0   1   0   0   0
## 8837   0   0   0   0   0   0   0   0   1   0   0
## 8838   0   0   0   0   1   0   0   1   0   0   0
## 8839   0   0   0   0   0   0   0   0   0   0   0
## 8840   0   0   0   0   0   0   0   0   0   1   0
## 8841   0   0   0   0   0   0   0   0   0   0   0
## 8842   0   0   0   0   0   0   0   0   0   0   0
## 8843   0   0   0   0   0   0   0   0   0   0   0
## 8844   0   0   0   1   0   0   0   0   0   0   0
## 8845   0   0   0   0   0   0   0   0   0   0   0
## 8846   0   1   0   0   0   0   0   0   0   0   0
## 8847   0   0   0   0   0   0   0   1   0   0   0
## 8848   0   0   0   0   0   0   0   0   0   0   0
## 8849   0   0   0   0   0   0   0   0   0   0   0
## 8850   0   0   0   0   0   0   0   0   0   0   0
## 8851   0   0   0   0   0   0   0   0   0   1   0
## 8852   0   1   0   0   0   0   0   0   0   0   0
## 8853   0   0   0   1   0   0   0   0   0   0   0
## 8854   0   0   0   0   0   0   0   0   0   0   0
## 8855   0   0   0   0   0   0   0   0   0   1   0
## 8856   0   0   0   0   0   0   0   0   0   1   0
## 8857   0   0   0   0   0   0   0   0   0   0   0
## 8858   0   1   0   0   0   0   0   0   0   0   0
## 8859   0   0   0   0   0   1   0   0   0   0   0
## 8860   0   1   0   0   0   0   0   0   0   0   0
## 8861   0   0   1   0   0   0   0   0   0   0   0
## 8862   0   0   0   0   0   0   0   0   0   0   0
## 8863   0   0   0   0   0   0   0   0   0   0   0
## 8864   0   0   0   0   0   0   0   0   0   0   0
## 8865   0   0   1   0   0   0   0   0   0   0   0
## 8866   0   0   0   0   0   0   0   0   0   0   0
## 8867   0   0   0   0   0   0   1   0   0   0   0
## 8868   0   0   0   0   0   0   0   0   0   0   0
## 8869   0   0   0   0   0   0   0   0   0   0   0
## 8870   0   0   0   0   0   0   1   0   0   0   0
## 8871   0   0   0   0   0   0   0   0   0   0   0
## 8872   0   0   0   0   0   0   0   1   0   0   0
## 8873   0   0   0   0   1   0   0   0   0   0   0
## 8874   0   0   0   0   1   1   0   0   0   0   0
## 8875   0   0   0   0   0   1   0   0   0   0   0
## 8876   0   0   0   0   1   0   0   0   0   0   0
## 8877   0   0   0   0   0   0   0   1   0   0   0
```

```
## 8878      0    0    0    0    1    1    0    0    0    0    0
## 8879      0    0    0    0    1    0    0    0    0    0    0
## 8880      0    1    0    0    0    0    0    0    0    0    0
## 8881      0    0    0    1    0    0    0    0    0    0    0
## 8882      0    0    0    0    0    0    0    0    0    0    0
## 8883      0    0    1    0    0    0    0    0    0    0    0
## 8884      0    0    0    1    0    0    0    0    0    0    0
## 8885      0    0    0    0    0    1    0    0    0    0    0
## 8886      0    0    0    0    0    0    0    0    0    0    0
## 8887      0    0    0    0    1    0    0    0    0    0    0
## 8888      0    0    0    0    0    0    0    0    0    1    0
## 8889      0    0    0    0    1    0    0    0    0    0    0
## 8890      0    0    0    0    0    0    0    0    0    0    0
## 8891      0    0    0    0    0    0    1    0    0    0    0
## 8892      0    0    0    0    0    0    1    0    0    0    0
## 8893      0    0    0    0    0    0    0    0    0    0    0
## 8894      0    0    1    0    0    0    0    0    0    0    0
## 8895      0    0    0    0    0    0    0    0    0    0    0
## 8896      0    0    0    0    0    0    0    0    0    0    0
## 8897      0    0    0    0    0    0    0    0    0    0    0
## 8898      0    0    1    0    0    0    0    0    0    0    0
## 8899      0    0    0    0    0    0    0    0    0    0    0
## 8900      0    0    0    0    0    0    0    0    1    0    1
## 8901      0    0    0    0    0    0    1    0    0    0    0
## 8902      0    0    0    0    0    0    1    0    0    0    0
## 8903      0    0    0    1    0    0    0    0    0    0    0
## 8904      0    0    0    0    0    0    0    0    0    0    0
## 8905      0    0    0    0    0    1    0    0    0    0    0
## 8906      0    0    0    0    0    0    0    0    0    0    0
## 8907      0    0    0    0    0    0    1    0    0    0    0
## 8908      0    0    0    0    0    0    0    0    0    1    0
## 8909      0    1    0    0    0    0    0    0    0    0    0
## 8910      0    0    0    0    0    0    0    0    0    0    0
## 8911      0    0    0    0    0    0    0    0    0    1    0
## 8912      0    0    1    0    0    0    0    0    0    0    0
## 8913      0    0    0    0    0    0    0    0    0    0    0
## 8914      0    0    0    0    0    0    0    0    0    0    0
## 8915      1    0    0    0    0    0    0    0    0    0    0
## 8916      0    0    0    0    0    0    0    0    0    0    0
## 8917      0    0    0    0    0    0    0    0    1    0    0
## 8918      0    0    0    0    0    0    0    0    0    0    0
## 8919      0    0    0    0    0    0    0    0    0    0    0
## 8920      0    0    0    0    0    0    0    0    0    0    1
## 8921      0    0    0    0    0    0    0    0    1    0    0
## 8922      0    0    0    0    0    0    0    0    0    0    1
## 8923      0    0    1    0    0    0    0    0    0    0    0
## 8924      0    0    0    0    0    0    0    0    0    1    0
## 8925      0    0    1    0    0    0    0    0    0    0    0
## 8926      1    0    0    0    0    0    0    0    0    0    0
## 8927      0    0    0    0    0    0    0    0    0    0    0
## 8928      0    0    1    0    0    0    0    0    0    0    0
## 8929      0    0    1    0    0    0    0    0    0    0    0
## 8930      1    0    0    0    0    0    0    0    0    0    0
## 8931      1    0    0    0    0    0    0    0    0    0    0
```

```
## 8932      0      0      0      1      0      0      0      0      0      0      0
## 8933      0      0      0      0      0      0      0      0      0      0      0
## 8934      0      0      0      0      0      0      0      1      0      0      0
## 8935      0      0      0      0      0      0      0      0      0      0      0
## 8936      0      0      0      0      0      0      0      0      0      0      0
## 8937      0      0      0      0      0      0      0      0      0      0      0
## 8938      0      1      0      0      0      0      0      0      0      0      0
## 8939      0      1      0      0      0      0      0      0      0      0      0
## 8940      0      0      0      1      0      0      0      0      0      0      0
## 8941      0      0      1      0      0      0      0      0      0      0      0
## 8942      0      0      0      0      0      0      0      1      0      0      0
## 8943      0      0      0      0      0      0      0      0      0      0      0
## 8944      0      0      0      1      0      0      0      0      0      0      0
## 8945      0      0      0      0      0      0      1      0      0      0      0
## 8946      0      0      0      0      0      0      0      0      0      0      0
## 8947      0      0      0      0      0      0      0      1      0      0      0
## 8948      0      0      0      0      0      2      0      0      0      0      0
## 8949      0      0      0      0      0      0      0      0      0      1      0
## 8950      0      0      0      0      0      0      0      0      0      0      0
## 8951      0      0      0      0      0      1      0      0      0      0      0
## 8952      0      0      0      0      0      0      0      0      0      0      0
## 8953      0      0      0      0      1      0      0      0      0      0      0
## 8954      0      0      0      0      0      0      0      0      0      0      0
## 8955      0      0      0      0      0      0      0      0      0      0      0
## 8956      0      0      0      0      0      0      0      0      0      0      0
## 8957      0      1      0      0      0      0      0      0      0      0      0
## 8958      0      0      0      0      0      0      0      0      0      1      0
## 8959      1      0      0      0      0      0      0      0      0      0      0
## 8960      0      0      0      0      0      0      0      0      0      0      0
## 8961      0      0      0      0      0      0      0      0      0      1      0
## 8962      0      0      0      0      0      0      0      0      0      0      0
## 8963      1      0      0      0      0      0      0      0      0      0      0
## 8964      0      0      0      0      0      0      0      0      0      2      0
## 8965      0      0      0      0      0      0      0      0      0      0      1
## 8966      0      0      0      0      0      0      0      0      0      0      0
## 8967      1      0      0      0      0      0      0      0      0      0      0
## 8968      0      0      0      0      0      0      1      0      0      0      0
## 8969      0      0      0      0      0      0      0      0      0      0      0
## 8970      0      0      0      0      0      0      0      0      0      0      0
## 8971      0      0      0      0      0      0      0      0      0      1      0
## 8972      0      0      0      0      0      0      0      0      0      0      0
## 8973      0      0      0      0      0      0      0      0      0      0      0
## 8974      0      0      1      0      0      0      0      0      0      0      0
## 8975      1      0      0      0      0      0      0      0      0      0      0
## 8976      1      0      0      0      0      0      0      0      0      0      0
## 8977      1      1      0      0      0      0      0      0      0      0      0
## 8978      0      0      1      0      0      0      0      0      0      0      0
## 8979      0      0      0      0      0      0      0      0      0      0      0
## 8980      0      0      0      0      0      0      0      0      0      0      0
## 8981      0      0      0      0      0      0      1      0      0      0      0
## 8982      0      0      0      0      0      0      0      0      0      0      0
## 8983      0      0      0      0      0      0      0      0      0      0      0
## 8984      3      0      0      0      0      0      0      0      0      0      0
## 8985      0      0      0      0      0      0      0      0      0      0      0
```

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```
## 8986   0   0   0   0   0   0   0   0   0   0   0
## 8987   0   0   0   1   0   0   0   0   0   0   0
## 8988   0   0   0   0   0   0   0   0   0   0   0
## 8989   1   0   0   0   0   0   0   0   0   0   0
## 8990   0   0   0   0   0   0   1   0   0   0   0
## 8991   0   0   0   0   0   0   0   0   0   0   1
## 8992   1   0   0   0   0   0   0   0   0   0   0
## 8993   0   0   0   0   0   0   0   0   0   0   0
## 8994   0   0   0   0   0   0   0   0   0   0   0
## 8995   0   0   0   0   0   0   0   0   0   0   0
## 8996   0   0   0   0   0   0   0   0   0   1   0
## 8997   0   0   0   1   0   0   0   0   0   0   0
## 8998   0   0   0   0   0   1   1   0   0   1   0
## 8999   0   0   0   0   0   0   0   0   0   0   0
## 9000   0   0   0   0   0   0   0   0   0   0   0
## 9001   0   0   0   0   0   0   0   0   0   0   0
## 9002   0   0   0   0   0   0   0   0   0   0   0
## 9003   0   0   0   0   1   0   0   0   0   0   0
## 9004   0   0   0   0   0   0   0   0   1   1   1
## 9005   0   0   0   0   0   0   0   0   0   0   0
## 9006   0   0   0   0   0   0   0   0   0   0   0
## 9007   0   0   0   0   0   0   0   0   1   0   0
## 9008   0   0   0   0   0   0   0   0   0   0   0
## 9009   0   0   0   0   0   0   0   0   0   0   0
## 9010   0   0   0   0   0   0   0   0   0   0   0
## 9011   0   0   0   0   0   0   0   0   0   0   0
## 9012   0   0   0   1   0   0   0   0   0   0   0
## 9013   0   0   0   0   1   0   0   0   0   0   0
## 9014   0   0   0   0   0   0   0   0   1   0   0
## 9015   0   0   0   0   0   0   0   0   0   0   0
## 9016   0   0   0   0   0   0   1   0   0   0   0
## 9017   0   0   0   0   0   0   0   0   0   0   0
## 9018   0   0   0   0   0   0   0   0   0   0   1
## 9019   0   0   0   0   0   0   0   0   0   0   0
## 9020   0   0   0   0   0   0   0   0   0   0   0
## 9021   0   0   0   0   0   0   0   0   0   0   0
## 9022   0   0   0   0   0   0   0   0   0   0   0
## 9023   0   0   0   0   0   0   0   0   0   0   1
## 9024   0   0   0   0   0   0   1   0   0   0   0
## 9025   0   0   0   0   0   0   0   0   0   0   0
## 9026   1   0   0   0   0   0   0   0   0   0   0
## 9027   1   1   0   0   0   0   0   0   0   0   1
## 9028   0   0   0   0   0   0   0   0   1   0   0
## 9029   0   0   0   0   0   0   1   0   0   0   0
## 9030   0   0   0   0   0   0   0   0   0   0   0
## 9031   0   0   1   0   0   0   0   0   0   0   0
## 9032   0   0   0   0   0   0   0   0   0   0   0
## 9033   0   0   0   0   0   0   0   0   0   0   0
## 9034   0   0   0   0   0   0   0   0   0   0   0
## 9035   0   0   0   0   0   0   0   0   0   0   0
## 9036   0   0   0   0   0   0   0   0   0   0   0
## 9037   0   0   0   0   0   0   0   0   0   1   0
## 9038   0   0   0   0   0   0   0   0   0   0   0
## 9039   0   0   0   0   0   0   0   0   0   1   0
```

```
## 9040   0   0   0   2   0   1   0   0   0   1   0
## 9041   0   0   0   0   0   0   0   0   0   0   1
## 9042   0   0   0   0   0   0   1   0   0   0   0
## 9043   0   0   0   0   0   0   0   0   0   0   0
## 9044   0   0   0   1   0   0   0   0   0   0   0
## 9045   0   0   0   0   0   0   0   0   1   0   0
## 9046   0   1   0   0   0   0   0   0   0   0   0
## 9047   0   0   0   0   0   0   0   0   0   1   0
## 9048   0   0   0   0   0   0   0   0   0   0   0
## 9049   0   0   0   0   0   0   0   0   0   0   0
## 9050   0   0   0   0   0   0   0   0   0   0   0
## 9051   0   0   1   1   3   1   0   0   0   0   0
## 9052   0   0   0   0   0   0   1   0   0   0   0
## 9053   0   0   0   0   0   0   0   0   0   0   0
## 9054   0   0   0   1   0   0   0   0   0   0   0
## 9055   0   0   0   0   0   0   0   0   0   0   0
## 9056   0   0   0   0   0   0   0   0   1   0   0
## 9057   0   0   0   0   0   0   1   0   0   0   0
## 9058   0   0   0   0   0   0   0   0   0   0   0
## 9059   0   0   0   0   0   0   2   0   0   1   0
## 9060   0   0   0   0   0   0   2   0   0   0   0
## 9061   0   0   0   0   1   0   0   0   0   0   0
## 9062   0   0   0   0   1   0   0   0   0   0   0
## 9063   0   0   0   0   0   0   1   1   0   0   0
## 9064   0   0   0   0   1   0   0   1   0   0   0
## 9065   0   0   0   0   0   0   0   0   0   1   0
## 9066   0   0   0   1   0   0   0   0   0   0   0
## 9067   0   0   0   0   0   0   0   0   0   0   0
## 9068   0   0   0   0   0   0   0   0   0   0   0
## 9069   0   0   1   0   0   0   0   0   0   0   0
## 9070   0   0   1   0   0   0   1   0   0   0   0
## 9071   0   1   0   0   0   0   0   0   0   0   0
## 9072   0   0   0   0   0   0   0   0   0   0   0
## 9073   1   0   0   0   0   0   0   0   0   0   0
## 9074   0   0   0   0   0   0   0   0   0   1   0
## 9075   0   0   0   0   0   0   0   0   0   0   0
## 9076   0   0   0   0   0   0   0   0   0   0   0
## 9077   0   0   0   0   0   0   0   0   0   0   0
## 9078   0   0   0   0   0   0   0   0   0   0   0
## 9079   0   0   0   0   0   0   0   0   0   1   0
## 9080   0   1   0   0   0   0   0   0   0   0   0
## 9081   0   0   0   0   0   0   1   0   0   0   0
## 9082   1   0   0   0   0   0   0   0   0   0   0
## 9083   0   0   0   0   0   0   0   0   0   0   0
## 9084   0   0   0   0   0   0   1   0   0   0   0
## 9085   0   0   0   0   1   0   0   0   0   0   0
## 9086   0   0   0   0   0   0   0   0   0   0   0
## 9087   0   0   0   0   1   0   0   0   0   0   0
## 9088   0   0   0   1   0   0   0   0   0   0   0
## 9089   0   0   0   0   0   0   0   0   0   0   0
## 9090   0   0   0   0   0   0   0   0   0   0   0
##  [ reached 'max' / getOption("max.print") -- omitted 4220 rows ]
```

```r
soil.bac.t <-as.data.frame(t(soil.bac))
soilbac1 <-soil.bac.t[1,]
print(soilbac1)
```

```
##        1  2 3  4    5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26
## T1_1 31 11 2 25 124 5 4 0 1  2  0 28  0  0  4  0 13  1  0  1  8  0  2  2  2  4
##       27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51
## T1_1 11  4  1  0  1  6  4  0 14  0 13 22 10  3  0  2  0  8  1  2  3  2  2  7 12
##       52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76
## T1_1  2  0 10  6  1  8  6  0  7  0  1 11  4  3  6  4  0  0  1  2  2  0  4  2  1
##       77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100
## T1_1  6  0  1  2  0  0  1  2  0  0  0  0  2  2  0  0  0  2  0  0 11  1  1   0
##       101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118
## T1_1   0   0   0   0   0   1  18   0   0   0   0   6  12   4   3   0   0   0
##       119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136
## T1_1   3   0   2   0   0   9   0   0   0   0   0   0   0   0   0   0   0   0
##       137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154
## T1_1   1   1   0   2   0   0   0   4   1   0   0   0  14   1   0   0   2   2
##       155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172
## T1_1  14   4   7   1   0  13   1   5   0   1   0   0   4   0  11   0   2   6
##       173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190
## T1_1   0   0   1   0   4   4   4   0   0   0   1   0   2   1   0   7  13   0
##       191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208
## T1_1   0   2   5   2   0   0   0   2   0   0   2   2   0   2   0   0   1   0
##       209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226
## T1_1   0   0   4   0   0   1   0   0   0   1   0   0  10   3   0   0   3   0
##       227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244
## T1_1   0   4   0   1   7   1   1   0   8   1   0   0   6   0   0   0   0   0
##       245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262
## T1_1   0   0   0   0   0   0   0   1   0   0   0   1   0   0   0   0   0   0
##       263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280
## T1_1   0   0   0   0   0   2   0   1   2   2   0   0   0   0   1   0   0   7
##       281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298
## T1_1   1   0   0   0   0   2   9   0   0   1   0   0   0   0   0   0   1   0
##       299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316
## T1_1   0   1   2   2   0   0   0   0   0   4   1   0   0   0   0   2   1   0
##       317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334
## T1_1   7   1   1   0   0   0   0   0   0   0   0   0   0   2   1   0   5   0
##       335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352
## T1_1   0   0   5   0   0   0   6   0   0   0   2   6   1   0   0   0   0   0
##       353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370
## T1_1   0   0   1   1   2   0   3   0   2   1   1   4   1   0   1   0   0   0
##       371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388
## T1_1   0   0   2   2   0   1   0   7   0   1   2   0  10   0   0   0   0   0
##       389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406
## T1_1   0   0   2   0   3   0   0   1   0   0   0   0   0   0   2   0   0   0
##       407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424
## T1_1   0   2   0   0   0   0   6   0   0   0   0   0   0   0   0   0   0   0
##       425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442
## T1_1   0   0   0   0   0   0   1   0   0   0   0   0   0   1   0   0   0   0
##       443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460
## T1_1   0   0   0   0   0   1   0   0   7   0   0   0   0   1   0   0   1   0
##       461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478
## T1_1   0   0   1   0   0   0   0   0   0   0   0   0   0   0   3   0   0   0
```

```
##      479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496
## T1_1   0   0   0   1   0   0   0   3   0   1   2   0   0   0   0   1   0   0
##      497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514
## T1_1   0   0   0   4   0   0   0   1   0   0   7   0   0   0   0   0   0   0
##      515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532
## T1_1   0   0   0   2   0   3   4   0   0   0   0   2   0   0   0   2   0   4
##      533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550
## T1_1   0   0   0   2   0   0   0   1   3   0   3   0   0   0   0   0   0   0
##      551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568
## T1_1   0   1   0   0   2   0   2   1   0   1   0   0   0   2   2   2   0   0
##      569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586
## T1_1   0   0   0   0   0   2   0   1   1   3   4   0   0   0   0   0   0   0
##      587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604
## T1_1   1   0   1   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
##      605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622
## T1_1   0   0   1   0   0   2   0   0   0   0   0   0   0   1   0   0   2   0
##      623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640
## T1_1   0   0   0   1   0   0   0   0   0   0   0   0   0   0   0   0   0   0
##      641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658
## T1_1   0   0   0   1   0   0   0   0   0   0   0   0   0   0   0   0   0   0
##      659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676
## T1_1   2   0   0   0   0   1   0   0   0   0   0   0   0   0   0   0   4   0
##      677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694
## T1_1   0   5   0   0   0   0   1   0   0   0   0   0   0   0   1   1   0   0
##      695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712
## T1_1   0   2   0   0   0   0   0   0   0   2   0   0   0   0   0   0   0   0
##      713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730
## T1_1   0   0   0   0   0   0   4   2   0   0   0   0   2   0   0   2   0   0
##      731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748
## T1_1   0   4   2   0   1   2   0   0   0   0   0   0   0   0   0   0   0   0
##      749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766
## T1_1   1   0   0   0   1   0   0   0   0   1   0   0   1   0   0   0   0   0
##      767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784
## T1_1   0   1   0   0   3   0   0   0   0   0   0   0   1   0   0   2   0   0
##      785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802
## T1_1   4   1   0   0   0   0   0   4   0   0   3   1   1   0   0   0   0   0
##      803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820
## T1_1   0   0   0   0   0   0   0   0   3   2   1   0   2   0   0   0   0   2
##      821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838
## T1_1   0   0   0   0   0   0   0   2   0   0   0   0   0   0   0   0   0   0
##      839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856
## T1_1   0   0   1   0   0   0   0   0   0   0   0   0   1   0   0   0   1   0
##      857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874
## T1_1   0   0   0   0   1   7   0   0   0   0   0   0   0   0   2   1   0   0
##      875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892
## T1_1   0   0   0   0   0   0   0   0   0   1   1   0   0   0   0   0   0   1
##      893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910
## T1_1   1   0   1   0   2   0   0   0   7   0   0   0   0   0   0   0   0   0
##      911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928
## T1_1   0   1   0   0   1   0   0   0   0   0   1   0   0   0   0   0   0   0
##      929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946
## T1_1   0   0   4   1   1   0   1   0   0   1   0   0   0   3   0   0   0   0
##      947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964
## T1_1   0   0   0   0   0   1   0   0   0   0   0   0   0   0   1   1   0   0
```

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##       965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982
## T1_1   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   3
##       983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000
## T1_1   0   0   0   0   0   0   0   0   0   0   0   0   0   3   0   0   0    1
##       1001 1002 1003 1004 1005 1006 1007 1008 1009 1010 1011 1012 1013 1014 1015
## T1_1    0    0    2    3    1    1    0    0    0    0    0    1    0    0    0
##       1016 1017 1018 1019 1020 1021 1022 1023 1024 1025 1026 1027 1028 1029 1030
## T1_1    0    0    3    0    0    0    0    0    2    0    0    0    0    0    0
##       1031 1032 1033 1034 1035 1036 1037 1038 1039 1040 1041 1042 1043 1044 1045
## T1_1    3    0    0    0    0    0    2    0    0    0    0    0    0    0    0
##       1046 1047 1048 1049 1050 1051 1052 1053 1054 1055 1056 1057 1058 1059 1060
## T1_1    0    0    0    0    1    0    0    0    0    1    0    0    0    1    0
##       1061 1062 1063 1064 1065 1066 1067 1068 1069 1070 1071 1072 1073 1074 1075
## T1_1    0    0    0    0    0    0    4    0    0    0    0    0    0    0    0
##       1076 1077 1078 1079 1080 1081 1082 1083 1084 1085 1086 1087 1088 1089 1090
## T1_1    0    3    0    0    0    0    0    0    0    0    0    0    0    0    0
##       1091 1092 1093 1094 1095 1096 1097 1098 1099 1100 1101 1102 1103 1104 1105
## T1_1    0    0    1    1    0    0    0    0    0    0    1    0    0    0    0
##       1106 1107 1108 1109 1110 1111 1112 1113 1114 1115 1116 1117 1118 1119 1120
## T1_1    0    0    0    0    0    0    0    0    0    0    0    5    2    0    0
##       1121 1122 1123 1124 1125 1126 1127 1128 1129 1130 1131 1132 1133 1134 1135
## T1_1    0    1    1    0    0    0    1    0    3    1    0    0    2    0    0
##       1136 1137 1138 1139 1140 1141 1142 1143 1144 1145 1146 1147 1148 1149 1150
## T1_1    0    0    0    0    0    1    0    0    0    0    0    0    0    1    0
##       1151 1152 1153 1154 1155 1156 1157 1158 1159 1160 1161 1162 1163 1164 1165
## T1_1    0    0    1    3    0    0    0    0    0    0    0    0    0    0    1
##       1166 1167 1168 1169 1170 1171 1172 1173 1174 1175 1176 1177 1178 1179 1180
## T1_1    0    0    1    0    0    1    0    0    0    0    0    0    0    0    0
##       1181 1182 1183 1184 1185 1186 1187 1188 1189 1190 1191 1192 1193 1194 1195
## T1_1    0    1    0    0    0    0    0    0    0    1    0    0    0    0    0
##       1196 1197 1198 1199 1200 1201 1202 1203 1204 1205 1206 1207 1208 1209 1210
## T1_1    0    1    1    0    0    0    0    2    1    0    1    3    0    4    0
##       1211 1212 1213 1214 1215 1216 1217 1218 1219 1220 1221 1222 1223 1224 1225
## T1_1    0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
##       1226 1227 1228 1229 1230 1231 1232 1233 1234 1235 1236 1237 1238 1239 1240
## T1_1    1    0    0    1    0    0    0    0    0    0    1    0    0    0    0
##       1241 1242 1243 1244 1245 1246 1247 1248 1249 1250 1251 1252 1253 1254 1255
## T1_1    0    2    1    0    1    0    0    0    1    0    0    0    0    0    0
##       1256 1257 1258 1259 1260 1261 1262 1263 1264 1265 1266 1267 1268 1269 1270
## T1_1    3    0    0    1    0    0    0    0    0    0    0    0    0    0    0
##       1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283 1284 1285
## T1_1    0    1    0    0    1    0    0    0    0    0    0    0    0    1    0
##       1286 1287 1288 1289 1290 1291 1292 1293 1294 1295 1296 1297 1298 1299 1300
## T1_1    1    0    0    0    0    0    0    0    0    0    2    0    0    0    4
##       1301 1302 1303 1304 1305 1306 1307 1308 1309 1310 1311 1312 1313 1314 1315
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    2
##       1316 1317 1318 1319 1320 1321 1322 1323 1324 1325 1326 1327 1328 1329 1330
## T1_1    0    2    0    0    0    2    0    0    0    0    1    0    2    0    0
##       1331 1332 1333 1334 1335 1336 1337 1338 1339 1340 1341 1342 1343 1344 1345
## T1_1    0    0    0    0    1    0    0    5    0    0    0    0    0    0    1
##       1346 1347 1348 1349 1350 1351 1352 1353 1354 1355 1356 1357 1358 1359 1360
## T1_1    0    0    0    0    0    0    0    2    0    0    3    1    0    0    0
##       1361 1362 1363 1364 1365 1366 1367 1368 1369 1370 1371 1372 1373 1374 1375
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
##      1376 1377 1378 1379 1380 1381 1382 1383 1384 1385 1386 1387 1388 1389 1390
## T1_1    2    0    0    0    0    0    0    0    2    1    0    0    0    0    0
##      1391 1392 1393 1394 1395 1396 1397 1398 1399 1400 1401 1402 1403 1404 1405
## T1_1    1    0    1    0    0    1    0    0    0    1    0    0    0    0    0
##      1406 1407 1408 1409 1410 1411 1412 1413 1414 1415 1416 1417 1418 1419 1420
## T1_1    0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
##      1421 1422 1423 1424 1425 1426 1427 1428 1429 1430 1431 1432 1433 1434 1435
## T1_1    1    0    0    5    0    0    0    0    1    0    0    0    0    0    0
##      1436 1437 1438 1439 1440 1441 1442 1443 1444 1445 1446 1447 1448 1449 1450
## T1_1    1    0    0    0    0    0    0    0    0    0    0    0    0    1    0
##      1451 1452 1453 1454 1455 1456 1457 1458 1459 1460 1461 1462 1463 1464 1465
## T1_1    0    0    0    0    0    0    0    0    2    0    0    1    0    0    0
##      1466 1467 1468 1469 1470 1471 1472 1473 1474 1475 1476 1477 1478 1479 1480
## T1_1    1    0    2    2    1    0    1    0    0    4    0    0    0    0    0
##      1481 1482 1483 1484 1485 1486 1487 1488 1489 1490 1491 1492 1493 1494 1495
## T1_1    0    0    0    0    1    1    0    0    0    1    0    0    0    0    1
##      1496 1497 1498 1499 1500 1501 1502 1503 1504 1505 1506 1507 1508 1509 1510
## T1_1    0    0    0    0    1    0    0    0    1    0    0    0    0    0    0
##      1511 1512 1513 1514 1515 1516 1517 1518 1519 1520 1521 1522 1523 1524 1525
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      1526 1527 1528 1529 1530 1531 1532 1533 1534 1535 1536 1537 1538 1539 1540
## T1_1    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
##      1541 1542 1543 1544 1545 1546 1547 1548 1549 1550 1551 1552 1553 1554 1555
## T1_1    0    0    0    0    0    0    0    0    1    0    1    0    0    0    0
##      1556 1557 1558 1559 1560 1561 1562 1563 1564 1565 1566 1567 1568 1569 1570
## T1_1    0    0    0    0    0    0    0    0    1    0    0    0    1    0    0
##      1571 1572 1573 1574 1575 1576 1577 1578 1579 1580 1581 1582 1583 1584 1585
## T1_1    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
##      1586 1587 1588 1589 1590 1591 1592 1593 1594 1595 1596 1597 1598 1599 1600
## T1_1    0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
##      1601 1602 1603 1604 1605 1606 1607 1608 1609 1610 1611 1612 1613 1614 1615
## T1_1    0    0    0    0    0    1    0    0    0    0    0    0    0    2    0
##      1616 1617 1618 1619 1620 1621 1622 1623 1624 1625 1626 1627 1628 1629 1630
## T1_1    0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
##      1631 1632 1633 1634 1635 1636 1637 1638 1639 1640 1641 1642 1643 1644 1645
## T1_1    3    1    0    0    0    0    0    0    0    0    0    0    0    0    0
##      1646 1647 1648 1649 1650 1651 1652 1653 1654 1655 1656 1657 1658 1659 1660
## T1_1    0    2    0    2    0    0    2    0    0    0    0    0    0    0    0
##      1661 1662 1663 1664 1665 1666 1667 1668 1669 1670 1671 1672 1673 1674 1675
## T1_1    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
##      1676 1677 1678 1679 1680 1681 1682 1683 1684 1685 1686 1687 1688 1689 1690
## T1_1    1    0    0    0    0    0    0    2    0    0    0    0    0    0    0
##      1691 1692 1693 1694 1695 1696 1697 1698 1699 1700 1701 1702 1703 1704 1705
## T1_1    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
##      1706 1707 1708 1709 1710 1711 1712 1713 1714 1715 1716 1717 1718 1719 1720
## T1_1    0    0    0    0    0    1    1    0    0    0    0    0    0    0    0
##      1721 1722 1723 1724 1725 1726 1727 1728 1729 1730 1731 1732 1733 1734 1735
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
##      1736 1737 1738 1739 1740 1741 1742 1743 1744 1745 1746 1747 1748 1749 1750
## T1_1    0    0    0    0    0    0    0    0    0    0    2    0    0    0    0
##      1751 1752 1753 1754 1755 1756 1757 1758 1759 1760 1761 1762 1763 1764 1765
## T1_1    0    0    0    0    0    0    0    0    0    0   10    0    0    0    1
##      1766 1767 1768 1769 1770 1771 1772 1773 1774 1775 1776 1777 1778 1779 1780
## T1_1    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
```

```
##      1781 1782 1783 1784 1785 1786 1787 1788 1789 1790 1791 1792 1793 1794 1795
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      1796 1797 1798 1799 1800 1801 1802 1803 1804 1805 1806 1807 1808 1809 1810
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      1811 1812 1813 1814 1815 1816 1817 1818 1819 1820 1821 1822 1823 1824 1825
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    3    0
##      1826 1827 1828 1829 1830 1831 1832 1833 1834 1835 1836 1837 1838 1839 1840
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      1841 1842 1843 1844 1845 1846 1847 1848 1849 1850 1851 1852 1853 1854 1855
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      1856 1857 1858 1859 1860 1861 1862 1863 1864 1865 1866 1867 1868 1869 1870
## T1_1    0    3    0    0    0    1    0    0    0    0    0    0    0    0    0
##      1871 1872 1873 1874 1875 1876 1877 1878 1879 1880 1881 1882 1883 1884 1885
## T1_1    0    0    0    0    0    0    0    1    0    0    2    0    1    0    0
##      1886 1887 1888 1889 1890 1891 1892 1893 1894 1895 1896 1897 1898 1899 1900
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      1901 1902 1903 1904 1905 1906 1907 1908 1909 1910 1911 1912 1913 1914 1915
## T1_1    0    0    2    0    0    0    0    0    0    0    0    0    0    1    0
##      1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930
## T1_1    0    0    3    0    0    0    1    0    0    0    0    0    0    0    0
##      1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945
## T1_1    0    0    0    0    0    0    0    0    2    0    1    1    0    0    0
##      1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
##      1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975
## T1_1    0    0    0    0    0    2    0    0    0    0    0    0    0    0    0
##      1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990
## T1_1    0    0    0    0    0    0    0    0    0    0    2    0    0    0    0
##      1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005
## T1_1    0    0    0    0    0    0    3    0    0    0    0    0    0    1    1
##      2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020
## T1_1    0    0    0    0    0    0    0    0    0    4    0    0    0    0    0
##      2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035
## T1_1    0    0    0    0    0    0    0    0    0    0    2    0    0    0    0
##      2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
## T1_1    0    0    0    0    0    0    2    0    2    0    0    0    0    1    0
##      2051 2052 2053 2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065
## T1_1    0    0    0    0    0    0    0    0    1    1    0    0    0    0    0
##      2066 2067 2068 2069 2070 2071 2072 2073 2074 2075 2076 2077 2078 2079 2080
## T1_1    0    0    1    0    0    0    0    1    0    0    0    0    0    0    0
##      2081 2082 2083 2084 2085 2086 2087 2088 2089 2090 2091 2092 2093 2094 2095
## T1_1    0    0    0    1    0    1    0    0    0    0    0    0    0    0    0
##      2096 2097 2098 2099 2100 2101 2102 2103 2104 2105 2106 2107 2108 2109 2110
## T1_1    0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
##      2111 2112 2113 2114 2115 2116 2117 2118 2119 2120 2121 2122 2123 2124 2125
## T1_1    0    0    0    0    0    0    0    0    3    0    0    0    0    1    0
##      2126 2127 2128 2129 2130 2131 2132 2133 2134 2135 2136 2137 2138 2139 2140
## T1_1    0    0    0    0    0    0    0    0    0    2    0    0    0    0    0
##      2141 2142 2143 2144 2145 2146 2147 2148 2149 2150 2151 2152 2153 2154 2155
## T1_1    1    0    0    0    0    0    0    1    0    0    0    5    0    0    0
##      2156 2157 2158 2159 2160 2161 2162 2163 2164 2165 2166 2167 2168 2169 2170
## T1_1    0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
##      2171 2172 2173 2174 2175 2176 2177 2178 2179 2180 2181 2182 2183 2184 2185
## T1_1    0    0    0    2    0    0    0    0    0    0    0    0    0    0    0
```

```
##      2186 2187 2188 2189 2190 2191 2192 2193 2194 2195 2196 2197 2198 2199 2200
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      2201 2202 2203 2204 2205 2206 2207 2208 2209 2210 2211 2212 2213 2214 2215
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      2216 2217 2218 2219 2220 2221 2222 2223 2224 2225 2226 2227 2228 2229 2230
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      2231 2232 2233 2234 2235 2236 2237 2238 2239 2240 2241 2242 2243 2244 2245
## T1_1    0    0    3    0    0    0    1    0    0    0    0    0    0    0    1
##      2246 2247 2248 2249 2250 2251 2252 2253 2254 2255 2256 2257 2258 2259 2260
## T1_1    0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
##      2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274 2275
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      2276 2277 2278 2279 2280 2281 2282 2283 2284 2285 2286 2287 2288 2289 2290
## T1_1    0    0    2    0    0    0    0    0    0    0    1    0    0    0    0
##      2291 2292 2293 2294 2295 2296 2297 2298 2299 2300 2301 2302 2303 2304 2305
## T1_1    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
##      2306 2307 2308 2309 2310 2311 2312 2313 2314 2315 2316 2317 2318 2319 2320
## T1_1    0    0    3    0    0    0    0    0    0    0    0    4    0    0    0
##      2321 2322 2323 2324 2325 2326 2327 2328 2329 2330 2331 2332 2333 2334 2335
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      2336 2337 2338 2339 2340 2341 2342 2343 2344 2345 2346 2347 2348 2349 2350
## T1_1    3    0    0    0    0    0    0    0    0    0    3    0    0    2    0
##      2351 2352 2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365
## T1_1    0    0    0    0    0    0    2    0    0    0    3    0    0    0    0
##      2366 2367 2368 2369 2370 2371 2372 2373 2374 2375 2376 2377 2378 2379 2380
## T1_1    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
##      2381 2382 2383 2384 2385 2386 2387 2388 2389 2390 2391 2392 2393 2394 2395
## T1_1    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
##      2396 2397 2398 2399 2400 2401 2402 2403 2404 2405 2406 2407 2408 2409 2410
## T1_1    0    0    0    0    0    0    0    2    1    0    0    0    0    0    0
##      2411 2412 2413 2414 2415 2416 2417 2418 2419 2420 2421 2422 2423 2424 2425
## T1_1    0    0    1    0    0    0    0    0    1    0    0    0    0    0    0
##      2426 2427 2428 2429 2430 2431 2432 2433 2434 2435 2436 2437 2438 2439 2440
## T1_1    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
##      2441 2442 2443 2444 2445 2446 2447 2448 2449 2450 2451 2452 2453 2454 2455
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
##      2456 2457 2458 2459 2460 2461 2462 2463 2464 2465 2466 2467 2468 2469 2470
## T1_1    0    0    0    0    0    0    0    0    2    0    0    0    0    0    0
##      2471 2472 2473 2474 2475 2476 2477 2478 2479 2480 2481 2482 2483 2484 2485
## T1_1    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      2486 2487 2488 2489 2490 2491 2492 2493 2494 2495 2496 2497 2498 2499 2500
## T1_1    0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
##      2501 2502 2503 2504 2505 2506 2507 2508 2509 2510 2511 2512 2513 2514 2515
## T1_1    0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
##      2516 2517 2518 2519 2520 2521 2522 2523 2524 2525 2526 2527 2528 2529 2530
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      2531 2532 2533 2534 2535 2536 2537 2538 2539 2540 2541 2542 2543 2544 2545
## T1_1    1    0    0    0    1    2    0    0    0    0    0    0    0    0    0
##      2546 2547 2548 2549 2550 2551 2552 2553 2554 2555 2556 2557 2558 2559 2560
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    2
##      2561 2562 2563 2564 2565 2566 2567 2568 2569 2570 2571 2572 2573 2574 2575
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      2576 2577 2578 2579 2580 2581 2582 2583 2584 2585 2586 2587 2588 2589 2590
## T1_1    0    0    0    0    0    0    0    5    0    1    0    0    0    0    0
```

```
##      2591 2592 2593 2594 2595 2596 2597 2598 2599 2600 2601 2602 2603 2604 2605
## T1_1    0    0    0    1    0    0    0    0    0    0    0    2    0    0    0
##      2606 2607 2608 2609 2610 2611 2612 2613 2614 2615 2616 2617 2618 2619 2620
## T1_1    0    0    0    0    0    0    0    0    0    2    0    0    0    0    0
##      2621 2622 2623 2624 2625 2626 2627 2628 2629 2630 2631 2632 2633 2634 2635
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    2    0
##      2636 2637 2638 2639 2640 2641 2642 2643 2644 2645 2646 2647 2648 2649 2650
## T1_1    0    0    0    0    0    2    0    0    0    0    0    0    1    0    0
##      2651 2652 2653 2654 2655 2656 2657 2658 2659 2660 2661 2662 2663 2664 2665
## T1_1    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
##      2666 2667 2668 2669 2670 2671 2672 2673 2674 2675 2676 2677 2678 2679 2680
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      2681 2682 2683 2684 2685 2686 2687 2688 2689 2690 2691 2692 2693 2694 2695
## T1_1    0    0    0    2    0    0    0    0    0    0    0    0    0    0    0
##      2696 2697 2698 2699 2700 2701 2702 2703 2704 2705 2706 2707 2708 2709 2710
## T1_1    2    0    0    0    0    0    0    0    0    0    0    1    0    0    0
##      2711 2712 2713 2714 2715 2716 2717 2718 2719 2720 2721 2722 2723 2724 2725
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      2726 2727 2728 2729 2730 2731 2732 2733 2734 2735 2736 2737 2738 2739 2740
## T1_1    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
##      2741 2742 2743 2744 2745 2746 2747 2748 2749 2750 2751 2752 2753 2754 2755
## T1_1    0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
##      2756 2757 2758 2759 2760 2761 2762 2763 2764 2765 2766 2767 2768 2769 2770
## T1_1    0    2    0    0    0    0    0    0    0    1    0    0    0    0    0
##      2771 2772 2773 2774 2775 2776 2777 2778 2779 2780 2781 2782 2783 2784 2785
## T1_1    0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
##      2786 2787 2788 2789 2790 2791 2792 2793 2794 2795 2796 2797 2798 2799 2800
## T1_1    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
##      2801 2802 2803 2804 2805 2806 2807 2808 2809 2810 2811 2812 2813 2814 2815
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      2816 2817 2818 2819 2820 2821 2822 2823 2824 2825 2826 2827 2828 2829 2830
## T1_1    0    1    2    0    1    0    1    0    0    0    0    0    0    2    0
##      2831 2832 2833 2834 2835 2836 2837 2838 2839 2840 2841 2842 2843 2844 2845
## T1_1    2    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      2846 2847 2848 2849 2850 2851 2852 2853 2854 2855 2856 2857 2858 2859 2860
## T1_1    2    0    0    0    0    0    0    0    0    0    0    0    1    0    0
##      2861 2862 2863 2864 2865 2866 2867 2868 2869 2870 2871 2872 2873 2874 2875
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      2876 2877 2878 2879 2880 2881 2882 2883 2884 2885 2886 2887 2888 2889 2890
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      2891 2892 2893 2894 2895 2896 2897 2898 2899 2900 2901 2902 2903 2904 2905
## T1_1    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
##      2906 2907 2908 2909 2910 2911 2912 2913 2914 2915 2916 2917 2918 2919 2920
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      2921 2922 2923 2924 2925 2926 2927 2928 2929 2930 2931 2932 2933 2934 2935
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      2936 2937 2938 2939 2940 2941 2942 2943 2944 2945 2946 2947 2948 2949 2950
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
##      2951 2952 2953 2954 2955 2956 2957 2958 2959 2960 2961 2962 2963 2964 2965
## T1_1    0    0    0    0    0    2    0    0    0    0    0    0    0    0    1
##      2966 2967 2968 2969 2970 2971 2972 2973 2974 2975 2976 2977 2978 2979 2980
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      2981 2982 2983 2984 2985 2986 2987 2988 2989 2990 2991 2992 2993 2994 2995
## T1_1    0    0    0    0    0    0    1    0    0    0    0    1    0    0    0
```

```
##      2996 2997 2998 2999 3000 3001 3002 3003 3004 3005 3006 3007 3008 3009 3010
## T1_1    0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
##      3011 3012 3013 3014 3015 3016 3017 3018 3019 3020 3021 3022 3023 3024 3025
## T1_1    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
##      3026 3027 3028 3029 3030 3031 3032 3033 3034 3035 3036 3037 3038 3039 3040
## T1_1    0    0    0    0    0    0    0    0    0    0    2    0    0    0    0
##      3041 3042 3043 3044 3045 3046 3047 3048 3049 3050 3051 3052 3053 3054 3055
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
##      3056 3057 3058 3059 3060 3061 3062 3063 3064 3065 3066 3067 3068 3069 3070
## T1_1    0    0    0    0    1    0    0    0    0    0    0    1    0    0    1
##      3071 3072 3073 3074 3075 3076 3077 3078 3079 3080 3081 3082 3083 3084 3085
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    2    0
##      3086 3087 3088 3089 3090 3091 3092 3093 3094 3095 3096 3097 3098 3099 3100
## T1_1    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      3101 3102 3103 3104 3105 3106 3107 3108 3109 3110 3111 3112 3113 3114 3115
## T1_1    0    0    0    0    0    0    1    0    0    0    1    0    0    0    0
##      3116 3117 3118 3119 3120 3121 3122 3123 3124 3125 3126 3127 3128 3129 3130
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      3131 3132 3133 3134 3135 3136 3137 3138 3139 3140 3141 3142 3143 3144 3145
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      3146 3147 3148 3149 3150 3151 3152 3153 3154 3155 3156 3157 3158 3159 3160
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      3161 3162 3163 3164 3165 3166 3167 3168 3169 3170 3171 3172 3173 3174 3175
## T1_1    0    0    0    2    0    0    0    0    0    0    2    0    0    0    0
##      3176 3177 3178 3179 3180 3181 3182 3183 3184 3185 3186 3187 3188 3189 3190
## T1_1    0    1    1    0    0    0    0    0    0    1    0    0    0    0    0
##      3191 3192 3193 3194 3195 3196 3197 3198 3199 3200 3201 3202 3203 3204 3205
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      3206 3207 3208 3209 3210 3211 3212 3213 3214 3215 3216 3217 3218 3219 3220
## T1_1    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
##      3221 3222 3223 3224 3225 3226 3227 3228 3229 3230 3231 3232 3233 3234 3235
## T1_1    0    0    1    0    0    0    0    0    0    0    0    3    0    0    1
##      3236 3237 3238 3239 3240 3241 3242 3243 3244 3245 3246 3247 3248 3249 3250
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      3251 3252 3253 3254 3255 3256 3257 3258 3259 3260 3261 3262 3263 3264 3265
## T1_1    2    0    0    0    0    0    0    0    0    1    0    0    1    2    0
##      3266 3267 3268 3269 3270 3271 3272 3273 3274 3275 3276 3277 3278 3279 3280
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      3281 3282 3283 3284 3285 3286 3287 3288 3289 3290 3291 3292 3293 3294 3295
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      3296 3297 3298 3299 3300 3301 3302 3303 3304 3305 3306 3307 3308 3309 3310
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      3311 3312 3313 3314 3315 3316 3317 3318 3319 3320 3321 3322 3323 3324 3325
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      3326 3327 3328 3329 3330 3331 3332 3333 3334 3335 3336 3337 3338 3339 3340
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      3341 3342 3343 3344 3345 3346 3347 3348 3349 3350 3351 3352 3353 3354 3355
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      3356 3357 3358 3359 3360 3361 3362 3363 3364 3365 3366 3367 3368 3369 3370
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      3371 3372 3373 3374 3375 3376 3377 3378 3379 3380 3381 3382 3383 3384 3385
## T1_1    0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
##      3386 3387 3388 3389 3390 3391 3392 3393 3394 3395 3396 3397 3398 3399 3400
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
```

```
##      3401 3402 3403 3404 3405 3406 3407 3408 3409 3410 3411 3412 3413 3414 3415
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    2    0
##      3416 3417 3418 3419 3420 3421 3422 3423 3424 3425 3426 3427 3428 3429 3430
## T1_1    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
##      3431 3432 3433 3434 3435 3436 3437 3438 3439 3440 3441 3442 3443 3444 3445
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      3446 3447 3448 3449 3450 3451 3452 3453 3454 3455 3456 3457 3458 3459 3460
## T1_1    0    2    0    0    0    0    0    0    0    0    0    0    0    0    1
##      3461 3462 3463 3464 3465 3466 3467 3468 3469 3470 3471 3472 3473 3474 3475
## T1_1    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
##      3476 3477 3478 3479 3480 3481 3482 3483 3484 3485 3486 3487 3488 3489 3490
## T1_1    0    0    0    0    0    1    0    0    0    0    0    1    0    0    0
##      3491 3492 3493 3494 3495 3496 3497 3498 3499 3500 3501 3502 3503 3504 3505
## T1_1    0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
##      3506 3507 3508 3509 3510 3511 3512 3513 3514 3515 3516 3517 3518 3519 3520
## T1_1    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
##      3521 3522 3523 3524 3525 3526 3527 3528 3529 3530 3531 3532 3533 3534 3535
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      3536 3537 3538 3539 3540 3541 3542 3543 3544 3545 3546 3547 3548 3549 3550
## T1_1    2    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      3551 3552 3553 3554 3555 3556 3557 3558 3559 3560 3561 3562 3563 3564 3565
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      3566 3567 3568 3569 3570 3571 3572 3573 3574 3575 3576 3577 3578 3579 3580
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      3581 3582 3583 3584 3585 3586 3587 3588 3589 3590 3591 3592 3593 3594 3595
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
##      3596 3597 3598 3599 3600 3601 3602 3603 3604 3605 3606 3607 3608 3609 3610
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      3611 3612 3613 3614 3615 3616 3617 3618 3619 3620 3621 3622 3623 3624 3625
## T1_1    0    1    0    0    0    0    0    1    0    0    0    0    0    0    1
##      3626 3627 3628 3629 3630 3631 3632 3633 3634 3635 3636 3637 3638 3639 3640
## T1_1    0    0    0    2    0    0    0    0    0    0    0    0    0    0    0
##      3641 3642 3643 3644 3645 3646 3647 3648 3649 3650 3651 3652 3653 3654 3655
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    2
##      3656 3657 3658 3659 3660 3661 3662 3663 3664 3665 3666 3667 3668 3669 3670
## T1_1    0    0    0    0    0    0    0    1    0    1    0    0    0    0    0
##      3671 3672 3673 3674 3675 3676 3677 3678 3679 3680 3681 3682 3683 3684 3685
## T1_1    0    0    0    0    0    1    0    3    0    0    0    0    2    0    0
##      3686 3687 3688 3689 3690 3691 3692 3693 3694 3695 3696 3697 3698 3699 3700
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      3701 3702 3703 3704 3705 3706 3707 3708 3709 3710 3711 3712 3713 3714 3715
## T1_1    2    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      3716 3717 3718 3719 3720 3721 3722 3723 3724 3725 3726 3727 3728 3729 3730
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      3731 3732 3733 3734 3735 3736 3737 3738 3739 3740 3741 3742 3743 3744 3745
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
##      3746 3747 3748 3749 3750 3751 3752 3753 3754 3755 3756 3757 3758 3759 3760
## T1_1    0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
##      3761 3762 3763 3764 3765 3766 3767 3768 3769 3770 3771 3772 3773 3774 3775
## T1_1    0    0    2    0    0    0    0    0    0    0    0    0    0    1    0
##      3776 3777 3778 3779 3780 3781 3782 3783 3784 3785 3786 3787 3788 3789 3790
## T1_1    0    0    0    0    0    2    1    0    0    0    0    0    0    0    0
##      3791 3792 3793 3794 3795 3796 3797 3798 3799 3800 3801 3802 3803 3804 3805
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    2    0    0
```

```
##      3806 3807 3808 3809 3810 3811 3812 3813 3814 3815 3816 3817 3818 3819 3820
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
##      3821 3822 3823 3824 3825 3826 3827 3828 3829 3830 3831 3832 3833 3834 3835
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      3836 3837 3838 3839 3840 3841 3842 3843 3844 3845 3846 3847 3848 3849 3850
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      3851 3852 3853 3854 3855 3856 3857 3858 3859 3860 3861 3862 3863 3864 3865
## T1_1    0    1    0    0    0    0    0    0    0    0    0    1    0    0    0
##      3866 3867 3868 3869 3870 3871 3872 3873 3874 3875 3876 3877 3878 3879 3880
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    4
##      3881 3882 3883 3884 3885 3886 3887 3888 3889 3890 3891 3892 3893 3894 3895
## T1_1    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
##      3896 3897 3898 3899 3900 3901 3902 3903 3904 3905 3906 3907 3908 3909 3910
## T1_1    0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
##      3911 3912 3913 3914 3915 3916 3917 3918 3919 3920 3921 3922 3923 3924 3925
## T1_1    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
##      3926 3927 3928 3929 3930 3931 3932 3933 3934 3935 3936 3937 3938 3939 3940
## T1_1    0    0    2    0    0    0    0    0    0    0    0    0    0    0    1
##      3941 3942 3943 3944 3945 3946 3947 3948 3949 3950 3951 3952 3953 3954 3955
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      3956 3957 3958 3959 3960 3961 3962 3963 3964 3965 3966 3967 3968 3969 3970
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
##      3971 3972 3973 3974 3975 3976 3977 3978 3979 3980 3981 3982 3983 3984 3985
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      3986 3987 3988 3989 3990 3991 3992 3993 3994 3995 3996 3997 3998 3999 4000
## T1_1    1    0    1    0    0    0    1    0    0    0    0    1    0    0    0
##      4001 4002 4003 4004 4005 4006 4007 4008 4009 4010 4011 4012 4013 4014 4015
## T1_1    0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
##      4016 4017 4018 4019 4020 4021 4022 4023 4024 4025 4026 4027 4028 4029 4030
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      4031 4032 4033 4034 4035 4036 4037 4038 4039 4040 4041 4042 4043 4044 4045
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    2
##      4046 4047 4048 4049 4050 4051 4052 4053 4054 4055 4056 4057 4058 4059 4060
## T1_1    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
##      4061 4062 4063 4064 4065 4066 4067 4068 4069 4070 4071 4072 4073 4074 4075
## T1_1    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
##      4076 4077 4078 4079 4080 4081 4082 4083 4084 4085 4086 4087 4088 4089 4090
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      4091 4092 4093 4094 4095 4096 4097 4098 4099 4100 4101 4102 4103 4104 4105
## T1_1    0    0    0    2    0    0    0    0    0    0    0    0    0    0    0
##      4106 4107 4108 4109 4110 4111 4112 4113 4114 4115 4116 4117 4118 4119 4120
## T1_1    0    2    0    1    0    0    0    0    0    0    2    0    0    0    0
##      4121 4122 4123 4124 4125 4126 4127 4128 4129 4130 4131 4132 4133 4134 4135
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      4136 4137 4138 4139 4140 4141 4142 4143 4144 4145 4146 4147 4148 4149 4150
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      4151 4152 4153 4154 4155 4156 4157 4158 4159 4160 4161 4162 4163 4164 4165
## T1_1    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
##      4166 4167 4168 4169 4170 4171 4172 4173 4174 4175 4176 4177 4178 4179 4180
## T1_1    0    0    1    2    0    0    0    0    0    0    0    0    0    0    0
##      4181 4182 4183 4184 4185 4186 4187 4188 4189 4190 4191 4192 4193 4194 4195
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      4196 4197 4198 4199 4200 4201 4202 4203 4204 4205 4206 4207 4208 4209 4210
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
##      4211 4212 4213 4214 4215 4216 4217 4218 4219 4220 4221 4222 4223 4224 4225
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
##      4226 4227 4228 4229 4230 4231 4232 4233 4234 4235 4236 4237 4238 4239 4240
## T1_1    1    0    0    0    0    0    0    0    1    0    0    0    0    0    0
##      4241 4242 4243 4244 4245 4246 4247 4248 4249 4250 4251 4252 4253 4254 4255
## T1_1    0    0    2    0    0    0    0    0    0    0    0    0    0    0    3
##      4256 4257 4258 4259 4260 4261 4262 4263 4264 4265 4266 4267 4268 4269 4270
## T1_1    0    0    0    0    0    0    0    0    4    0    0    0    0    1    0
##      4271 4272 4273 4274 4275 4276 4277 4278 4279 4280 4281 4282 4283 4284 4285
## T1_1    0    0    0    0    0    0    0    0    0    0    0    2    0    0    0
##      4286 4287 4288 4289 4290 4291 4292 4293 4294 4295 4296 4297 4298 4299 4300
## T1_1    0    2    0    0    0    0    0    0    0    0    1    0    0    0    0
##      4301 4302 4303 4304 4305 4306 4307 4308 4309 4310 4311 4312 4313 4314 4315
## T1_1    0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
##      4316 4317 4318 4319 4320 4321 4322 4323 4324 4325 4326 4327 4328 4329 4330
## T1_1    0    2    0    0    0    0    0    0    0    0    0    0    0    0    0
##      4331 4332 4333 4334 4335 4336 4337 4338 4339 4340 4341 4342 4343 4344 4345
## T1_1    0    0    0    0    0    2    0    0    0    0    0    0    0    0    0
##      4346 4347 4348 4349 4350 4351 4352 4353 4354 4355 4356 4357 4358 4359 4360
## T1_1    0    0    0    0    0    2    0    0    0    0    0    0    0    0    0
##      4361 4362 4363 4364 4365 4366 4367 4368 4369 4370 4371 4372 4373 4374 4375
## T1_1    0    0    0    0    0    0    0    0    0    2    0    0    0    0    0
##      4376 4377 4378 4379 4380 4381 4382 4383 4384 4385 4386 4387 4388 4389 4390
## T1_1    0    0    0    2    0    0    0    0    0    0    0    0    0    0    0
##      4391 4392 4393 4394 4395 4396 4397 4398 4399 4400 4401 4402 4403 4404 4405
## T1_1    0    1    0    0    0    0    0    0    0    1    0    0    3    0    0
##      4406 4407 4408 4409 4410 4411 4412 4413 4414 4415 4416 4417 4418 4419 4420
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      4421 4422 4423 4424 4425 4426 4427 4428 4429 4430 4431 4432 4433 4434 4435
## T1_1    0    0    0    0    0    0    0    0    2    0    0    0    0    0    0
##      4436 4437 4438 4439 4440 4441 4442 4443 4444 4445 4446 4447 4448 4449 4450
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      4451 4452 4453 4454 4455 4456 4457 4458 4459 4460 4461 4462 4463 4464 4465
## T1_1    2    0    2    0    0    0    2    0    0    0    0    0    0    0    1
##      4466 4467 4468 4469 4470 4471 4472 4473 4474 4475 4476 4477 4478 4479 4480
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      4481 4482 4483 4484 4485 4486 4487 4488 4489 4490 4491 4492 4493 4494 4495
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      4496 4497 4498 4499 4500 4501 4502 4503 4504 4505 4506 4507 4508 4509 4510
## T1_1    0    0    0    1    0    0    0    0    1    0    0    0    0    0    0
##      4511 4512 4513 4514 4515 4516 4517 4518 4519 4520 4521 4522 4523 4524 4525
## T1_1    0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
##      4526 4527 4528 4529 4530 4531 4532 4533 4534 4535 4536 4537 4538 4539 4540
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      4541 4542 4543 4544 4545 4546 4547 4548 4549 4550 4551 4552 4553 4554 4555
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      4556 4557 4558 4559 4560 4561 4562 4563 4564 4565 4566 4567 4568 4569 4570
## T1_1    0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
##      4571 4572 4573 4574 4575 4576 4577 4578 4579 4580 4581 4582 4583 4584 4585
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      4586 4587 4588 4589 4590 4591 4592 4593 4594 4595 4596 4597 4598 4599 4600
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      4601 4602 4603 4604 4605 4606 4607 4608 4609 4610 4611 4612 4613 4614 4615
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
##      4616 4617 4618 4619 4620 4621 4622 4623 4624 4625 4626 4627 4628 4629 4630
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      4631 4632 4633 4634 4635 4636 4637 4638 4639 4640 4641 4642 4643 4644 4645
## T1_1    0    0    0    1    1    0    0    0    0    0    0    0    0    0    0
##      4646 4647 4648 4649 4650 4651 4652 4653 4654 4655 4656 4657 4658 4659 4660
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      4661 4662 4663 4664 4665 4666 4667 4668 4669 4670 4671 4672 4673 4674 4675
## T1_1    0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
##      4676 4677 4678 4679 4680 4681 4682 4683 4684 4685 4686 4687 4688 4689 4690
## T1_1    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
##      4691 4692 4693 4694 4695 4696 4697 4698 4699 4700 4701 4702 4703 4704 4705
## T1_1    0    0    0    0    0    1    0    0    0    2    0    0    0    0    0
##      4706 4707 4708 4709 4710 4711 4712 4713 4714 4715 4716 4717 4718 4719 4720
## T1_1    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
##      4721 4722 4723 4724 4725 4726 4727 4728 4729 4730 4731 4732 4733 4734 4735
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
##      4736 4737 4738 4739 4740 4741 4742 4743 4744 4745 4746 4747 4748 4749 4750
## T1_1    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
##      4751 4752 4753 4754 4755 4756 4757 4758 4759 4760 4761 4762 4763 4764 4765
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    1    1    1    0
##      4766 4767 4768 4769 4770 4771 4772 4773 4774 4775 4776 4777 4778 4779 4780
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      4781 4782 4783 4784 4785 4786 4787 4788 4789 4790 4791 4792 4793 4794 4795
## T1_1    0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
##      4796 4797 4798 4799 4800 4801 4802 4803 4804 4805 4806 4807 4808 4809 4810
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      4811 4812 4813 4814 4815 4816 4817 4818 4819 4820 4821 4822 4823 4824 4825
## T1_1    0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
##      4826 4827 4828 4829 4830 4831 4832 4833 4834 4835 4836 4837 4838 4839 4840
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      4841 4842 4843 4844 4845 4846 4847 4848 4849 4850 4851 4852 4853 4854 4855
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      4856 4857 4858 4859 4860 4861 4862 4863 4864 4865 4866 4867 4868 4869 4870
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      4871 4872 4873 4874 4875 4876 4877 4878 4879 4880 4881 4882 4883 4884 4885
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      4886 4887 4888 4889 4890 4891 4892 4893 4894 4895 4896 4897 4898 4899 4900
## T1_1    0    0    0    0    0    2    0    0    0    0    0    0    0    1    0
##      4901 4902 4903 4904 4905 4906 4907 4908 4909 4910 4911 4912 4913 4914 4915
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      4916 4917 4918 4919 4920 4921 4922 4923 4924 4925 4926 4927 4928 4929 4930
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    1    0    2
##      4931 4932 4933 4934 4935 4936 4937 4938 4939 4940 4941 4942 4943 4944 4945
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      4946 4947 4948 4949 4950 4951 4952 4953 4954 4955 4956 4957 4958 4959 4960
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      4961 4962 4963 4964 4965 4966 4967 4968 4969 4970 4971 4972 4973 4974 4975
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      4976 4977 4978 4979 4980 4981 4982 4983 4984 4985 4986 4987 4988 4989 4990
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      4991 4992 4993 4994 4995 4996 4997 4998 4999 5000 5001 5002 5003 5004 5005
## T1_1    0    0    0    0    0    0    0    0    2    0    0    0    0    0    0
##      5006 5007 5008 5009 5010 5011 5012 5013 5014 5015 5016 5017 5018 5019 5020
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
##      5021 5022 5023 5024 5025 5026 5027 5028 5029 5030 5031 5032 5033 5034 5035
## T1_1    0    0    0    1    0    0    0    0    0    1    0    0    0    0    1
##      5036 5037 5038 5039 5040 5041 5042 5043 5044 5045 5046 5047 5048 5049 5050
## T1_1    0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
##      5051 5052 5053 5054 5055 5056 5057 5058 5059 5060 5061 5062 5063 5064 5065
## T1_1    0    1    0    1    0    0    0    0    0    0    0    0    0    0    0
##      5066 5067 5068 5069 5070 5071 5072 5073 5074 5075 5076 5077 5078 5079 5080
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      5081 5082 5083 5084 5085 5086 5087 5088 5089 5090 5091 5092 5093 5094 5095
## T1_1    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      5096 5097 5098 5099 5100 5101 5102 5103 5104 5105 5106 5107 5108 5109 5110
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      5111 5112 5113 5114 5115 5116 5117 5118 5119 5120 5121 5122 5123 5124 5125
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      5126 5127 5128 5129 5130 5131 5132 5133 5134 5135 5136 5137 5138 5139 5140
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
##      5141 5142 5143 5144 5145 5146 5147 5148 5149 5150 5151 5152 5153 5154 5155
## T1_1    1    0    0    0    1    0    0    0    0    0    0    0    0    0    0
##      5156 5157 5158 5159 5160 5161 5162 5163 5164 5165 5166 5167 5168 5169 5170
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      5171 5172 5173 5174 5175 5176 5177 5178 5179 5180 5181 5182 5183 5184 5185
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      5186 5187 5188 5189 5190 5191 5192 5193 5194 5195 5196 5197 5198 5199 5200
## T1_1    0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
##      5201 5202 5203 5204 5205 5206 5207 5208 5209 5210 5211 5212 5213 5214 5215
## T1_1    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      5216 5217 5218 5219 5220 5221 5222 5223 5224 5225 5226 5227 5228 5229 5230
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      5231 5232 5233 5234 5235 5236 5237 5238 5239 5240 5241 5242 5243 5244 5245
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      5246 5247 5248 5249 5250 5251 5252 5253 5254 5255 5256 5257 5258 5259 5260
## T1_1    1    0    0    0    0    0    0    0    1    0    0    0    0    0    0
##      5261 5262 5263 5264 5265 5266 5267 5268 5269 5270 5271 5272 5273 5274 5275
## T1_1    0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
##      5276 5277 5278 5279 5280 5281 5282 5283 5284 5285 5286 5287 5288 5289 5290
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      5291 5292 5293 5294 5295 5296 5297 5298 5299 5300 5301 5302 5303 5304 5305
## T1_1    0    0    0    0    0    0    0    0    0    0    2    0    0    0    0
##      5306 5307 5308 5309 5310 5311 5312 5313 5314 5315 5316 5317 5318 5319 5320
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
##      5321 5322 5323 5324 5325 5326 5327 5328 5329 5330 5331 5332 5333 5334 5335
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      5336 5337 5338 5339 5340 5341 5342 5343 5344 5345 5346 5347 5348 5349 5350
## T1_1    0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
##      5351 5352 5353 5354 5355 5356 5357 5358 5359 5360 5361 5362 5363 5364 5365
## T1_1    0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
##      5366 5367 5368 5369 5370 5371 5372 5373 5374 5375 5376 5377 5378 5379 5380
## T1_1    0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
##      5381 5382 5383 5384 5385 5386 5387 5388 5389 5390 5391 5392 5393 5394 5395
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      5396 5397 5398 5399 5400 5401 5402 5403 5404 5405 5406 5407 5408 5409 5410
## T1_1    1    1    0    0    0    0    0    0    0    0    0    1    0    0    0
##      5411 5412 5413 5414 5415 5416 5417 5418 5419 5420 5421 5422 5423 5424 5425
## T1_1    0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
##       5426 5427 5428 5429 5430 5431 5432 5433 5434 5435 5436 5437 5438 5439 5440
## T1_1     0    0    0    0    0    0    0    1    1    0    0    0    0    0    0
##       5441 5442 5443 5444 5445 5446 5447 5448 5449 5450 5451 5452 5453 5454 5455
## T1_1     0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
##       5456 5457 5458 5459 5460 5461 5462 5463 5464 5465 5466 5467 5468 5469 5470
## T1_1     0    0    0    1    0    1    0    0    0    0    0    0    0    0    0
##       5471 5472 5473 5474 5475 5476 5477 5478 5479 5480 5481 5482 5483 5484 5485
## T1_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##       5486 5487 5488 5489 5490 5491 5492 5493 5494 5495 5496 5497 5498 5499 5500
## T1_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##       5501 5502 5503 5504 5505 5506 5507 5508 5509 5510 5511 5512 5513 5514 5515
## T1_1     0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
##       5516 5517 5518 5519 5520 5521 5522 5523 5524 5525 5526 5527 5528 5529 5530
## T1_1     0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
##       5531 5532 5533 5534 5535 5536 5537 5538 5539 5540 5541 5542 5543 5544 5545
## T1_1     0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
##       5546 5547 5548 5549 5550 5551 5552 5553 5554 5555 5556 5557 5558 5559 5560
## T1_1     0    0    0    1    0    0    0    0    0    0    0    0    0    0    1
##       5561 5562 5563 5564 5565 5566 5567 5568 5569 5570 5571 5572 5573 5574 5575
## T1_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##       5576 5577 5578 5579 5580 5581 5582 5583 5584 5585 5586 5587 5588 5589 5590
## T1_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##       5591 5592 5593 5594 5595 5596 5597 5598 5599 5600 5601 5602 5603 5604 5605
## T1_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##       5606 5607 5608 5609 5610 5611 5612 5613 5614 5615 5616 5617 5618 5619 5620
## T1_1     1    0    0    0    0    0    0    0    0    0    1    0    0    0    0
##       5621 5622 5623 5624 5625 5626 5627 5628 5629 5630 5631 5632 5633 5634 5635
## T1_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##       5636 5637 5638 5639 5640 5641 5642 5643 5644 5645 5646 5647 5648 5649 5650
## T1_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##       5651 5652 5653 5654 5655 5656 5657 5658 5659 5660 5661 5662 5663 5664 5665
## T1_1     0    0    0    0    0    0    1    0    0    0    0    0    1    1    0
##       5666 5667 5668 5669 5670 5671 5672 5673 5674 5675 5676 5677 5678 5679 5680
## T1_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##       5681 5682 5683 5684 5685 5686 5687 5688 5689 5690 5691 5692 5693 5694 5695
## T1_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##       5696 5697 5698 5699 5700 5701 5702 5703 5704 5705 5706 5707 5708 5709 5710
## T1_1     0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
##       5711 5712 5713 5714 5715 5716 5717 5718 5719 5720 5721 5722 5723 5724 5725
## T1_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##       5726 5727 5728 5729 5730 5731 5732 5733 5734 5735 5736 5737 5738 5739 5740
## T1_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##       5741 5742 5743 5744 5745 5746 5747 5748 5749 5750 5751 5752 5753 5754 5755
## T1_1     0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
##       5756 5757 5758 5759 5760 5761 5762 5763 5764 5765 5766 5767 5768 5769 5770
## T1_1     0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
##       5771 5772 5773 5774 5775 5776 5777 5778 5779 5780 5781 5782 5783 5784 5785
## T1_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##       5786 5787 5788 5789 5790 5791 5792 5793 5794 5795 5796 5797 5798 5799 5800
## T1_1     0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
##       5801 5802 5803 5804 5805 5806 5807 5808 5809 5810 5811 5812 5813 5814 5815
## T1_1     0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
##       5816 5817 5818 5819 5820 5821 5822 5823 5824 5825 5826 5827 5828 5829 5830
## T1_1     0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
```

```
##      5831 5832 5833 5834 5835 5836 5837 5838 5839 5840 5841 5842 5843 5844 5845
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      5846 5847 5848 5849 5850 5851 5852 5853 5854 5855 5856 5857 5858 5859 5860
## T1_1    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
##      5861 5862 5863 5864 5865 5866 5867 5868 5869 5870 5871 5872 5873 5874 5875
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      5876 5877 5878 5879 5880 5881 5882 5883 5884 5885 5886 5887 5888 5889 5890
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
##      5891 5892 5893 5894 5895 5896 5897 5898 5899 5900 5901 5902 5903 5904 5905
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      5906 5907 5908 5909 5910 5911 5912 5913 5914 5915 5916 5917 5918 5919 5920
## T1_1    0    0    1    0    0    0    1    0    0    0    0    0    0    0    0
##      5921 5922 5923 5924 5925 5926 5927 5928 5929 5930 5931 5932 5933 5934 5935
## T1_1    0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
##      5936 5937 5938 5939 5940 5941 5942 5943 5944 5945 5946 5947 5948 5949 5950
## T1_1    0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
##      5951 5952 5953 5954 5955 5956 5957 5958 5959 5960 5961 5962 5963 5964 5965
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      5966 5967 5968 5969 5970 5971 5972 5973 5974 5975 5976 5977 5978 5979 5980
## T1_1    0    0    0    1    1    0    0    0    1    0    0    0    0    1    0
##      5981 5982 5983 5984 5985 5986 5987 5988 5989 5990 5991 5992 5993 5994 5995
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      5996 5997 5998 5999 6000 6001 6002 6003 6004 6005 6006 6007 6008 6009 6010
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      6011 6012 6013 6014 6015 6016 6017 6018 6019 6020 6021 6022 6023 6024 6025
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
##      6026 6027 6028 6029 6030 6031 6032 6033 6034 6035 6036 6037 6038 6039 6040
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      6041 6042 6043 6044 6045 6046 6047 6048 6049 6050 6051 6052 6053 6054 6055
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      6056 6057 6058 6059 6060 6061 6062 6063 6064 6065 6066 6067 6068 6069 6070
## T1_1    0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
##      6071 6072 6073 6074 6075 6076 6077 6078 6079 6080 6081 6082 6083 6084 6085
## T1_1    0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
##      6086 6087 6088 6089 6090 6091 6092 6093 6094 6095 6096 6097 6098 6099 6100
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      6101 6102 6103 6104 6105 6106 6107 6108 6109 6110 6111 6112 6113 6114 6115
## T1_1    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
##      6116 6117 6118 6119 6120 6121 6122 6123 6124 6125 6126 6127 6128 6129 6130
## T1_1    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
##      6131 6132 6133 6134 6135 6136 6137 6138 6139 6140 6141 6142 6143 6144 6145
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      6146 6147 6148 6149 6150 6151 6152 6153 6154 6155 6156 6157 6158 6159 6160
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      6161 6162 6163 6164 6165 6166 6167 6168 6169 6170 6171 6172 6173 6174 6175
## T1_1    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
##      6176 6177 6178 6179 6180 6181 6182 6183 6184 6185 6186 6187 6188 6189 6190
## T1_1    0    0    0    0    0    0    0    2    0    0    0    0    0    0    0
##      6191 6192 6193 6194 6195 6196 6197 6198 6199 6200 6201 6202 6203 6204 6205
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      6206 6207 6208 6209 6210 6211 6212 6213 6214 6215 6216 6217 6218 6219 6220
## T1_1    0    0    0    0    1    0    0    0    0    0    0    1    1    0    1
##      6221 6222 6223 6224 6225 6226 6227 6228 6229 6230 6231 6232 6233 6234 6235
## T1_1    1    0    0    0    0    0    0    1    0    0    0    1    0    0    0
```

```
##      6236 6237 6238 6239 6240 6241 6242 6243 6244 6245 6246 6247 6248 6249 6250
## T1_1    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
##      6251 6252 6253 6254 6255 6256 6257 6258 6259 6260 6261 6262 6263 6264 6265
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      6266 6267 6268 6269 6270 6271 6272 6273 6274 6275 6276 6277 6278 6279 6280
## T1_1    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
##      6281 6282 6283 6284 6285 6286 6287 6288 6289 6290 6291 6292 6293 6294 6295
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      6296 6297 6298 6299 6300 6301 6302 6303 6304 6305 6306 6307 6308 6309 6310
## T1_1    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
##      6311 6312 6313 6314 6315 6316 6317 6318 6319 6320 6321 6322 6323 6324 6325
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
##      6326 6327 6328 6329 6330 6331 6332 6333 6334 6335 6336 6337 6338 6339 6340
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
##      6341 6342 6343 6344 6345 6346 6347 6348 6349 6350 6351 6352 6353 6354 6355
## T1_1    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      6356 6357 6358 6359 6360 6361 6362 6363 6364 6365 6366 6367 6368 6369 6370
## T1_1    0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
##      6371 6372 6373 6374 6375 6376 6377 6378 6379 6380 6381 6382 6383 6384 6385
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
##      6386 6387 6388 6389 6390 6391 6392 6393 6394 6395 6396 6397 6398 6399 6400
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      6401 6402 6403 6404 6405 6406 6407 6408 6409 6410 6411 6412 6413 6414 6415
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      6416 6417 6418 6419 6420 6421 6422 6423 6424 6425 6426 6427 6428 6429 6430
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
##      6431 6432 6433 6434 6435 6436 6437 6438 6439 6440 6441 6442 6443 6444 6445
## T1_1    1    0    0    0    0    0    0    0    0    0    0    0    0    1    1
##      6446 6447 6448 6449 6450 6451 6452 6453 6454 6455 6456 6457 6458 6459 6460
## T1_1    0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
##      6461 6462 6463 6464 6465 6466 6467 6468 6469 6470 6471 6472 6473 6474 6475
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      6476 6477 6478 6479 6480 6481 6482 6483 6484 6485 6486 6487 6488 6489 6490
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      6491 6492 6493 6494 6495 6496 6497 6498 6499 6500 6501 6502 6503 6504 6505
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      6506 6507 6508 6509 6510 6511 6512 6513 6514 6515 6516 6517 6518 6519 6520
## T1_1    0    0    0    1    0    0    0    0    0    0    0    0    0    1    0
##      6521 6522 6523 6524 6525 6526 6527 6528 6529 6530 6531 6532 6533 6534 6535
## T1_1    0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
##      6536 6537 6538 6539 6540 6541 6542 6543 6544 6545 6546 6547 6548 6549 6550
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      6551 6552 6553 6554 6555 6556 6557 6558 6559 6560 6561 6562 6563 6564 6565
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      6566 6567 6568 6569 6570 6571 6572 6573 6574 6575 6576 6577 6578 6579 6580
## T1_1    0    0    0    0    0    0    0    0    0    2    0    0    0    0    0
##      6581 6582 6583 6584 6585 6586 6587 6588 6589 6590 6591 6592 6593 6594 6595
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      6596 6597 6598 6599 6600 6601 6602 6603 6604 6605 6606 6607 6608 6609 6610
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      6611 6612 6613 6614 6615 6616 6617 6618 6619 6620 6621 6622 6623 6624 6625
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      6626 6627 6628 6629 6630 6631 6632 6633 6634 6635 6636 6637 6638 6639 6640
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
##      6641 6642 6643 6644 6645 6646 6647 6648 6649 6650 6651 6652 6653 6654 6655
## T1_1    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
##      6656 6657 6658 6659 6660 6661 6662 6663 6664 6665 6666 6667 6668 6669 6670
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      6671 6672 6673 6674 6675 6676 6677 6678 6679 6680 6681 6682 6683 6684 6685
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      6686 6687 6688 6689 6690 6691 6692 6693 6694 6695 6696 6697 6698 6699 6700
## T1_1    0    0    0    0    0    0    0    0    1    0    0    0    1    0    0
##      6701 6702 6703 6704 6705 6706 6707 6708 6709 6710 6711 6712 6713 6714 6715
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      6716 6717 6718 6719 6720 6721 6722 6723 6724 6725 6726 6727 6728 6729 6730
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      6731 6732 6733 6734 6735 6736 6737 6738 6739 6740 6741 6742 6743 6744 6745
## T1_1    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
##      6746 6747 6748 6749 6750 6751 6752 6753 6754 6755 6756 6757 6758 6759 6760
## T1_1    0    0    0    0    0    0    1    0    1    0    0    0    0    0    0
##      6761 6762 6763 6764 6765 6766 6767 6768 6769 6770 6771 6772 6773 6774 6775
## T1_1    0    0    0    0    0    0    0    0    0    1    0    0    0    1    0
##      6776 6777 6778 6779 6780 6781 6782 6783 6784 6785 6786 6787 6788 6789 6790
## T1_1    0    0    0    0    0    0    0    0    0    0    2    0    0    0    0
##      6791 6792 6793 6794 6795 6796 6797 6798 6799 6800 6801 6802 6803 6804 6805
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      6806 6807 6808 6809 6810 6811 6812 6813 6814 6815 6816 6817 6818 6819 6820
## T1_1    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
##      6821 6822 6823 6824 6825 6826 6827 6828 6829 6830 6831 6832 6833 6834 6835
## T1_1    0    0    0    0    0    0    0    0    1    0    1    0    0    0    0
##      6836 6837 6838 6839 6840 6841 6842 6843 6844 6845 6846 6847 6848 6849 6850
## T1_1    0    0    0    0    1    0    0    0    0    1    0    0    0    0    1
##      6851 6852 6853 6854 6855 6856 6857 6858 6859 6860 6861 6862 6863 6864 6865
## T1_1    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
##      6866 6867 6868 6869 6870 6871 6872 6873 6874 6875 6876 6877 6878 6879 6880
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      6881 6882 6883 6884 6885 6886 6887 6888 6889 6890 6891 6892 6893 6894 6895
## T1_1    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
##      6896 6897 6898 6899 6900 6901 6902 6903 6904 6905 6906 6907 6908 6909 6910
## T1_1    0    0    0    1    0    0    0    0    0    1    0    0    0    0    0
##      6911 6912 6913 6914 6915 6916 6917 6918 6919 6920 6921 6922 6923 6924 6925
## T1_1    0    0    0    0    0    1    0    0    0    0    0    0    1    0    0
##      6926 6927 6928 6929 6930 6931 6932 6933 6934 6935 6936 6937 6938 6939 6940
## T1_1    0    0    0    0    0    0    1    0    0    0    0    0    1    0    0
##      6941 6942 6943 6944 6945 6946 6947 6948 6949 6950 6951 6952 6953 6954 6955
## T1_1    0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
##      6956 6957 6958 6959 6960 6961 6962 6963 6964 6965 6966 6967 6968 6969 6970
## T1_1    0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
##      6971 6972 6973 6974 6975 6976 6977 6978 6979 6980 6981 6982 6983 6984 6985
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      6986 6987 6988 6989 6990 6991 6992 6993 6994 6995 6996 6997 6998 6999 7000
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
##      7001 7002 7003 7004 7005 7006 7007 7008 7009 7010 7011 7012 7013 7014 7015
## T1_1    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      7016 7017 7018 7019 7020 7021 7022 7023 7024 7025 7026 7027 7028 7029 7030
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      7031 7032 7033 7034 7035 7036 7037 7038 7039 7040 7041 7042 7043 7044 7045
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
##      7046 7047 7048 7049 7050 7051 7052 7053 7054 7055 7056 7057 7058 7059 7060
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      7061 7062 7063 7064 7065 7066 7067 7068 7069 7070 7071 7072 7073 7074 7075
## T1_1    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
##      7076 7077 7078 7079 7080 7081 7082 7083 7084 7085 7086 7087 7088 7089 7090
## T1_1    0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
##      7091 7092 7093 7094 7095 7096 7097 7098 7099 7100 7101 7102 7103 7104 7105
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      7106 7107 7108 7109 7110 7111 7112 7113 7114 7115 7116 7117 7118 7119 7120
## T1_1    1    0    0    1    0    0    0    0    0    0    0    0    0    0    0
##      7121 7122 7123 7124 7125 7126 7127 7128 7129 7130 7131 7132 7133 7134 7135
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      7136 7137 7138 7139 7140 7141 7142 7143 7144 7145 7146 7147 7148 7149 7150
## T1_1    0    0    0    1    0    0    0    0    1    1    0    0    0    0    0
##      7151 7152 7153 7154 7155 7156 7157 7158 7159 7160 7161 7162 7163 7164 7165
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
##      7166 7167 7168 7169 7170 7171 7172 7173 7174 7175 7176 7177 7178 7179 7180
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      7181 7182 7183 7184 7185 7186 7187 7188 7189 7190 7191 7192 7193 7194 7195
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      7196 7197 7198 7199 7200 7201 7202 7203 7204 7205 7206 7207 7208 7209 7210
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      7211 7212 7213 7214 7215 7216 7217 7218 7219 7220 7221 7222 7223 7224 7225
## T1_1    0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
##      7226 7227 7228 7229 7230 7231 7232 7233 7234 7235 7236 7237 7238 7239 7240
## T1_1    0    0    0    0    0    1    0    2    0    0    0    0    0    0    0
##      7241 7242 7243 7244 7245 7246 7247 7248 7249 7250 7251 7252 7253 7254 7255
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      7256 7257 7258 7259 7260 7261 7262 7263 7264 7265 7266 7267 7268 7269 7270
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      7271 7272 7273 7274 7275 7276 7277 7278 7279 7280 7281 7282 7283 7284 7285
## T1_1    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
##      7286 7287 7288 7289 7290 7291 7292 7293 7294 7295 7296 7297 7298 7299 7300
## T1_1    0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
##      7301 7302 7303 7304 7305 7306 7307 7308 7309 7310 7311 7312 7313 7314 7315
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      7316 7317 7318 7319 7320 7321 7322 7323 7324 7325 7326 7327 7328 7329 7330
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      7331 7332 7333 7334 7335 7336 7337 7338 7339 7340 7341 7342 7343 7344 7345
## T1_1    0    0    0    1    1    0    0    0    0    0    0    0    0    0    0
##      7346 7347 7348 7349 7350 7351 7352 7353 7354 7355 7356 7357 7358 7359 7360
## T1_1    0    0    0    0    1    0    0    0    0    0    0    2    0    0    0
##      7361 7362 7363 7364 7365 7366 7367 7368 7369 7370 7371 7372 7373 7374 7375
## T1_1    0    0    0    0    0    0    0    0    1    1    0    0    0    0    0
##      7376 7377 7378 7379 7380 7381 7382 7383 7384 7385 7386 7387 7388 7389 7390
## T1_1    0    0    0    0    0    0    0    0    1    0    0    0    0    1    0
##      7391 7392 7393 7394 7395 7396 7397 7398 7399 7400 7401 7402 7403 7404 7405
## T1_1    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
##      7406 7407 7408 7409 7410 7411 7412 7413 7414 7415 7416 7417 7418 7419 7420
## T1_1    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      7421 7422 7423 7424 7425 7426 7427 7428 7429 7430 7431 7432 7433 7434 7435
## T1_1    1    0    0    0    0    0    0    0    0    0    0    0    1    0    0
##      7436 7437 7438 7439 7440 7441 7442 7443 7444 7445 7446 7447 7448 7449 7450
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
##      7451 7452 7453 7454 7455 7456 7457 7458 7459 7460 7461 7462 7463 7464 7465
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      7466 7467 7468 7469 7470 7471 7472 7473 7474 7475 7476 7477 7478 7479 7480
## T1_1    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
##      7481 7482 7483 7484 7485 7486 7487 7488 7489 7490 7491 7492 7493 7494 7495
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      7496 7497 7498 7499 7500 7501 7502 7503 7504 7505 7506 7507 7508 7509 7510
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      7511 7512 7513 7514 7515 7516 7517 7518 7519 7520 7521 7522 7523 7524 7525
## T1_1    1    1    0    0    0    0    0    1    1    0    1    0    0    0    0
##      7526 7527 7528 7529 7530 7531 7532 7533 7534 7535 7536 7537 7538 7539 7540
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      7541 7542 7543 7544 7545 7546 7547 7548 7549 7550 7551 7552 7553 7554 7555
## T1_1    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      7556 7557 7558 7559 7560 7561 7562 7563 7564 7565 7566 7567 7568 7569 7570
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      7571 7572 7573 7574 7575 7576 7577 7578 7579 7580 7581 7582 7583 7584 7585
## T1_1    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
##      7586 7587 7588 7589 7590 7591 7592 7593 7594 7595 7596 7597 7598 7599 7600
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    1    1
##      7601 7602 7603 7604 7605 7606 7607 7608 7609 7610 7611 7612 7613 7614 7615
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      7616 7617 7618 7619 7620 7621 7622 7623 7624 7625 7626 7627 7628 7629 7630
## T1_1    0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
##      7631 7632 7633 7634 7635 7636 7637 7638 7639 7640 7641 7642 7643 7644 7645
## T1_1    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
##      7646 7647 7648 7649 7650 7651 7652 7653 7654 7655 7656 7657 7658 7659 7660
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
##      7661 7662 7663 7664 7665 7666 7667 7668 7669 7670 7671 7672 7673 7674 7675
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
##      7676 7677 7678 7679 7680 7681 7682 7683 7684 7685 7686 7687 7688 7689 7690
## T1_1    0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
##      7691 7692 7693 7694 7695 7696 7697 7698 7699 7700 7701 7702 7703 7704 7705
## T1_1    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
##      7706 7707 7708 7709 7710 7711 7712 7713 7714 7715 7716 7717 7718 7719 7720
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      7721 7722 7723 7724 7725 7726 7727 7728 7729 7730 7731 7732 7733 7734 7735
## T1_1    0    0    0    0    0    0    0    1    1    0    0    0    0    0    0
##      7736 7737 7738 7739 7740 7741 7742 7743 7744 7745 7746 7747 7748 7749 7750
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      7751 7752 7753 7754 7755 7756 7757 7758 7759 7760 7761 7762 7763 7764 7765
## T1_1    0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
##      7766 7767 7768 7769 7770 7771 7772 7773 7774 7775 7776 7777 7778 7779 7780
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
##      7781 7782 7783 7784 7785 7786 7787 7788 7789 7790 7791 7792 7793 7794 7795
## T1_1    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      7796 7797 7798 7799 7800 7801 7802 7803 7804 7805 7806 7807 7808 7809 7810
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      7811 7812 7813 7814 7815 7816 7817 7818 7819 7820 7821 7822 7823 7824 7825
## T1_1    0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
##      7826 7827 7828 7829 7830 7831 7832 7833 7834 7835 7836 7837 7838 7839 7840
## T1_1    0    1    0    0    0    0    0    0    0    0    1    0    0    0    0
##      7841 7842 7843 7844 7845 7846 7847 7848 7849 7850 7851 7852 7853 7854 7855
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

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##      7856 7857 7858 7859 7860 7861 7862 7863 7864 7865 7866 7867 7868 7869 7870
## T1_1    0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
##      7871 7872 7873 7874 7875 7876 7877 7878 7879 7880 7881 7882 7883 7884 7885
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    1    1    0
##      7886 7887 7888 7889 7890 7891 7892 7893 7894 7895 7896 7897 7898 7899 7900
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      7901 7902 7903 7904 7905 7906 7907 7908 7909 7910 7911 7912 7913 7914 7915
## T1_1    0    1    0    0    0    0    0    0    0    0    0    0    0    1    0
##      7916 7917 7918 7919 7920 7921 7922 7923 7924 7925 7926 7927 7928 7929 7930
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      7931 7932 7933 7934 7935 7936 7937 7938 7939 7940 7941 7942 7943 7944 7945
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      7946 7947 7948 7949 7950 7951 7952 7953 7954 7955 7956 7957 7958 7959 7960
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      7961 7962 7963 7964 7965 7966 7967 7968 7969 7970 7971 7972 7973 7974 7975
## T1_1    0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
##      7976 7977 7978 7979 7980 7981 7982 7983 7984 7985 7986 7987 7988 7989 7990
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      7991 7992 7993 7994 7995 7996 7997 7998 7999 8000 8001 8002 8003 8004 8005
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
##      8006 8007 8008 8009 8010 8011 8012 8013 8014 8015 8016 8017 8018 8019 8020
## T1_1    1    0    0    0    0    1    0    0    0    0    0    0    0    0    0
##      8021 8022 8023 8024 8025 8026 8027 8028 8029 8030 8031 8032 8033 8034 8035
## T1_1    0    0    0    0    0    0    0    0    0    0    2    0    0    0    0
##      8036 8037 8038 8039 8040 8041 8042 8043 8044 8045 8046 8047 8048 8049 8050
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      8051 8052 8053 8054 8055 8056 8057 8058 8059 8060 8061 8062 8063 8064 8065
## T1_1    0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
##      8066 8067 8068 8069 8070 8071 8072 8073 8074 8075 8076 8077 8078 8079 8080
## T1_1    0    0    1    1    0    0    0    0    0    1    0    0    0    0    0
##      8081 8082 8083 8084 8085 8086 8087 8088 8089 8090 8091 8092 8093 8094 8095
## T1_1    0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
##      8096 8097 8098 8099 8100 8101 8102 8103 8104 8105 8106 8107 8108 8109 8110
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      8111 8112 8113 8114 8115 8116 8117 8118 8119 8120 8121 8122 8123 8124 8125
## T1_1    0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
##      8126 8127 8128 8129 8130 8131 8132 8133 8134 8135 8136 8137 8138 8139 8140
## T1_1    0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
##      8141 8142 8143 8144 8145 8146 8147 8148 8149 8150 8151 8152 8153 8154 8155
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
##      8156 8157 8158 8159 8160 8161 8162 8163 8164 8165 8166 8167 8168 8169 8170
## T1_1    0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
##      8171 8172 8173 8174 8175 8176 8177 8178 8179 8180 8181 8182 8183 8184 8185
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      8186 8187 8188 8189 8190 8191 8192 8193 8194 8195 8196 8197 8198 8199 8200
## T1_1    0    0    0    1    0    0    0    0    0    0    0    0    1    0    0
##      8201 8202 8203 8204 8205 8206 8207 8208 8209 8210 8211 8212 8213 8214 8215
## T1_1    0    0    0    0    0    0    1    0    0    0    0    0    0    1    0
##      8216 8217 8218 8219 8220 8221 8222 8223 8224 8225 8226 8227 8228 8229 8230
## T1_1    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
##      8231 8232 8233 8234 8235 8236 8237 8238 8239 8240 8241 8242 8243 8244 8245
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      8246 8247 8248 8249 8250 8251 8252 8253 8254 8255 8256 8257 8258 8259 8260
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
##      8261 8262 8263 8264 8265 8266 8267 8268 8269 8270 8271 8272 8273 8274 8275
## T1_1    0    0    0    1    0    1    0    0    0    0    0    0    0    0    0
##      8276 8277 8278 8279 8280 8281 8282 8283 8284 8285 8286 8287 8288 8289 8290
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      8291 8292 8293 8294 8295 8296 8297 8298 8299 8300 8301 8302 8303 8304 8305
## T1_1    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
##      8306 8307 8308 8309 8310 8311 8312 8313 8314 8315 8316 8317 8318 8319 8320
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      8321 8322 8323 8324 8325 8326 8327 8328 8329 8330 8331 8332 8333 8334 8335
## T1_1    0    0    1    0    0    0    0    1    0    0    0    0    0    0    1
##      8336 8337 8338 8339 8340 8341 8342 8343 8344 8345 8346 8347 8348 8349 8350
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      8351 8352 8353 8354 8355 8356 8357 8358 8359 8360 8361 8362 8363 8364 8365
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      8366 8367 8368 8369 8370 8371 8372 8373 8374 8375 8376 8377 8378 8379 8380
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      8381 8382 8383 8384 8385 8386 8387 8388 8389 8390 8391 8392 8393 8394 8395
## T1_1    0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
##      8396 8397 8398 8399 8400 8401 8402 8403 8404 8405 8406 8407 8408 8409 8410
## T1_1    0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
##      8411 8412 8413 8414 8415 8416 8417 8418 8419 8420 8421 8422 8423 8424 8425
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      8426 8427 8428 8429 8430 8431 8432 8433 8434 8435 8436 8437 8438 8439 8440
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
##      8441 8442 8443 8444 8445 8446 8447 8448 8449 8450 8451 8452 8453 8454 8455
## T1_1    0    0    0    0    1    0    0    0    0    1    0    0    0    0    0
##      8456 8457 8458 8459 8460 8461 8462 8463 8464 8465 8466 8467 8468 8469 8470
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      8471 8472 8473 8474 8475 8476 8477 8478 8479 8480 8481 8482 8483 8484 8485
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      8486 8487 8488 8489 8490 8491 8492 8493 8494 8495 8496 8497 8498 8499 8500
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      8501 8502 8503 8504 8505 8506 8507 8508 8509 8510 8511 8512 8513 8514 8515
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
##      8516 8517 8518 8519 8520 8521 8522 8523 8524 8525 8526 8527 8528 8529 8530
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      8531 8532 8533 8534 8535 8536 8537 8538 8539 8540 8541 8542 8543 8544 8545
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      8546 8547 8548 8549 8550 8551 8552 8553 8554 8555 8556 8557 8558 8559 8560
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      8561 8562 8563 8564 8565 8566 8567 8568 8569 8570 8571 8572 8573 8574 8575
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      8576 8577 8578 8579 8580 8581 8582 8583 8584 8585 8586 8587 8588 8589 8590
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      8591 8592 8593 8594 8595 8596 8597 8598 8599 8600 8601 8602 8603 8604 8605
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      8606 8607 8608 8609 8610 8611 8612 8613 8614 8615 8616 8617 8618 8619 8620
## T1_1    0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
##      8621 8622 8623 8624 8625 8626 8627 8628 8629 8630 8631 8632 8633 8634 8635
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      8636 8637 8638 8639 8640 8641 8642 8643 8644 8645 8646 8647 8648 8649 8650
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      8651 8652 8653 8654 8655 8656 8657 8658 8659 8660 8661 8662 8663 8664 8665
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
##      8666 8667 8668 8669 8670 8671 8672 8673 8674 8675 8676 8677 8678 8679 8680
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      8681 8682 8683 8684 8685 8686 8687 8688 8689 8690 8691 8692 8693 8694 8695
## T1_1    0    0    0    0    0    0    0    0    1    0    0    1    0    0    1
##      8696 8697 8698 8699 8700 8701 8702 8703 8704 8705 8706 8707 8708 8709 8710
## T1_1    0    1    1    1    0    0    0    0    0    0    0    0    0    0    0
##      8711 8712 8713 8714 8715 8716 8717 8718 8719 8720 8721 8722 8723 8724 8725
## T1_1    0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
##      8726 8727 8728 8729 8730 8731 8732 8733 8734 8735 8736 8737 8738 8739 8740
## T1_1    0    0    0    1    0    0    0    0    0    0    0    1    0    0    0
##      8741 8742 8743 8744 8745 8746 8747 8748 8749 8750 8751 8752 8753 8754 8755
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
##      8756 8757 8758 8759 8760 8761 8762 8763 8764 8765 8766 8767 8768 8769 8770
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
##      8771 8772 8773 8774 8775 8776 8777 8778 8779 8780 8781 8782 8783 8784 8785
## T1_1    0    0    0    0    0    0    0    0    0    0    1    0    0    0    1
##      8786 8787 8788 8789 8790 8791 8792 8793 8794 8795 8796 8797 8798 8799 8800
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      8801 8802 8803 8804 8805 8806 8807 8808 8809 8810 8811 8812 8813 8814 8815
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      8816 8817 8818 8819 8820 8821 8822 8823 8824 8825 8826 8827 8828 8829 8830
## T1_1    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      8831 8832 8833 8834 8835 8836 8837 8838 8839 8840 8841 8842 8843 8844 8845
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      8846 8847 8848 8849 8850 8851 8852 8853 8854 8855 8856 8857 8858 8859 8860
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      8861 8862 8863 8864 8865 8866 8867 8868 8869 8870 8871 8872 8873 8874 8875
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      8876 8877 8878 8879 8880 8881 8882 8883 8884 8885 8886 8887 8888 8889 8890
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      8891 8892 8893 8894 8895 8896 8897 8898 8899 8900 8901 8902 8903 8904 8905
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      8906 8907 8908 8909 8910 8911 8912 8913 8914 8915 8916 8917 8918 8919 8920
## T1_1    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
##      8921 8922 8923 8924 8925 8926 8927 8928 8929 8930 8931 8932 8933 8934 8935
## T1_1    0    0    0    0    0    1    0    0    0    1    1    0    0    0    0
##      8936 8937 8938 8939 8940 8941 8942 8943 8944 8945 8946 8947 8948 8949 8950
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      8951 8952 8953 8954 8955 8956 8957 8958 8959 8960 8961 8962 8963 8964 8965
## T1_1    0    0    0    0    0    0    0    0    1    0    0    0    1    0    0
##      8966 8967 8968 8969 8970 8971 8972 8973 8974 8975 8976 8977 8978 8979 8980
## T1_1    0    1    0    0    0    0    0    0    0    1    1    1    0    0    0
##      8981 8982 8983 8984 8985 8986 8987 8988 8989 8990 8991 8992 8993 8994 8995
## T1_1    0    0    0    3    0    0    0    0    1    0    0    1    0    0    0
##      8996 8997 8998 8999 9000 9001 9002 9003 9004 9005 9006 9007 9008 9009 9010
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      9011 9012 9013 9014 9015 9016 9017 9018 9019 9020 9021 9022 9023 9024 9025
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      9026 9027 9028 9029 9030 9031 9032 9033 9034 9035 9036 9037 9038 9039 9040
## T1_1    1    1    0    0    0    0    0    0    0    0    0    0    0    0    0
##      9041 9042 9043 9044 9045 9046 9047 9048 9049 9050 9051 9052 9053 9054 9055
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      9056 9057 9058 9059 9060 9061 9062 9063 9064 9065 9066 9067 9068 9069 9070
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
##      9071 9072 9073 9074 9075 9076 9077 9078 9079 9080 9081 9082 9083 9084 9085
## T1_1    0    0    1    0    0    0    0    0    0    0    0    1    0    0    0
##      9086 9087 9088 9089 9090 9091 9092 9093 9094 9095 9096 9097 9098 9099 9100
## T1_1    0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
##      9101 9102 9103 9104 9105 9106 9107 9108 9109 9110 9111 9112 9113 9114 9115
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
##      9116 9117 9118 9119 9120 9121 9122 9123 9124 9125 9126 9127 9128 9129 9130
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      9131 9132 9133 9134 9135 9136 9137 9138 9139 9140 9141 9142 9143 9144 9145
## T1_1    0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
##      9146 9147 9148 9149 9150 9151 9152 9153 9154 9155 9156 9157 9158 9159 9160
## T1_1    0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
##      9161 9162 9163 9164 9165 9166 9167 9168 9169 9170 9171 9172 9173 9174 9175
## T1_1    0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
##      9176 9177 9178 9179 9180 9181 9182 9183 9184 9185 9186 9187 9188 9189 9190
## T1_1    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
##      9191 9192 9193 9194 9195 9196 9197 9198 9199 9200 9201 9202 9203 9204 9205
## T1_1    0    0    0    1    0    0    0    0    0    1    0    0    0    0    0
##      9206 9207 9208 9209 9210 9211 9212 9213 9214 9215 9216 9217 9218 9219 9220
## T1_1    0    0    0    1    0    0    0    0    0    0    1    0    0    0    0
##      9221 9222 9223 9224 9225 9226 9227 9228 9229 9230 9231 9232 9233 9234 9235
## T1_1    0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
##      9236 9237 9238 9239 9240 9241 9242 9243 9244 9245 9246 9247 9248 9249 9250
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      9251 9252 9253 9254 9255 9256 9257 9258 9259 9260 9261 9262 9263 9264 9265
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
##      9266 9267 9268 9269 9270 9271 9272 9273 9274 9275 9276 9277 9278 9279 9280
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      9281 9282 9283 9284 9285 9286 9287 9288 9289 9290 9291 9292 9293 9294 9295
## T1_1    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      9296 9297 9298 9299 9300 9301 9302 9303 9304 9305 9306 9307 9308 9309 9310
## T1_1    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
##      9311 9312 9313 9314 9315 9316 9317 9318 9319 9320 9321 9322 9323 9324 9325
## T1_1    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      9326 9327 9328 9329 9330 9331 9332 9333 9334 9335 9336 9337 9338 9339 9340
## T1_1    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
##      9341 9342 9343 9344 9345 9346 9347 9348 9349 9350 9351 9352 9353 9354 9355
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      9356 9357 9358 9359 9360 9361 9362 9363 9364 9365 9366 9367 9368 9369 9370
## T1_1    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
##      9371 9372 9373 9374 9375 9376 9377 9378 9379 9380 9381 9382 9383 9384 9385
## T1_1    0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
##      9386 9387 9388 9389 9390 9391 9392 9393 9394 9395 9396 9397 9398 9399 9400
## T1_1    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
##      9401 9402 9403 9404 9405 9406 9407 9408 9409 9410 9411 9412 9413 9414 9415
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      9416 9417 9418 9419 9420 9421 9422 9423 9424 9425 9426 9427 9428 9429 9430
## T1_1    1    0    0    0    0    0    0    0    0    1    0    1    0    0    0
##      9431 9432 9433 9434 9435 9436 9437 9438 9439 9440 9441 9442 9443 9444 9445
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      9446 9447 9448 9449 9450 9451 9452 9453 9454 9455 9456 9457 9458 9459 9460
## T1_1    0    0    1    1    0    0    0    0    0    0    0    0    0    0    0
##      9461 9462 9463 9464 9465 9466 9467 9468 9469 9470 9471 9472 9473 9474 9475
## T1_1    1    0    0    0    0    0    0    0    0    0    0    0    0    1    0
```

```
##      9476 9477 9478 9479 9480 9481 9482 9483 9484 9485 9486 9487 9488 9489 9490
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      9491 9492 9493 9494 9495 9496 9497 9498 9499 9500 9501 9502 9503 9504 9505
## T1_1    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      9506 9507 9508 9509 9510 9511 9512 9513 9514 9515 9516 9517 9518 9519 9520
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      9521 9522 9523 9524 9525 9526 9527 9528 9529 9530 9531 9532 9533 9534 9535
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      9536 9537 9538 9539 9540 9541 9542 9543 9544 9545 9546 9547 9548 9549 9550
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      9551 9552 9553 9554 9555 9556 9557 9558 9559 9560 9561 9562 9563 9564 9565
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      9566 9567 9568 9569 9570 9571 9572 9573 9574 9575 9576 9577 9578 9579 9580
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      9581 9582 9583 9584 9585 9586 9587 9588 9589 9590 9591 9592 9593 9594 9595
## T1_1    0    1    1    0    0    0    0    0    1    0    0    0    0    0    0
##      9596 9597 9598 9599 9600 9601 9602 9603 9604 9605 9606 9607 9608 9609 9610
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      9611 9612 9613 9614 9615 9616 9617 9618 9619 9620 9621 9622 9623 9624 9625
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      9626 9627 9628 9629 9630 9631 9632 9633 9634 9635 9636 9637 9638 9639 9640
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      9641 9642 9643 9644 9645 9646 9647 9648 9649 9650 9651 9652 9653 9654 9655
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      9656 9657 9658 9659 9660 9661 9662 9663 9664 9665 9666 9667 9668 9669 9670
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      9671 9672 9673 9674 9675 9676 9677 9678 9679 9680 9681 9682 9683 9684 9685
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      9686 9687 9688 9689 9690 9691 9692 9693 9694 9695 9696 9697 9698 9699 9700
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
##      9701 9702 9703 9704 9705 9706 9707 9708 9709 9710 9711 9712 9713 9714 9715
## T1_1    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      9716 9717 9718 9719 9720 9721 9722 9723 9724 9725 9726 9727 9728 9729 9730
## T1_1    0    0    1    0    0    0    0    0    0    0    0    0    0    1    1
##      9731 9732 9733 9734 9735 9736 9737 9738 9739 9740 9741 9742 9743 9744 9745
## T1_1    0    0    0    0    0    1    0    0    1    0    0    0    0    0    0
##      9746 9747 9748 9749 9750 9751 9752 9753 9754 9755 9756 9757 9758 9759 9760
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      9761 9762 9763 9764 9765 9766 9767 9768 9769 9770 9771 9772 9773 9774 9775
## T1_1    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
##      9776 9777 9778 9779 9780 9781 9782 9783 9784 9785 9786 9787 9788 9789 9790
## T1_1    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      9791 9792 9793 9794 9795 9796 9797 9798 9799 9800 9801 9802 9803 9804 9805
## T1_1    0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
##      9806 9807 9808 9809 9810 9811 9812 9813 9814 9815 9816 9817 9818 9819 9820
## T1_1    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
##      9821 9822 9823 9824 9825 9826 9827 9828 9829 9830 9831 9832 9833 9834 9835
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      9836 9837 9838 9839 9840 9841 9842 9843 9844 9845 9846 9847 9848 9849 9850
## T1_1    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
##      9851 9852 9853 9854 9855 9856 9857 9858 9859 9860 9861 9862 9863 9864 9865
## T1_1    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      9866 9867 9868 9869 9870 9871 9872 9873 9874 9875 9876 9877 9878 9879 9880
## T1_1    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
##      9881 9882 9883 9884 9885 9886 9887 9888 9889 9890 9891 9892 9893 9894 9895
## T1_1    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
##      9896 9897 9898 9899 9900 9901 9902 9903 9904 9905 9906 9907 9908 9909 9910
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      9911 9912 9913 9914 9915 9916 9917 9918 9919 9920 9921 9922 9923 9924 9925
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      9926 9927 9928 9929 9930 9931 9932 9933 9934 9935 9936 9937 9938 9939 9940
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      9941 9942 9943 9944 9945 9946 9947 9948 9949 9950 9951 9952 9953 9954 9955
## T1_1    0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
##      9956 9957 9958 9959 9960 9961 9962 9963 9964 9965 9966 9967 9968 9969 9970
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      9971 9972 9973 9974 9975 9976 9977 9978 9979 9980 9981 9982 9983 9984 9985
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      9986 9987 9988 9989 9990 9991 9992 9993 9994 9995 9996 9997 9998 9999
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      10000 10001 10002 10003 10004 10005 10006 10007 10008 10009 10010 10011
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##      10012 10013 10014 10015 10016 10017 10018 10019 10020 10021 10022 10023
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##      10024 10025 10026 10027 10028 10029 10030 10031 10032 10033 10034 10035
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##      10036 10037 10038 10039 10040 10041 10042 10043 10044 10045 10046 10047
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##      10048 10049 10050 10051 10052 10053 10054 10055 10056 10057 10058 10059
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##      10060 10061 10062 10063 10064 10065 10066 10067 10068 10069 10070 10071
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##      10072 10073 10074 10075 10076 10077 10078 10079 10080 10081 10082 10083
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##      10084 10085 10086 10087 10088 10089 10090 10091 10092 10093 10094 10095
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##      10096 10097 10098 10099 10100 10101 10102 10103 10104 10105 10106 10107
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##      10108 10109 10110 10111 10112 10113 10114 10115 10116 10117 10118 10119
## T1_1     0     0     0     0     0     0     0     0     0     1     0     0
##      10120 10121 10122 10123 10124 10125 10126 10127 10128 10129 10130 10131
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##      10132 10133 10134 10135 10136 10137 10138 10139 10140 10141 10142 10143
## T1_1     0     0     0     0     0     0     0     0     0     0     1     0
##      10144 10145 10146 10147 10148 10149 10150 10151 10152 10153 10154 10155
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##      10156 10157 10158 10159 10160 10161 10162 10163 10164 10165 10166 10167
## T1_1     0     0     0     1     1     0     0     0     0     0     0     0
##      10168 10169 10170 10171 10172 10173 10174 10175 10176 10177 10178 10179
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##      10180 10181 10182 10183 10184 10185 10186 10187 10188 10189 10190 10191
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##      10192 10193 10194 10195 10196 10197 10198 10199 10200 10201 10202 10203
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##      10204 10205 10206 10207 10208 10209 10210 10211 10212 10213 10214 10215
## T1_1     0     0     0     0     0     0     0     1     0     0     0     0
##      10216 10217 10218 10219 10220 10221 10222 10223 10224 10225 10226 10227
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
```

```
##      10228 10229 10230 10231 10232 10233 10234 10235 10236 10237 10238 10239
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##      10240 10241 10242 10243 10244 10245 10246 10247 10248 10249 10250 10251
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##      10252 10253 10254 10255 10256 10257 10258 10259 10260 10261 10262 10263
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##      10264 10265 10266 10267 10268 10269 10270 10271 10272 10273 10274 10275
## T1_1     1     0     0     0     0     0     0     0     0     0     0     0
##      10276 10277 10278 10279 10280 10281 10282 10283 10284 10285 10286 10287
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##      10288 10289 10290 10291 10292 10293 10294 10295 10296 10297 10298 10299
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##      10300 10301 10302 10303 10304 10305 10306 10307 10308 10309 10310 10311
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##      10312 10313 10314 10315 10316 10317 10318 10319 10320 10321 10322 10323
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##      10324 10325 10326 10327 10328 10329 10330 10331 10332 10333 10334 10335
## T1_1     1     0     0     0     0     0     0     0     0     0     0     0
##      10336 10337 10338 10339 10340 10341 10342 10343 10344 10345 10346 10347
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##      10348 10349 10350 10351 10352 10353 10354 10355 10356 10357 10358 10359
## T1_1     0     0     0     0     0     1     0     0     0     0     2     0
##      10360 10361 10362 10363 10364 10365 10366 10367 10368 10369 10370 10371
## T1_1     0     0     0     1     0     1     0     0     0     0     0     0
##      10372 10373 10374 10375 10376 10377 10378 10379 10380 10381 10382 10383
## T1_1     0     2     0     0     0     0     0     0     0     0     0     0
##      10384 10385 10386 10387 10388 10389 10390 10391 10392 10393 10394 10395
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##      10396 10397 10398 10399 10400 10401 10402 10403 10404 10405 10406 10407
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##      10408 10409 10410 10411 10412 10413 10414 10415 10416 10417 10418 10419
## T1_1     0     0     0     0     0     0     3     0     0     0     0     0
##      10420 10421 10422 10423 10424 10425 10426 10427 10428 10429 10430 10431
## T1_1     0     1     0     0     1     0     0     0     0     0     0     0
##      10432 10433 10434 10435 10436 10437 10438 10439 10440 10441 10442 10443
## T1_1     0     0     0     0     1     0     0     0     0     0     0     0
##      10444 10445 10446 10447 10448 10449 10450 10451 10452 10453 10454 10455
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##      10456 10457 10458 10459 10460 10461 10462 10463 10464 10465 10466 10467
## T1_1     0     0     0     1     0     1     0     0     0     0     0     0
##      10468 10469 10470 10471 10472 10473 10474 10475 10476 10477 10478 10479
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##      10480 10481 10482 10483 10484 10485 10486 10487 10488 10489 10490 10491
## T1_1     0     0     0     0     0     0     0     0     1     0     0     0
##      10492 10493 10494 10495 10496 10497 10498 10499 10500 10501 10502 10503
## T1_1     0     0     0     0     0     0     0     0     0     0     1     0
##      10504 10505 10506 10507 10508 10509 10510 10511 10512 10513 10514 10515
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##      10516 10517 10518 10519 10520 10521 10522 10523 10524 10525 10526 10527
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##      10528 10529 10530 10531 10532 10533 10534 10535 10536 10537 10538 10539
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##      10540 10541 10542 10543 10544 10545 10546 10547 10548 10549 10550 10551
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
```

```
##       10552 10553 10554 10555 10556 10557 10558 10559 10560 10561 10562 10563
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       10564 10565 10566 10567 10568 10569 10570 10571 10572 10573 10574 10575
## T1_1     0     0     1     0     0     0     0     0     0     0     0     0
##       10576 10577 10578 10579 10580 10581 10582 10583 10584 10585 10586 10587
## T1_1     0     0     0     0     0     0     0     0     0     1     1     1
##       10588 10589 10590 10591 10592 10593 10594 10595 10596 10597 10598 10599
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       10600 10601 10602 10603 10604 10605 10606 10607 10608 10609 10610 10611
## T1_1     1     0     0     0     0     0     0     0     0     0     0     0
##       10612 10613 10614 10615 10616 10617 10618 10619 10620 10621 10622 10623
## T1_1     0     0     0     0     0     0     0     0     2     0     0     0
##       10624 10625 10626 10627 10628 10629 10630 10631 10632 10633 10634 10635
## T1_1     0     0     1     0     0     0     0     0     0     0     0     0
##       10636 10637 10638 10639 10640 10641 10642 10643 10644 10645 10646 10647
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       10648 10649 10650 10651 10652 10653 10654 10655 10656 10657 10658 10659
## T1_1     1     0     0     0     0     0     0     0     1     0     0     0
##       10660 10661 10662 10663 10664 10665 10666 10667 10668 10669 10670 10671
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       10672 10673 10674 10675 10676 10677 10678 10679 10680 10681 10682 10683
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       10684 10685 10686 10687 10688 10689 10690 10691 10692 10693 10694 10695
## T1_1     0     1     0     0     0     0     1     0     0     0     0     0
##       10696 10697 10698 10699 10700 10701 10702 10703 10704 10705 10706 10707
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       10708 10709 10710 10711 10712 10713 10714 10715 10716 10717 10718 10719
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       10720 10721 10722 10723 10724 10725 10726 10727 10728 10729 10730 10731
## T1_1     0     0     0     0     0     0     0     0     0     1     1     0
##       10732 10733 10734 10735 10736 10737 10738 10739 10740 10741 10742 10743
## T1_1     0     0     0     0     0     0     0     1     0     0     0     0
##       10744 10745 10746 10747 10748 10749 10750 10751 10752 10753 10754 10755
## T1_1     0     0     0     0     2     1     0     0     0     1     0     0
##       10756 10757 10758 10759 10760 10761 10762 10763 10764 10765 10766 10767
## T1_1     0     1     1     1     0     0     0     1     0     0     0     0
##       10768 10769 10770 10771 10772 10773 10774 10775 10776 10777 10778 10779
## T1_1     0     0     0     0     0     0     0     0     0     0     0     1
##       10780 10781 10782 10783 10784 10785 10786 10787 10788 10789 10790 10791
## T1_1     0     1     0     0     0     0     0     0     0     0     0     0
##       10792 10793 10794 10795 10796 10797 10798 10799 10800 10801 10802 10803
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       10804 10805 10806 10807 10808 10809 10810 10811 10812 10813 10814 10815
## T1_1     0     0     0     0     0     0     1     0     0     0     0     0
##       10816 10817 10818 10819 10820 10821 10822 10823 10824 10825 10826 10827
## T1_1     0     0     0     0     0     1     0     0     1     0     0     0
##       10828 10829 10830 10831 10832 10833 10834 10835 10836 10837 10838 10839
## T1_1     1     0     0     0     0     0     0     0     0     0     0     0
##       10840 10841 10842 10843 10844 10845 10846 10847 10848 10849 10850 10851
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       10852 10853 10854 10855 10856 10857 10858 10859 10860 10861 10862 10863
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       10864 10865 10866 10867 10868 10869 10870 10871 10872 10873 10874 10875
## T1_1     0     0     0     0     0     0     0     0     0     0     1     0
```

```
##       10876 10877 10878 10879 10880 10881 10882 10883 10884 10885 10886 10887
## T1_1     0     1     0     0     0     0     0     0     0     0     0     0
##       10888 10889 10890 10891 10892 10893 10894 10895 10896 10897 10898 10899
## T1_1     0     1     0     0     0     0     0     0     0     0     0     0
##       10900 10901 10902 10903 10904 10905 10906 10907 10908 10909 10910 10911
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       10912 10913 10914 10915 10916 10917 10918 10919 10920 10921 10922 10923
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       10924 10925 10926 10927 10928 10929 10930 10931 10932 10933 10934 10935
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       10936 10937 10938 10939 10940 10941 10942 10943 10944 10945 10946 10947
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       10948 10949 10950 10951 10952 10953 10954 10955 10956 10957 10958 10959
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       10960 10961 10962 10963 10964 10965 10966 10967 10968 10969 10970 10971
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       10972 10973 10974 10975 10976 10977 10978 10979 10980 10981 10982 10983
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       10984 10985 10986 10987 10988 10989 10990 10991 10992 10993 10994 10995
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       10996 10997 10998 10999 11000 11001 11002 11003 11004 11005 11006 11007
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11008 11009 11010 11011 11012 11013 11014 11015 11016 11017 11018 11019
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11020 11021 11022 11023 11024 11025 11026 11027 11028 11029 11030 11031
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11032 11033 11034 11035 11036 11037 11038 11039 11040 11041 11042 11043
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11044 11045 11046 11047 11048 11049 11050 11051 11052 11053 11054 11055
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11056 11057 11058 11059 11060 11061 11062 11063 11064 11065 11066 11067
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11068 11069 11070 11071 11072 11073 11074 11075 11076 11077 11078 11079
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11080 11081 11082 11083 11084 11085 11086 11087 11088 11089 11090 11091
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11092 11093 11094 11095 11096 11097 11098 11099 11100 11101 11102 11103
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11104 11105 11106 11107 11108 11109 11110 11111 11112 11113 11114 11115
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11116 11117 11118 11119 11120 11121 11122 11123 11124 11125 11126 11127
## T1_1     0     0     0     0     1     0     0     0     0     0     0     0
##       11128 11129 11130 11131 11132 11133 11134 11135 11136 11137 11138 11139
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11140 11141 11142 11143 11144 11145 11146 11147 11148 11149 11150 11151
## T1_1     0     0     0     0     0     0     1     0     1     0     0     0
##       11152 11153 11154 11155 11156 11157 11158 11159 11160 11161 11162 11163
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11164 11165 11166 11167 11168 11169 11170 11171 11172 11173 11174 11175
## T1_1     0     0     0     0     0     1     0     0     0     0     0     1
##       11176 11177 11178 11179 11180 11181 11182 11183 11184 11185 11186 11187
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11188 11189 11190 11191 11192 11193 11194 11195 11196 11197 11198 11199
## T1_1     0     0     0     0     0     0     0     1     0     0     0     1
```

```
##       11200 11201 11202 11203 11204 11205 11206 11207 11208 11209 11210 11211
## T1_1     0     0     0     0     0     0     0     1     0     1     0     0
##       11212 11213 11214 11215 11216 11217 11218 11219 11220 11221 11222 11223
## T1_1     0     0     0     0     0     0     0     0     0     0     0     1
##       11224 11225 11226 11227 11228 11229 11230 11231 11232 11233 11234 11235
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11236 11237 11238 11239 11240 11241 11242 11243 11244 11245 11246 11247
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11248 11249 11250 11251 11252 11253 11254 11255 11256 11257 11258 11259
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11260 11261 11262 11263 11264 11265 11266 11267 11268 11269 11270 11271
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11272 11273 11274 11275 11276 11277 11278 11279 11280 11281 11282 11283
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11284 11285 11286 11287 11288 11289 11290 11291 11292 11293 11294 11295
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11296 11297 11298 11299 11300 11301 11302 11303 11304 11305 11306 11307
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11308 11309 11310 11311 11312 11313 11314 11315 11316 11317 11318 11319
## T1_1     0     0     0     0     0     1     0     0     0     0     0     0
##       11320 11321 11322 11323 11324 11325 11326 11327 11328 11329 11330 11331
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11332 11333 11334 11335 11336 11337 11338 11339 11340 11341 11342 11343
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11344 11345 11346 11347 11348 11349 11350 11351 11352 11353 11354 11355
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11356 11357 11358 11359 11360 11361 11362 11363 11364 11365 11366 11367
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11368 11369 11370 11371 11372 11373 11374 11375 11376 11377 11378 11379
## T1_1     0     0     0     0     0     0     1     1     0     0     0     0
##       11380 11381 11382 11383 11384 11385 11386 11387 11388 11389 11390 11391
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11392 11393 11394 11395 11396 11397 11398 11399 11400 11401 11402 11403
## T1_1     0     0     0     0     1     0     0     0     0     0     0     0
##       11404 11405 11406 11407 11408 11409 11410 11411 11412 11413 11414 11415
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11416 11417 11418 11419 11420 11421 11422 11423 11424 11425 11426 11427
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11428 11429 11430 11431 11432 11433 11434 11435 11436 11437 11438 11439
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11440 11441 11442 11443 11444 11445 11446 11447 11448 11449 11450 11451
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11452 11453 11454 11455 11456 11457 11458 11459 11460 11461 11462 11463
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11464 11465 11466 11467 11468 11469 11470 11471 11472 11473 11474 11475
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11476 11477 11478 11479 11480 11481 11482 11483 11484 11485 11486 11487
## T1_1     0     0     0     0     0     0     0     0     0     0     1     1
##       11488 11489 11490 11491 11492 11493 11494 11495 11496 11497 11498 11499
## T1_1     0     0     0     0     0     0     0     0     1     0     0     0
##       11500 11501 11502 11503 11504 11505 11506 11507 11508 11509 11510 11511
## T1_1     0     0     0     0     0     0     0     1     0     1     0     0
##       11512 11513 11514 11515 11516 11517 11518 11519 11520 11521 11522 11523
## T1_1     1     0     0     1     0     0     0     0     1     0     0     0
```

```
##       11524 11525 11526 11527 11528 11529 11530 11531 11532 11533 11534 11535
## T1_1     0     0     0     0     0     1     0     0     0     0     0     0
##       11536 11537 11538 11539 11540 11541 11542 11543 11544 11545 11546 11547
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11548 11549 11550 11551 11552 11553 11554 11555 11556 11557 11558 11559
## T1_1     0     0     0     0     0     0     1     0     0     0     0     0
##       11560 11561 11562 11563 11564 11565 11566 11567 11568 11569 11570 11571
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11572 11573 11574 11575 11576 11577 11578 11579 11580 11581 11582 11583
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11584 11585 11586 11587 11588 11589 11590 11591 11592 11593 11594 11595
## T1_1     1     0     1     0     1     0     0     0     0     0     0     0
##       11596 11597 11598 11599 11600 11601 11602 11603 11604 11605 11606 11607
## T1_1     0     0     0     0     0     0     1     0     0     0     0     0
##       11608 11609 11610 11611 11612 11613 11614 11615 11616 11617 11618 11619
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11620 11621 11622 11623 11624 11625 11626 11627 11628 11629 11630 11631
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11632 11633 11634 11635 11636 11637 11638 11639 11640 11641 11642 11643
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11644 11645 11646 11647 11648 11649 11650 11651 11652 11653 11654 11655
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11656 11657 11658 11659 11660 11661 11662 11663 11664 11665 11666 11667
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11668 11669 11670 11671 11672 11673 11674 11675 11676 11677 11678 11679
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11680 11681 11682 11683 11684 11685 11686 11687 11688 11689 11690 11691
## T1_1     1     1     0     0     0     0     0     0     0     0     0     1
##       11692 11693 11694 11695 11696 11697 11698 11699 11700 11701 11702 11703
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11704 11705 11706 11707 11708 11709 11710 11711 11712 11713 11714 11715
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11716 11717 11718 11719 11720 11721 11722 11723 11724 11725 11726 11727
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11728 11729 11730 11731 11732 11733 11734 11735 11736 11737 11738 11739
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11740 11741 11742 11743 11744 11745 11746 11747 11748 11749 11750 11751
## T1_1     0     0     1     0     0     0     0     0     0     0     0     0
##       11752 11753 11754 11755 11756 11757 11758 11759 11760 11761 11762 11763
## T1_1     1     0     0     0     0     0     0     0     0     0     1     0
##       11764 11765 11766 11767 11768 11769 11770 11771 11772 11773 11774 11775
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11776 11777 11778 11779 11780 11781 11782 11783 11784 11785 11786 11787
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11788 11789 11790 11791 11792 11793 11794 11795 11796 11797 11798 11799
## T1_1     0     0     0     0     0     0     0     1     0     1     0     1
##       11800 11801 11802 11803 11804 11805 11806 11807 11808 11809 11810 11811
## T1_1     0     0     0     0     0     0     0     0     0     0     0     2
##       11812 11813 11814 11815 11816 11817 11818 11819 11820 11821 11822 11823
## T1_1     0     0     0     0     0     0     0     0     0     0     0     1
##       11824 11825 11826 11827 11828 11829 11830 11831 11832 11833 11834 11835
## T1_1     0     0     0     0     1     0     0     0     0     0     0     0
##       11836 11837 11838 11839 11840 11841 11842 11843 11844 11845 11846 11847
## T1_1     0     0     0     1     0     0     0     0     0     0     0     0
```

```
##       11848 11849 11850 11851 11852 11853 11854 11855 11856 11857 11858 11859
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11860 11861 11862 11863 11864 11865 11866 11867 11868 11869 11870 11871
## T1_1     0     0     1     0     0     0     0     0     0     0     0     0
##       11872 11873 11874 11875 11876 11877 11878 11879 11880 11881 11882 11883
## T1_1     0     0     0     0     1     0     0     0     0     0     0     0
##       11884 11885 11886 11887 11888 11889 11890 11891 11892 11893 11894 11895
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11896 11897 11898 11899 11900 11901 11902 11903 11904 11905 11906 11907
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11908 11909 11910 11911 11912 11913 11914 11915 11916 11917 11918 11919
## T1_1     0     1     0     0     0     0     0     0     0     0     0     0
##       11920 11921 11922 11923 11924 11925 11926 11927 11928 11929 11930 11931
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11932 11933 11934 11935 11936 11937 11938 11939 11940 11941 11942 11943
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11944 11945 11946 11947 11948 11949 11950 11951 11952 11953 11954 11955
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11956 11957 11958 11959 11960 11961 11962 11963 11964 11965 11966 11967
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11968 11969 11970 11971 11972 11973 11974 11975 11976 11977 11978 11979
## T1_1     0     0     0     0     0     0     1     0     0     0     0     0
##       11980 11981 11982 11983 11984 11985 11986 11987 11988 11989 11990 11991
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11992 11993 11994 11995 11996 11997 11998 11999 12000 12001 12002 12003
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       12004 12005 12006 12007 12008 12009 12010 12011 12012 12013 12014 12015
## T1_1     0     0     1     0     0     0     0     0     0     0     0     0
##       12016 12017 12018 12019 12020 12021 12022 12023 12024 12025 12026 12027
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       12028 12029 12030 12031 12032 12033 12034 12035 12036 12037 12038 12039
## T1_1     0     0     0     0     1     0     0     0     0     0     0     1
##       12040 12041 12042 12043 12044 12045 12046 12047 12048 12049 12050 12051
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       12052 12053 12054 12055 12056 12057 12058 12059 12060 12061 12062 12063
## T1_1     0     0     0     0     1     0     0     0     0     0     0     0
##       12064 12065 12066 12067 12068 12069 12070 12071 12072 12073 12074 12075
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       12076 12077 12078 12079 12080 12081 12082 12083 12084 12085 12086 12087
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       12088 12089 12090 12091 12092 12093 12094 12095 12096 12097 12098 12099
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       12100 12101 12102 12103 12104 12105 12106 12107 12108 12109 12110 12111
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       12112 12113 12114 12115 12116 12117 12118 12119 12120 12121 12122 12123
## T1_1     0     0     1     0     0     0     0     0     0     0     0     0
##       12124 12125 12126 12127 12128 12129 12130 12131 12132 12133 12134 12135
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       12136 12137 12138 12139 12140 12141 12142 12143 12144 12145 12146 12147
## T1_1     0     0     0     0     0     1     1     0     0     0     0     0
##       12148 12149 12150 12151 12152 12153 12154 12155 12156 12157 12158 12159
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       12160 12161 12162 12163 12164 12165 12166 12167 12168 12169 12170 12171
## T1_1     0     0     0     0     0     0     0     0     0     0     0     1
```

```
##       12172 12173 12174 12175 12176 12177 12178 12179 12180 12181 12182 12183
## T1_1      0     0     0     0     0     0     0     1     0     0     0     0
##       12184 12185 12186 12187 12188 12189 12190 12191 12192 12193 12194 12195
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
##       12196 12197 12198 12199 12200 12201 12202 12203 12204 12205 12206 12207
## T1_1      0     0     0     1     0     0     0     0     0     0     0     0
##       12208 12209 12210 12211 12212 12213 12214 12215 12216 12217 12218 12219
## T1_1      0     0     0     1     0     0     0     0     0     0     0     0
##       12220 12221 12222 12223 12224 12225 12226 12227 12228 12229 12230 12231
## T1_1      0     0     1     0     0     0     0     0     0     0     0     0
##       12232 12233 12234 12235 12236 12237 12238 12239 12240 12241 12242 12243
## T1_1      0     0     0     1     0     0     0     0     0     0     0     0
##       12244 12245 12246 12247 12248 12249 12250 12251 12252 12253 12254 12255
## T1_1      0     0     0     0     0     0     0     0     0     0     1     0
##       12256 12257 12258 12259 12260 12261 12262 12263 12264 12265 12266 12267
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
##       12268 12269 12270 12271 12272 12273 12274 12275 12276 12277 12278 12279
## T1_1      0     0     0     0     0     0     0     1     0     0     0     0
##       12280 12281 12282 12283 12284 12285 12286 12287 12288 12289 12290 12291
## T1_1      0     0     1     1     0     0     0     0     0     0     0     0
##       12292 12293 12294 12295 12296 12297 12298 12299 12300 12301 12302 12303
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
##       12304 12305 12306 12307 12308 12309 12310 12311 12312 12313 12314 12315
## T1_1      0     0     1     0     0     0     0     0     0     0     0     0
##       12316 12317 12318 12319 12320 12321 12322 12323 12324 12325 12326 12327
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
##       12328 12329 12330 12331 12332 12333 12334 12335 12336 12337 12338 12339
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
##       12340 12341 12342 12343 12344 12345 12346 12347 12348 12349 12350 12351
## T1_1      0     0     0     0     0     0     1     0     0     0     0     0
##       12352 12353 12354 12355 12356 12357 12358 12359 12360 12361 12362 12363
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
##       12364 12365 12366 12367 12368 12369 12370 12371 12372 12373 12374 12375
## T1_1      0     0     1     0     0     0     0     0     0     0     0     0
##       12376 12377 12378 12379 12380 12381 12382 12383 12384 12385 12386 12387
## T1_1      0     1     0     0     0     0     0     0     0     0     0     0
##       12388 12389 12390 12391 12392 12393 12394 12395 12396 12397 12398 12399
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
##       12400 12401 12402 12403 12404 12405 12406 12407 12408 12409 12410 12411
## T1_1      0     1     0     0     0     0     0     0     0     0     0     0
##       12412 12413 12414 12415 12416 12417 12418 12419 12420 12421 12422 12423
## T1_1      0     0     0     0     0     0     0     0     0     0     1     0
##       12424 12425 12426 12427 12428 12429 12430 12431 12432 12433 12434 12435
## T1_1      0     0     0     1     0     0     0     0     0     0     0     0
##       12436 12437 12438 12439 12440 12441 12442 12443 12444 12445 12446 12447
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
##       12448 12449 12450 12451 12452 12453 12454 12455 12456 12457 12458 12459
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
##       12460 12461 12462 12463 12464 12465 12466 12467 12468 12469 12470 12471
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
##       12472 12473 12474 12475 12476 12477 12478 12479 12480 12481 12482 12483
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
##       12484 12485 12486 12487 12488 12489 12490 12491 12492 12493 12494 12495
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
```

```
##       12496 12497 12498 12499 12500 12501 12502 12503 12504 12505 12506 12507
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       12508 12509 12510 12511 12512 12513 12514 12515 12516 12517 12518 12519
## T1_1     0     1     0     0     0     0     1     1     0     0     0     0
##       12520 12521 12522 12523 12524 12525 12526 12527 12528 12529 12530 12531
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       12532 12533 12534 12535 12536 12537 12538 12539 12540 12541 12542 12543
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       12544 12545 12546 12547 12548 12549 12550 12551 12552 12553 12554 12555
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       12556 12557 12558 12559 12560 12561 12562 12563 12564 12565 12566 12567
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       12568 12569 12570 12571 12572 12573 12574 12575 12576 12577 12578 12579
## T1_1     0     0     0     0     0     0     0     1     0     0     0     0
##       12580 12581 12582 12583 12584 12585 12586 12587 12588 12589 12590 12591
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       12592 12593 12594 12595 12596 12597 12598 12599 12600 12601 12602 12603
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       12604 12605 12606 12607 12608 12609 12610 12611 12612 12613 12614 12615
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       12616 12617 12618 12619 12620 12621 12622 12623 12624 12625 12626 12627
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       12628 12629 12630 12631 12632 12633 12634 12635 12636 12637 12638 12639
## T1_1     0     0     0     0     0     0     1     0     0     0     0     0
##       12640 12641 12642 12643 12644 12645 12646 12647 12648 12649 12650 12651
## T1_1     0     0     0     0     0     0     0     1     0     0     0     0
##       12652 12653 12654 12655 12656 12657 12658 12659 12660 12661 12662 12663
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       12664 12665 12666 12667 12668 12669 12670 12671 12672 12673 12674 12675
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       12676 12677 12678 12679 12680 12681 12682 12683 12684 12685 12686 12687
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       12688 12689 12690 12691 12692 12693 12694 12695 12696 12697 12698 12699
## T1_1     0     0     0     1     0     1     0     0     0     0     0     0
##       12700 12701 12702 12703 12704 12705 12706 12707 12708 12709 12710 12711
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       12712 12713 12714 12715 12716 12717 12718 12719 12720 12721 12722 12723
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       12724 12725 12726 12727 12728 12729 12730 12731 12732 12733 12734 12735
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       12736 12737 12738 12739 12740 12741 12742 12743 12744 12745 12746 12747
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       12748 12749 12750 12751 12752 12753 12754 12755 12756 12757 12758 12759
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       12760 12761 12762 12763 12764 12765 12766 12767 12768 12769 12770 12771
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       12772 12773 12774 12775 12776 12777 12778 12779 12780 12781 12782 12783
## T1_1     0     0     0     0     0     0     0     1     0     0     0     0
##       12784 12785 12786 12787 12788 12789 12790 12791 12792 12793 12794 12795
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       12796 12797 12798 12799 12800 12801 12802 12803 12804 12805 12806 12807
## T1_1     0     0     0     1     0     0     0     0     0     0     0     0
##       12808 12809 12810 12811 12812 12813 12814 12815 12816 12817 12818 12819
## T1_1     0     1     0     0     0     0     0     0     0     0     0     0
```

```
##       12820 12821 12822 12823 12824 12825 12826 12827 12828 12829 12830 12831
## T1_1     0     0     0     0     0     0     0     0     0     0     1     0
##       12832 12833 12834 12835 12836 12837 12838 12839 12840 12841 12842 12843
## T1_1     0     0     0     0     0     0     1     1     0     0     0     0
##       12844 12845 12846 12847 12848 12849 12850 12851 12852 12853 12854 12855
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       12856 12857 12858 12859 12860 12861 12862 12863 12864 12865 12866 12867
## T1_1     1     0     0     0     0     0     0     0     0     0     0     0
##       12868 12869 12870 12871 12872 12873 12874 12875 12876 12877 12878 12879
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       12880 12881 12882 12883 12884 12885 12886 12887 12888 12889 12890 12891
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       12892 12893 12894 12895 12896 12897 12898 12899 12900 12901 12902 12903
## T1_1     0     0     0     0     0     0     1     0     0     0     0     0
##       12904 12905 12906 12907 12908 12909 12910 12911 12912 12913 12914 12915
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       12916 12917 12918 12919 12920 12921 12922 12923 12924 12925 12926 12927
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       12928 12929 12930 12931 12932 12933 12934 12935 12936 12937 12938 12939
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       12940 12941 12942 12943 12944 12945 12946 12947 12948 12949 12950 12951
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       12952 12953 12954 12955 12956 12957 12958 12959 12960 12961 12962 12963
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       12964 12965 12966 12967 12968 12969 12970 12971 12972 12973 12974 12975
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       12976 12977 12978 12979 12980 12981 12982 12983 12984 12985 12986 12987
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       12988 12989 12990 12991 12992 12993 12994 12995 12996 12997 12998 12999
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       13000 13001 13002 13003 13004 13005 13006 13007 13008 13009 13010 13011
## T1_1     0     0     0     0     0     1     0     0     0     0     0     0
##       13012 13013 13014 13015 13016 13017 13018 13019 13020 13021 13022 13023
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       13024 13025 13026 13027 13028 13029 13030 13031 13032 13033 13034 13035
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       13036 13037 13038 13039 13040 13041 13042 13043 13044 13045 13046 13047
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       13048 13049 13050 13051 13052 13053 13054 13055 13056 13057 13058 13059
## T1_1     0     0     0     0     0     0     1     0     0     0     0     0
##       13060 13061 13062 13063 13064 13065 13066 13067 13068 13069 13070 13071
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       13072 13073 13074 13075 13076 13077 13078 13079 13080 13081 13082 13083
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       13084 13085 13086 13087 13088 13089 13090 13091 13092 13093 13094 13095
## T1_1     0     0     0     0     0     0     0     1     1     1     0     0
##       13096 13097 13098 13099 13100 13101 13102 13103 13104 13105 13106 13107
## T1_1     0     0     0     0     0     0     1     1     2     0     0     0
##       13108 13109 13110 13111 13112 13113 13114 13115 13116 13117 13118 13119
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       13120 13121 13122 13123 13124 13125 13126 13127 13128 13129 13130 13131
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       13132 13133 13134 13135 13136 13137 13138 13139 13140 13141 13142 13143
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
```

```
##       13144 13145 13146 13147 13148 13149 13150 13151 13152 13153 13154 13155
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       13156 13157 13158 13159 13160 13161 13162 13163 13164 13165 13166 13167
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       13168 13169 13170 13171 13172 13173 13174 13175 13176 13177 13178 13179
## T1_1     0     0     0     0     0     1     0     0     0     1     0     0
##       13180 13181 13182 13183 13184 13185 13186 13187 13188 13189 13190 13191
## T1_1     0     1     0     0     0     0     0     0     0     0     0     0
##       13192 13193 13194 13195 13196 13197 13198 13199 13200 13201 13202 13203
## T1_1     0     0     0     0     1     0     1     0     0     0     0     0
##       13204 13205 13206 13207 13208 13209 13210 13211 13212 13213 13214 13215
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       13216 13217 13218 13219 13220 13221 13222 13223 13224 13225 13226 13227
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       13228 13229 13230 13231 13232 13233 13234 13235 13236 13237 13238 13239
## T1_1     0     0     0     1     0     0     0     0     0     0     0     0
##       13240 13241 13242 13243 13244 13245 13246 13247 13248 13249 13250 13251
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       13252 13253 13254 13255 13256 13257 13258 13259 13260 13261 13262 13263
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       13264 13265 13266 13267 13268 13269 13270 13271 13272 13273 13274 13275
## T1_1     0     0     0     0     0     0     0     0     0     0     1     0
##       13276 13277 13278 13279 13280 13281 13282 13283 13284 13285 13286 13287
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
##       13288 13289 13290 13291 13292 13293 13294 13295 13296 13297 13298 13299
## T1_1     0     0     0     0     0     0     0     0     0     0     0     1
##       13300 13301 13302 13303 13304 13305 13306 13307 13308 13309 13310
## T1_1     0     0     0     0     1     0     0     0     0     0     0
```

```r
soilbac1.r <-S.obs(soilbac1)
print(soilbac1.r)
```

```
## T1_1
## 1074
```

```r
GC.soilbac1 <- GC(soilbac1)
```

```r
BCI.1 <-BCI[1,]
```

```r
GC.BCI.1 <-GC(BCI.1)
print(paste("KBS:", GC.soilbac1))
```

```
## [1] "KBS: 0.64794714487966"
```

```r
print(paste("BCI:", GC.BCI.1))
```

```
## [1] "BCI: 0.930803571428571"
```

Question 3: Answer the following questions about the soil bacterial dataset.

a. How many sequences did we recover from the sample `soilbac1`, i.e. N?
b. What is the observed richness of `soilbac1`?
c. How does coverage compare between the BCI sample (`site1`) and the KBS sample (`soilbac1`)?

Answer 3a: There were 19 total indviduals recovered.

Answer 3b: 1302 species

Answer 3c: The KBS dataset has signifcantly less singletons present (66.77%) compared to BCI (92.87%) at Site 2. Therefore, there are more rare species in the BCI dataset.

Richness estimators

In the R code chunk below, do the following:

1. Write a function to calculate **Chao1**,

2. Write a function to calculate **Chao2**,

3. Write a function to calculate **ACE**, and

4. Use these functions to estimate richness at `site1` and `soilbac1`.

```r
#abundance
chao1 <- function(x ="") {
  S.obs(x) + (sum(x==1)^2)/(2*sum(x ==2))
}
#incidence
chao2 <- function(site = "", SbyS = "") {
  SbyS = as.data.frame(SbyS)
  x = SbyS[site,]
  SbyS.pa <- (SbyS >0) *1
  Q1 = sum(colSums(SbyS.pa) ==1)
  Q2 = sum(colSums(SbyS.pa) ==2)
  chao2 = S.obs(x) +(Q1^2)/(2*Q2)
  return(chao2)
}


#abundance coverage
ace <- function (x = "", thresh =10){
  x <- x[x >0]
  S.abund <-length(which (x > thresh))
  S.rare <- length(which (x <= thresh))
  singlt <- length(which (x ==1))
  N.rare <-sum(x[which (x <= thresh)])
  C.ace <-1-(singlt/N.rare)
  i <- c(1:thresh)
  count <- function (i, y){
    length(y[y == i])
  }
  a.1 <- sapply(i, count, x)
  f.1 <-(i * (i-1))*a.1
  G.ace <- (S.rare/C.ace)*(sum(f.1)/(N.rare*(N.rare-1)))
  S.ace <- S.abund +(S.rare/C.ace) +(singlt/C.ace) *max(G.ace,0)
  return(S.ace)
}

chao1.S1 <- chao1(BCI.1)
chao2.S1 <- chao2(1, BCI)
ace.S1 <-ace(BCI.1)

chao1.soilbac <- chao1(soilbac1)
chao2.soilbac <- chao2(1, soil.bac.t)
ace.soilbac <-ace(soilbac1)
```

```r
#Output DF
result_df <- data.frame(
  Dataset = c("BCI", "Soil Bac"),
  Chao1 = c(chao1.S1, chao1.soilbac),
  Chao2 = c(chao2.S1, chao2.soilbac),
  ACE = c(ace.S1, ace.soilbac)
)


print(result_df)
```

```
##        Dataset      Chao1      Chao2       ACE
## 1          BCI   119.6944    104.6053   159.3404
## T1_1 Soil Bac 2628.5140 21055.3863 4465.9827
```

Question 4: What is the difference between ACE and the Chao estimators? Do the estimators give consistent results? Which one would you choose to use and why?

> ***Answer 4***: ACE estimator is an abundance-based coverage estimator compared to Chao1 which is also an abundance estimator. However, the key difference between the estimators is that Chao1 is based on the number of singletons and doubletons comapred to ACE that has a threshold of rare species (10) making it less effective for data with high levels of small populations of rare species. Therefore, Chao estimators should be used for data with many species with few indviduals per species. When applied to the BCI and Soil Bacteria, the different richness estimators provide a wide variety of results (results_df).

Rarefaction

In the R code chunk below, please do the following:

1. Calculate observed richness for all samples in `soilbac`,

2. Determine the size of the smallest sample,

3. Use the `rarefy()` function to rarefy each sample to this level,

4. Plot the rarefaction results, and

5. Add the 1:1 line and label.

```r
print(soil.bac.t)
```

```
##            1  2  3   4   5  6  7 8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
## T1_1   31 11  2  25 124  5  4 0  1  2  0 28  0  0  4  0 13  1  0  1  8  0  2  2
## T1_2   42 14  1  46 195  5 20 0  2  0  3 36  0  1 10  0 19  1  2 11 16  5  5  1
## T1_3   12 10  2  78 270  6  7 0  0  0  2 13  2  0  0  5 12  2  0  3 18  2  0  0
## T7_1  151  0 27  50  25 42  3 2  3  1  0  0  1  0  1  6  4  2  2 14  0  1  0 15
## T7_2   65  1  3 120  17 55  4 0 15  0  1  0 50  7  6 18  2 42 14 56 12 53  0  6
## T7_3   83  6  1  60   3 29  1 0  8  2  0  0 13  3  1 10  6 10  4 36  8 17  0  7
## DF_1   92 11 11  26   0 11  5 9 25  2  3  0 11  5 10 12 23 11  6 13  0 10  0  8
##           25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49
## T1_1    2  4 11  4  1  0  1  6  4  0 14  0 13 22 10  3  0  2  0  8  1  2  3  2  2
## T1_2    1  6 17  3  3  1  3  5 18  0 26  0 20 11 19  1  0  3  0  3  7  0  0  2  1
## T1_3    0  2 12  0  0  0  0  5  6  0 40  0 19 12  5  3  0  4  0  5  3  0  0  2  0
## T7_1    0  3  0  6  0  7  8  0  2  6  0  2  0 12  0  0  0 19  0 10  3 13 11  3  0
## T7_2    1  0  0  4  0  1  2  0 17  9 52  0  0  2  0  0  0 17  0  2 10  0  6 54  0
## T7_3    1  2  0  2  0 21 14  0  1  9  5 12  0  2  0  0  0 16  0  3  3  6  7 15  1
## DF_1    1  6  0  0  0  4  0  0  0  3 12  9  0  0  0  3 19 31  0  4  8  1 12  6  3
```

```
##      50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74
## T1_1  7 12  2  0 10  6  1  8  6  0  7  0  1 11  4  3  6  4  0  0  1  2  2  0  4
## T1_2  3  5  3  1  3 11  2  9  2  0  3  1  3 10 12 16 11  8  2  0  3  1  1  0  3
## T1_3  3  3  3  0  7  4  0 11  4  0  4  2  0 13  4  5  9  7  0  0  2  5  0  0  4
## T7_1  0  0  2  1  0  0  0  3 11  0  0  3  1 23  1  0  0  5  0  3  2 22  1  0  1
## T7_2  2  1  3  7  0  1  5 51  5  0  0  8  4  2  6  0  0 15  0  0 19  8  0  0  5
## T7_3  4  0  6 13  0  0  2 24  4  0  0  9  1  4  1  0  0  7  1  0 12 13  0  0  6
## DF_1 15  2 17 22  0  9  3  8  3  7  0  6  2  1  5  0  0  0  5  3  3 13 23  4  3
##      75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99
## T1_1  2  1  6  0  1  2  0  0  1  2  0  0  0  0  2  2  0  0  0  2  0  0 11  1  1
## T1_2  0  0  7  0  9  0  0  1  0  2  2  0  0  0  0  1  0  0  0  3  0  0 16  0  1
## T1_3  0  1  2  0 18  2  0  0  0  3  1  0  0  0  0  3  0  0  1 84  0  0 19  2  1
## T7_1  2  0 12  5  0  6  0 12  0  7  6  5  0  0  7 15  0  0  0  0  0  0  0  2  0
## T7_2  0  0 13 19  0  2  0  7  0  9  4  0  0  0  0  9  0  0  0  0  5  0  0  2  0
## T7_3  1  0 14  1  0  2  0  3  0  3  0  0  0  0  2 13  0  0  0  1  3  0  1  1  0
## DF_1  4  0  4  6  0  1  1 20  1  1  1  6  0 14  5  0  2  0  0  0  2  1  0  2  0
##      100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117
## T1_1   0   0   0   0   0   0   1  18   0   0   0   0   6  12   4   3   0   0
## T1_2   0   0   0   0   0   0   4   3   0   5   0   0   6   4   5   1   0   6
## T1_3   0   0   0   0   0   0   0  14   0   9   0   0   1   4   2   2   0   0
## T7_1   4   2   0   1   5   0   0   0   4  11   0  16  17   0   0   0   0   6
## T7_2   4   6   0   3   2   0   1   0   0   0   0   3   0   0   0   0   1   3
## T7_3   5   5   0   8   3   0   0   0   1   0   0   4   6   0   2   0   0   1
## DF_1   1  10   0  14   9   0   1   0   0   1   0  10   6   0   2   0  10   1
##      118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135
## T1_1   0   3   0   2   0   0   9   0   0   0   0   0   0   0   0   0   0   0
## T1_2   0   8   1   3   0   0   7   1   0   0   1   0   0   0   0   0   0   0
## T1_3   1   2   1  10   0   0   4   3   0   0   1   2   0   3   0   0   0   0
## T7_1  20   0   4   0   0   0   0   2   2   6   2   8   0   0   0   5   0   0
## T7_2  15  21  11   3   0   0   0   6   2   6   0   8   0   0   0   0   0   1
## T7_3  11   7  10   0   0   0   0  13   0  10   0   4   0   0   0   3   0   7
## DF_1   5  19   5   0   6  22   0   2   9   3   0  24   0   0   0   0   1   0
##      136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153
## T1_1   0   1   1   0   2   0   0   0   4   1   0   0   0  14   1   0   0   2
## T1_2   0   1   0   0   2   0   0   0  14   3   0   0   0  10   2   0   0   1
## T1_3   0   5   1   0   6   0   0   0   7   1   0   0   0   6   0   0   0   3
## T7_1   1   0   1   0   0   0   0   0   0   1   0   0   2   0   2   0   0   8
## T7_2   1   5   2   0   3   0   0   0   0   1   0   4   5   0   2   0   0   2
## T7_3   0   0   0   0   4   0   0   0   0   0   0   7   7   0   6   0   0   1
## DF_1   0   1   0   0   1   0   1   1   0   0   0   2   6   0   1   0   0   0
##      154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171
## T1_1   2  14   4   7   1   0  13   1   5   0   1   0   0   4   0  11   0   2
## T1_2   5   6   0   4   1   0   3   5   4   0   1   0   3   1   0   8   1   7
## T1_3   2   2   1   5   0   0   5   2   1   1   0   0   0   2   0  15   9   3
## T7_1   0   0   0   0   3   3   0   2   1   1   1   0   0   3   0   0   0   8
## T7_2   2   0   0   0   0   3   0   5   0   0   0   0   0   3   0   0   0   3
## T7_3   0   0   3   0   3   0   0   6   3   0   0   0   0   2   3   0   2  11
## DF_1   8   0   3   0   3   2   0   1   0   0   6   0   0   2   0   0   1   5
##      172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189
## T1_1   6   0   0   1   0   4   4   4   0   0   0   1   0   2   1   0   7  13
## T1_2   5   0   0   1   3   0   3   1   1   0   0   0   0   2   2   2   5   6
## T1_3   6   0   0   2   2   4   3   1   1   0   0   0   3   2   3   1   2  12
## T7_1   0   5   3   2   1   0   7   6   1   0   0   0   0   1   2   3   0   0
## T7_2   1   0   2   1  12   0   6   1   2   0   0   0   0   1   4   2   0   0
```

```
## T7_3    0   1   2   4  16   0   0   2   3   0   0   0   6   8   3   2   6   0
## DF_1    2   3   4   0   5   0  11   2   1   1   0   1   1   0   0   1   0   0
##       190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207
## T1_1    0   0   2   5   2   0   0   0   2   0   0   2   2   0   2   0   0   1
## T1_2    0   0   2   6   8   0   0   1   1   0   0   5   1   1   1   8   1   2
## T1_3    0   0   3   3   0   0   0   0   0   0   0   7   0   0   0   4   0   2
## T7_1    0   0   0   0   0   0   0   0   0   0   0   0   6   1   0   2   0   1
## T7_2    8   2   0   0   0   0   0   0   1   3   0   0   1   1   1   0   0   9
## T7_3    9   3   0   0   0   0   0   0   0   3   1   1  15   1   0   6   3   4
## DF_1    1   2   0   0   0   0   0   0   0   1   0   0   0   9   0   5   0   4
##       208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225
## T1_1    0   0   0   4   0   0   1   0   0   0   1   0   0  10   3   0   0   3
## T1_2    3   0   0   3   0   8   1   0   0   3   0   4   0  13   2   0   0   2
## T1_3    0   0   0   6   0   2   0   0   0   2   0   1   0   8   6   0   0   0
## T7_1    4   0   5   0   0   3   1   0   3   1   0   2   0   0   1   0  13   0
## T7_2    1   2   0   0   5   0   3   0   1   0   0   0   0  10   0   0   2   3
## T7_3    5   0   4   0   1   0   3   0   4   0   0   3   0   0   0   0   0   0
## DF_1    0   0   0   0   1   0   3   1   2   7   4   2   0   1   0   0   1   3
##       226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243
## T1_1    0   0   4   0   1   7   1   1   0   8   1   0   0   6   0   0   0   0
## T1_2    0   0  11   2   0  10   1   0   0   8   0   0   0   2   1   0   0   0
## T1_3    1   0   9   0   0   4   1   0   0   3   0   0   0   9   1   0   0   0
## T7_1    1   3   1   0   8   2   6   2   3   1   1   0   0   1   2   1   0   0
## T7_2    4   2   6   0   2   0   3   0   0   0   1   0   0   5   0   0   4   0
## T7_3    1   3   1   0   4   1   2   0   0   0   1   0   0   6   0   0   3   0
## DF_1    2   0  11   0   1   1   0   4   0   0   0   1   4   0   6   5   1   0
##       244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261
## T1_1    0   0   0   0   0   0   0   0   1   0   0   0   1   0   0   0   0   0
## T1_2    0   0   0   0   0   2   0   0   0   0   2   0   0   0   2   0   0   1
## T1_3    0   0   0   0   0   0   0   0   1   0   1   0   0   0   0   0   0   0
## T7_1    0   0   3   1   0   0   1   0   2   1   2   1   3   0   0   5   3   0
## T7_2    0   0   0  10   0   6   0   0   2   5   3   6   0   5   0   2   3   0
## T7_3    3   0   5   3   1   0   1   2   7   1   0   4   3   2   0   1   1   0
## DF_1    0   5   3   2   2   1   2   0   4   1   0   3   5   3   7   0   2   2
##       262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279
## T1_1    0   0   0   0   0   0   2   0   1   2   2   0   0   0   0   1   0   0
## T1_2    0   2   0   1   1   0   0   0   4   2   0   0   0   0   1   0   1   1
## T1_3    0   6   0   0   0   0   0   0   3   1   0   1   0   0   0   0   1   1
## T7_1    6  12   0   1   0   7   0   0   0   0   0   1  14   7   5   2   0   0
## T7_2    5   0   0   6   8   4   4   0   1   2   0   1   3   0   0   0   0   1
## T7_3    6   0   0   0   9   5   1   0   0   5   0   0   6   0   1   0   0   4
## DF_1    4   5   9   0   3   0   0   0   0   0   0   0   0   0   2   2   0   0
##       280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297
## T1_1    7   1   0   0   0   0   2   9   0   0   1   0   0   0   0   0   0   1
## T1_2    1   1   0   3   1   0   2   1   0   0   0   1   2   0   0   0   2   4
## T1_3    0   0   0   0   3   0   0   0   0   0   0   0   2   0   0   0   0   0
## T7_1    0   0   0   1   0   0   1   0   0   0   0   0   0   0   0   0   1   6
## T7_2    0   2   0   0   0   0   2   0   0   0   0   0   0   0   0   0   7   0
## T7_3    0   1   0   0   0   0   0   0   0   0   0   0   0   0   2   0   8   0
## DF_1    0   0   5   4   0   0   3   0   1   0   1  12   0   1   0   2   0   4
##       298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315
## T1_1    0   0   1   2   2   0   0   0   0   0   4   1   0   0   0   0   2   1
## T1_2    0   0   0   1   1   0   0   0   0   0   4   2   1   0   1   0   3   0
## T1_3    0   0   1   6   0   0   0   0   0   0   2   1   1   0   2   0  10   0
```

```
## T7_1    0    1    6    0    1    0    0    4    0    3    0    0    6    0    0    0    0    6
## T7_2    7    2    1    0    2    0    0    0    0    1    0    2    4    9    5    6    0    0
## T7_3    0    3    5    0    1    0    0    0    0    2    0    3    3    2    6    8    0    3
## DF_1    3    3    1    2   10    1    0    0    0    1    0    2    0    2    0    0    0    0
##       316  317  318  319  320  321  322  323  324  325  326  327  328  329  330  331  332  333
## T1_1    0    7    1    1    0    0    0    0    0    0    0    0    0    0    2    1    0    5
## T1_2    0    5    0    2    2    1    0    0    0    0    0    0    0    0    1    0    0   10
## T1_3    0    3    1    2    0    0    0    1    0    0    2    0    0    1    2    2    0   10
## T7_1    0    0    0    4    0    0    4    0    0    0    2    0    2    0    1    9    0    0
## T7_2    0    0    0    3    0    0    2    0    0    0   16    0    0    0    0    9    2    3
## T7_3    0    0    0    2    0    0    1    3    0    0    7    0    0    0    0    1    4    2
## DF_1    2    0    0   13   10    3    1    0    0    0    1    2    5    0    0    3    0    0
##       334  335  336  337  338  339  340  341  342  343  344  345  346  347  348  349  350  351
## T1_1    0    0    0    5    0    0    0    6    0    0    0    2    6    1    0    0    0    0
## T1_2    0    2    0    0    0    0    0    3    0    0    2    1    3    0    0    0    0    0
## T1_3    0    1    0    1    0    0    1    2    0    0    0    1    0    1    0    0    0    0
## T7_1    0    1    0    2    0    3    5    9    0    0    3    0    0    0    1    1    0    0
## T7_2    0    2    6    0    0    0    1    4    0    0    4    0    0    0    3    0    0    1
## T7_3    0    0    0    0    2    0    2    4    0    0    1    1    0    2    0    4    0    3
## DF_1    0    0    1    0    0    1    0    6    0    0    0    0    0    7    3    0    9    0
##       352  353  354  355  356  357  358  359  360  361  362  363  364  365  366  367  368  369
## T1_1    0    0    0    1    1    2    0    3    0    2    1    1    4    1    0    1    0    0
## T1_2    0    2    0    0    4    5    0    4    0    1    4    0    0    0    1    0    1    0
## T1_3    0    2    0    1    0    2    0    2    0    2    0    2    0    0    0    0    0    0
## T7_1    0    0    0    0    3    7    0    0    0    0    0    1    0    0    3    1    1    1
## T7_2    0    0    8    0    1    8    0    0    0    0    0    3    0    0    0    1    0    1
## T7_3    0    3    0    0    3    8    0    0    0    0    3    0    3    0   10    0    0    3
## DF_1    3    0    0    2    0   17    1    0    0    0   23    4    0    0    0    0    1    2
##       370  371  372  373  374  375  376  377  378  379  380  381  382  383  384  385  386  387
## T1_1    0    0    0    2    2    0    1    0    7    0    1    2    0   10    0    0    0    0
## T1_2    1    2    1    1    1    1    1    1    6    0    0    0    0    1    1    0    0    0
## T1_3    2    3    0    7    2    1    0    0    0    0    2    6    0   17    1    3    0    0
## T7_1    1    4    4    0    8    0    0    2    0    2    0    0    0    0    1    0    0    0
## T7_2    3    0    0    0    4    0    0    0    0    0    0    0    0    0    0   10    0    0
## T7_3    1    1    2    0   12    0    0    1    0    1    0    0    0    0    0    0    0    0
## DF_1    1   11    2    0    0    0    1    1    0    9    0    0    0    0    3    0    5    1
##       388  389  390  391  392  393  394  395  396  397  398  399  400  401  402  403  404  405
## T1_1    0    0    0    2    0    3    0    0    1    0    0    0    0    0    0    2    0    0
## T1_2    0    0    0    0    0    3    0    3    2    0    0    0    0    0    0    6    2    0
## T1_3    0    0    0    0    0    1    0    0    1    0    0    0    0    0    0    0    2    0
## T7_1    0    0    0    1    2    2    0    0    0    0    1    0    0    0   10    2    0    1
## T7_2    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0    2    0
## T7_3    0    0    0    1    1    0    0    0    0    0    1    0    0    0    0    0    7    2
## DF_1    0    0    1    3    1    0    0    0    0    0    1    0    4    0    0    4    1   10
##       406  407  408  409  410  411  412  413  414  415  416  417  418  419  420  421  422  423
## T1_1    0    0    2    0    0    0    0    6    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    2    1    0    0    1    2    0    1    0    0    0    0
## T1_3    0    0    0    0    0    0    0    8    0    0    0    0    0    0    0    0    0    0
## T7_1    1    0    0    1    0    0    1    0    1    0    0    0    1    0    0    2    1    0
## T7_2    2    0    1    1    0    0    0    0    1    1    4    0    2    0    0    0    2    1
## T7_3    2    0    0    0    0    0    0    0    0    4    3    0    0    0    0    0    0    0
## DF_1    1    0    0    0    0    0    4    0    1    0    0    0    1    1    2    0    0    0
##       424  425  426  427  428  429  430  431  432  433  434  435  436  437  438  439  440  441
## T1_1    0    0    0    0    0    0    0    1    0    0    0    0    0    0    1    0    0    0
```

```
## T1_2   0   0   0   3   1   0   0   0   0   0   0   1   0   1   0   0   1   0
## T1_3   0   1   0   0   0   0   0   0   0   0   0   1   0   1   3   0   0   0
## T7_1   0   2   0   0   9   0   1   0   0   0   0   0   0   5   1   0   0   0
## T7_2   0   0   0   0   0   0   0   0   0   0   0   0   5  10   4   0   4   0
## T7_3   1   0   0   0   0   0   0   0   0   0   0   2   2   0   0   0   1   0
## DF_1   4   0   0   0   0   0   3   1   0   2   0   0   0   0   0   0   2   0
##      442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459
## T1_1   0   0   0   0   0   0   1   0   0   7   0   0   0   0   1   0   0   1
## T1_2   0   0   0   0   0   0   0   0   0   0   0   0   4   0   2   0   0   0
## T1_3   0   0   0  10   0   0   1   0   0   1   0   0   1   0   1   2   0   0
## T7_1   0   1   0   0   0   1   2   0   0   0   2   2   0   0   0   0   1   1
## T7_2   0   2   0   0   0   0   1   0   0   0   3   0   1   0   0   3   6   0
## T7_3   0   1   0   0   0   3  10   0   0   0   1   2   0   0   0   1   0   0
## DF_1   2   1   8   0   0   0   1   0   0   0   2   9   0   2   0   2   4   0
##      460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477
## T1_1   0   0   0   1   0   0   0   0   0   0   0   0   0   0   0   3   0   0
## T1_2   0   0   0   2   0   0   0   0   6   0   0   1   0   0   0   5   0   0
## T1_3   1   0   0   3   1   7   0   0   2   0   0   0   0   0   0   2   0   0
## T7_1   1   0   0   0   2   0   0   3   0   0   0   1   0   0   3   0   0   1
## T7_2   0   0   0   1   0   1   3   0   2   0   0   0   0   0   0   0   0   1
## T7_3   0   0   0   0   0   0   2   0   1   0   0   5   0   0   0   0   0   0
## DF_1   0   1   0   0   2   0   0   5   3   0   0   0   0   0   0   0   0   3
##      478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495
## T1_1   0   0   0   0   1   0   0   0   3   0   1   2   0   0   0   0   1   0
## T1_2   0   0   0   0   1   0   0   0   0   1   0  13   3   0   0   0   0   0
## T1_3   0   0   0   0   0   0   0   0   0   0   1   0   3   0   0   0   1   0
## T7_1   0   0   0   1   0   4   0   5   0   0   0   0   5   0   0   0   2   1
## T7_2   0   0   1   2   0   0   4   0   0   3   0   0  21   1   0   0   0   0
## T7_3   0   0   0   2   1   0   0   1   2   0   4   0   8   1   0   0   0   3
## DF_1   9   0   0   1   2   0   1   0   1   3   1   0   2   1   0   0   0   1
##      496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513
## T1_1   0   0   0   0   4   0   0   0   1   0   0   7   0   0   0   0   0   0
## T1_2   0   3   0   0   3   0   0   0   0   0   0   1   0   0   1   0   1   0
## T1_3   0   0   0   0   2   0   0   0   0   0   0   3   0   0   0   0   1   1
## T7_1   2   0   5   0   0   4   0   3   2   0   0   0   0   0   0   1   6   0
## T7_2   0   0   0   0   0   0   0   6   1   3   0   0   0   0   0   2   1   2
## T7_3   1   0   0   0   0   0   0   1   0   0   1   0   0   0   1   2   0   0
## DF_1   3   0   0   0   0   5   2   1   1   3   1   0   9   0   2   2   4   2
##      514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531
## T1_1   0   0   0   0   2   0   3   4   0   0   0   0   2   0   0   0   2   0
## T1_2   0   0   0   0   3   0   5  11   0   2   0   1   0   0   0   0   0   0
## T1_3   0   0   0   1   0   1   0   3   3   3   0   0   1   0   1   0   0   0
## T7_1   0   0   0   0   0   0   0   0   0   2   1   0   0   0   0   3   0   0
## T7_2   0   0   0   0   0   0   0   0   2   0   4   0   0   0   1   0   0   0
## T7_3   0   0   0   0   0   0   0   0   3   0   1   0   0   0   2   2   0   0
## DF_1   0   0   0   0   0   1   3   0   0   2   1   0   0   5   0   0   0   0
##      532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549
## T1_1   4   0   0   0   2   0   0   0   1   3   0   3   0   0   0   0   0   0
## T1_2   0   2   0   0   0   0   1   0   0   3   0   4   0   0   0   0   1   0
## T1_3   0   0   0   0   0   0   1   0   0   2   0   0   0   0   0   0   0   0
## T7_1   0   0   0   0   0   0   0   0   4   0  10   0   1   1   0   0   0   1
## T7_2   0   0   0   0   9   0   1   0   0   0   4   0   4   0   0   7   0   2
## T7_3   0   3   0   0   4   0   5   0   0   0   0   0   5   0   0   0   0   0
## DF_1   0   1   0   0   2   0   2   0   0   0   0   0   2   0   0   0   0   2
```

```
##       550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567
## T1_1   0   0   1   0   0   2   0   2   1   0   1   0   0   0   2   2   2   0
## T1_2   0   0   1   1   0   0   0   0   2   0   0   0   0   2   1   4   0   0
## T1_3   0   0   0   0   1   2   0   7   0   3   2   0   0   0   0   2   0   0
## T7_1   0   0   0   0   2   2   0   0   0   0   0   0   1   0   0   0   0   0
## T7_2   0   0   0   2   3   0   7   0   6   0   3   0   3   0   1   0   0   0
## T7_3   0   0   0   0   0   4   4   0   0   3   0   0   0   0   0   0   0   0
## DF_1   0   0   0   0   2   3   0   0   0   0   1   0   1   0   0   0   0   0
##       568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585
## T1_1   0   0   0   0   0   0   2   0   1   1   3   4   0   0   0   0   0   0
## T1_2   0   0   1   0   3   0   0   0   1   0   2   0   0   0   0   0   0   0
## T1_3   1   0   1   0   0   0   0   0   0   0   6   2   0   1   0   0   0   0
## T7_1   0   0   0   0   0   0   1   0   1   1   0   6   0   0   0   0   0   0
## T7_2   2   0   0   1   0   0   1   2   4   0  16   0   0   0   0   0   0   0
## T7_3   3   0   0   4   0   0   0   3   4   0   1   2   0   2   0   0   0   0
## DF_1   4   0   0   1   0   0   0   3   0   0   0   0   0   1   0   1   4   0
##       586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603
## T1_1   0   1   0   1   0   0   0   0   0   0   0   0   0   0   0   0   0   0
## T1_2   1   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
## T1_3   0   1   0   1   0   0   0   0   3   0   0   0   0   0   0   0   0   0
## T7_1   2   1   0   0   0   5   0   0   0   0   6   1   0   0   5   0   1   0
## T7_2   6   1   2   1   4   1   0   0   0   0   0   0   0   2   0   0   0   2
## T7_3   0   0   1   7   3   1   0   0   0   0   0   0   0   2   0   0   0   0
## DF_1   0   0   1   0   0   0   0   3   0   0   1   2   0   1   4   0   1   0
##       604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621
## T1_1   0   0   0   1   0   0   2   0   0   0   0   0   0   0   1   0   0   2
## T1_2   0   0   2   1   0   0   2   0   0   0   0   0   0   0   4   0   1   2
## T1_3   0   1   1   1   0   0   0   0   0   0   0   0   0   0   0   0   0   4
## T7_1   0   7   3   0   0   0   2   3   2   0   0   0   0   2   0   0   0   0
## T7_2  10   0   0   0   0   0   0   2   0   0   0   0   0   2   0   5   1   0
## T7_3   1   0   0   0   0   0   1   1   5   0   0   0   1   1   0   3   0   0
## DF_1   1   0   6   0   0   1   0   0   3   0   0   2   0   0   0   1   0   0
##       622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639
## T1_1   0   0   0   0   1   0   0   0   0   0   0   0   0   0   0   0   0   0
## T1_2   0   0   0   0   4   0   0   0   0   0   0   0   1   0   0   0   1   0
## T1_3   0   0   0   0   3   0   0   0   0   0   0   0   0   0   0   0   1   0
## T7_1   0   0   6   0   0   1   0   0   0   1   0  10   2   0   0   2   0   4
## T7_2   1   0   3   0   0   0   0   0   0   2   0   3   0   0   0   5   0   0
## T7_3   2   0   3   0   0   0   0   0   0   9   8   2   0   3   0   4   0   0
## DF_1   0   2   2   0   0   0   0   1   0   0   0   2   3   1   0   3   0   2
##       640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657
## T1_1   0   0   0   0   1   0   0   0   0   0   0   0   0   0   0   0   0   0
## T1_2   0   0   2   2   2   0   0   0   0   0   0   0   0   1   0   0   0   0
## T1_3   1   0   1   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
## T7_1   0   0   2   0   0   0   0   0   1   0   0   0   0   0   0   0   0   0
## T7_2   0   5   1   0   3   0   0   2   3   0   0   4   0   0   2   0   0   0
## T7_3   0   0   3   0   0   0   0   0   2   0   0   0   5   0   5   0   0   0
## DF_1   0   1   5   0   0   1   0   1   0   0   0   1   0   3   0   0   0   0
##       658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675
## T1_1   0   2   0   0   0   0   1   0   0   0   0   0   0   0   0   0   0   4
## T1_2   0   1   0   0   0   2   0   0   0   0   0   0   1   0   0   0   0   2
## T1_3   0   3   0   0   1   0   0   0   0   3   0   0   0   0   0   4   0   0
## T7_1   0   1   1   7   0   4   0   0   0   1   0   0   3   0   0   1   0   0
## T7_2   1   3   0   0   0   0   1   0   0   4   0   0   0   1   0   5   0   0
```

```
## T7_3   0   0   1   0   0   0   0   0   2   0   0   0   5   0   0   4   0   0
## DF_1   1   0   1   0   0   0   1   1   0   0   0   8   0   1   1   0   4   0
##      676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693
## T1_1   0   0   5   0   0   0   0   1   0   0   0   0   0   0   0   1   1   0
## T1_2   0   0   0   1   0   0   0   1   0   0   0   0   1   0   0   1   2   1
## T1_3   0   0   1   1   0   0   0   0   0   0   0   0   0   0   0   0   1   0
## T7_1   0   0   0   1   2   0   0   0   0   1   4   0   0   0   0   2   0   1
## T7_2   0   0   0   0   1   0   0   0   0   0   1   0   2   0   0   0   0   1
## T7_3   0   0   0   3   0   0   0   7   0   0   6   0   5   0   0   0   0   2
## DF_1  13   3   0   1   2   0   0   0   0   0   0   0   1   0   0   2   0   0
##      694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711
## T1_1   0   0   2   0   0   0   0   0   0   0   2   0   0   0   0   0   0   0
## T1_2   0   0   4   0   0   1   0   0   0   1   7   0   0   0   0   0   0   0
## T1_3   0   0   1   0   1   0   0   0   0   0   0   0   0   0   1   0   0   0
## T7_1   0   0   0   0   1   1   0   0   0   4   0   1   1   5   0   3   1   0
## T7_2   0   0   0   6   0   0   1   0   2   0   0   2   0   1   3   5   0   0
## T7_3   1   0   0   2   8   0   4   0   0   0   0   1   0   0   0   4   0   0
## DF_1   1   0   0   0   1   1   4   0   0   0   0   2   6   4   1   0   0   0
##      712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729
## T1_1   0   0   0   0   0   0   0   4   2   0   0   0   0   2   0   0   2   0
## T1_2   2   7   0   0   0   0   0   0   4   1   0   0   0   2   0   0   1   0
## T1_3   0   0   0   0   3   1   0   0   0   0   0   0   1   0   0   0   1   0
## T7_1   1   0   0   0   0   2   0   0   0   1   0   1   0   1   0   4   0   0
## T7_2   0   0   0   0   0   3   0   4   0   1   0   2   0   0   0   0   0   0
## T7_3   0   0   0   0   0   1   0   4   3   8   0   0   0   0   0   1   0   0
## DF_1   5   0   0   0   0   1   0   0   0   1   0   0   0   0   1   0   0   5
##      730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747
## T1_1   0   0   4   2   0   1   2   0   0   0   0   0   0   0   0   0   0   0
## T1_2   0   1   0   0   0   1   3   0   0   0   0   0   0   0   0   0   1   0
## T1_3   1   0   1   2   0   1   1   0   1   0   0   0   0   0   1   0   1   0
## T7_1   0   1   1   0   1   0   1   0   0   1   0   0   0   0   4   0   6   0
## T7_2   0   4   0   2   1   0   0   1   3   1   0   0   0   1   1   1   0   0
## T7_3   0   0   0   0   0   0   0   0   5   3   0   0   0   0   0   3   6   0
## DF_1   0   1   0   1   0   2   0   1   2   0   0   1   0   1   3   0   0   0
##      748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765
## T1_1   0   1   0   0   0   1   0   0   0   0   1   0   0   1   0   0   0   0
## T1_2   0   0   0   0   0   2   0   0   0   1   0   0   0   0   0   0   0   3
## T1_3   0   0   0   0   0   1   1   0   0   1   0   0   0   1   0   2   0   1
## T7_1   0   5   0   0   0   0   0   0   0   0   1   0   0   1   2   2   0   0
## T7_2   0   0   0   0   0   0   2   0   0   3   1   0   0   2   0   0   0   1
## T7_3   0   0   0   1   0   0   0   0   0   0   2   0   0   0   0   1   0   1
## DF_1   0   3   0   2   3   0   0   1   0   0   0   0   0   0   0   0   0   0
##      766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783
## T1_1   0   0   1   0   0   3   0   0   0   0   0   0   0   1   0   0   2   0
## T1_2   0   0   0   0   0   3   0   0   0   0   0   0   0   3   0   0   2   0
## T1_3   0   0   0   0   0   3   0   0   0   0   0   0   0   3   0   0  12   0
## T7_1   0   0   0   0   0   2   0   0   1   0   0   0   0   4   0   0   0   0
## T7_2   0   0   0   0   0   1   2   0   0   0   0   0   0   0   0   0   0   0
## T7_3   0   0   0   0   3   0   3   0   3   0   0   0   0   2   0   0   0   0
## DF_1   0   0   6   1   1   2   0   2   6   0   1   0   0   0   2   0   1   0
##      784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801
## T1_1   0   4   1   0   0   0   0   0   4   0   0   3   1   1   0   0   0   0
## T1_2   0   4   2   0   2   0   0   0   0   0   0   2   0   2   0   0   0   0
## T1_3   0   8   1   0   1   0   0   1   4   0   0   0   0   0   0   0   1   1
```

```
## T7_1    0    0    0    4    0    3    0    0    0    4    0    1    0    1    0    0    0    4
## T7_2    0    0    0    1    1    1    0    0    0    0    4    0    0    0    0    0    3    0
## T7_3    0    1    0    0    0    0    0    0    0    0    1    0    1    0    0    0    0    2
## DF_1    1    1    6    0    3    0    0    0    0    2    0    0    1    0    0    0    2    0
##       802  803  804  805  806  807  808  809  810  811  812  813  814  815  816  817  818  819
## T1_1    0    0    0    0    0    0    0    0    0    3    2    1    0    2    0    0    0    0
## T1_2    0    3    0    0    0    0    0    2    0    0    1    1    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    1    4    0    0    0    2    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    3    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    1    0    0    0    0    0    0    3    1    0    0    0    0    5
## T7_3    0    0    1    0    2    0    3    0    0    0    0    1    5    0    0    0    0    3
## DF_1    1    0    0    2    0    0    0    0    8    0    0    0    0    0    1    0    0    1
##       820  821  822  823  824  825  826  827  828  829  830  831  832  833  834  835  836  837
## T1_1    2    0    0    0    0    0    0    0    2    0    0    0    0    0    0    0    0    0
## T1_2    1    0    0    8    4    0    0    0    2    1    1    0    0    0    0    0    0    1
## T1_3    0    0    1    0    1    0    1    0    3    4    0    0    1    0    0    1    0    0
## T7_1    0    0    0    0    0    0    3    0    0    0    0    2    0    0    0    0    0    0
## T7_2    0    0    3    0    1    0    5    0    0    1    0    0    2    0    0    0    0    4
## T7_3    0    0    2    0    0    6    0    0    0    9    0    0    1    0    0    0    0    3
## DF_1    0    0    0    0    0    0    1    0    0    0    0    3    2    1    0    0    1    1
##       838  839  840  841  842  843  844  845  846  847  848  849  850  851  852  853  854  855
## T1_1    0    0    0    1    0    0    0    0    0    0    0    0    0    1    0    0    0    1
## T1_2    0    0    0    0    1    0    0    0    2    0    0    0    5    0    0    0    0    1
## T1_3    0    1    0    2    1    0    0    0    0    0    0    1    2    0    0    0    0    2
## T7_1    2    0    0    2    0    0    0    0    2    0    0    4    0    2    0    2    0    0
## T7_2    0    1    1    0    0    0    0    0    0    0    0    3    0    0    0    3    1    0
## T7_3    0    0    1    0    2    0    0    0    2    0    3    0    0    5    0    1    3    0
## DF_1    0    2    2    0    0    6    0    0    1    0    0    0    0    4    0    0    1    0
##       856  857  858  859  860  861  862  863  864  865  866  867  868  869  870  871  872  873
## T1_1    0    0    0    0    0    1    7    0    0    0    0    0    0    0    0    2    1    0
## T1_2    0    0    0    0    3    0    0    0    0    0    0    1    0    0    0    0    0    0
## T1_3    0    0    0    1    0    0    1    0    0    0    0    0    0    0    0    1    0    1
## T7_1    0    1    0    0    1    0    0    3    0    0    0    0    0    8    0    3    0    0
## T7_2    0    1    0    0    1    0    0    0    0    0    0    2    1    3    0    0    0    0
## T7_3    0    3    1    0    0    1    0    0    0    2    0    2    0    3    0    0    0    0
## DF_1    0    0    0    0    1    1    0    1    0    0    1    4    0    1    1    0    1    0
##       874  875  876  877  878  879  880  881  882  883  884  885  886  887  888  889  890  891
## T1_1    0    0    0    0    0    0    0    0    0    0    1    1    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    1    0    0    3    0    0    0    1    1    0
## T1_3    0    0    0    1    0    0    0    0    0    0    0    0    1    0    1    1    0    0
## T7_1    0    0    3    0    0    4    2    1    0    0    0    0    1    0    0    2    0    0
## T7_2    5    0    5    0    0    0    0    2    0    0    0    3    5    0    1    0    1    0
## T7_3    0    6    2    0    0    7    0    0    0    0    0    1    1    0    0    0    2    1
## DF_1    1    0    1    0    0    1    0    0    0    0    0    0    4    0    0    0    0    1
##       892  893  894  895  896  897  898  899  900  901  902  903  904  905  906  907  908  909
## T1_1    1    1    0    1    0    2    0    0    0    7    0    0    0    0    0    0    0    0
## T1_2    3    0    0    1    0    0    1    0    0    1    2    2    0    0    0    0    0    0
## T1_3    0    0    0    0    1    3    3    0    0    6    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    1    2    2    0    0    0    1    1    0    0    1    0    0    0
## T7_2    0    3    1    0    1    2    1    0    0    0    1    0    3    0    0    0    0    1
## T7_3    0    0    0    0    3    0    0    0    0    0    0    1    1    0    0    1    0    0
## DF_1    0    0    0    0    0    3    0    0    1    0    1    2    5    0    0    0    0    0
##       910  911  912  913  914  915  916  917  918  919  920  921  922  923  924  925  926  927
## T1_1    0    0    1    0    0    1    0    0    0    0    0    1    0    0    0    0    0    0
```

```
## T1_2    0    4    0    0    0    1    1    0    0    0    0    2    0    0    1    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    3    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    2    0    0    2    0    0    0    0    0    0    0    1
## T7_2    2    2    0    0    1    0    4    1    6    0    0    0    0    0    0    0    0    0
## T7_3    0    6    0    0    1    0    0    0    5    1    0    0    0    0    0    0    0    0
## DF_1    1    3    0    0    1    1    0    2    2    0    3    0    0    0    0    0    1    0
##       928  929  930  931  932  933  934  935  936  937  938  939  940  941  942  943  944  945
## T1_1    0    0    0    4    1    1    0    1    0    0    1    0    0    0    3    0    0    0
## T1_2    0    0    0    0    0    1    0    0    0    1    1    0    0    2    1    0    0    0
## T1_3    0    0    0    2    0    1    0    0    0    1    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    1   10    0    0    1    1    0    1    0    0    1    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    2    0    0    1    0    0    0
## T7_3    0    0    0    0    0    0    0    0    2    6    0    1    0    0    1    0    0    0
## DF_1    0    1    0    0    0    0    0    0    0    2    0    0    0    0    1    0    0    1
##       946  947  948  949  950  951  952  953  954  955  956  957  958  959  960  961  962  963
## T1_1    0    0    0    0    0    0    1    0    0    0    0    0    0    0    0    1    1    0
## T1_2    0    3    3    0    0    1    0    5    1    0    0    0    0    1    0    1    2    0
## T1_3    0    2    0    2    0    1    0    0    2    0    0    0    0    0    0   10    2    0
## T7_1    5    0    0    0    0    0    1    0    2    0    0    0    0    0    0    2    0    1
## T7_2    0    0    0    0    0    0    2    0    4    0    0    0    0    0    0    6    1    0
## T7_3    0    0    0    0    0    0    0    0    2    0    0    0    0    0    0    1    0    1
## DF_1    0    0    0    0    1    1    0    0    1    1    3    0    0    2    0    2    1    2
##       964  965  966  967  968  969  970  971  972  973  974  975  976  977  978  979  980  981
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    1    0    0    1    0    0    0    0    3    0    0    0    0    0    0    1    0
## T1_3    0    2    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    3    2    0    0    0    1    0    0    0    5    0    2    0    0    4    2    1
## T7_2    0    6    1    0    0    0    0    0    0    4    0    0    0    0    0    0    0    0
## T7_3    0    0    1    0    0    0    1    0    0    0    0    4    1    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    2    1    0    1    0    0    7    0    1
##       982  983  984  985  986  987  988  989  990  991  992  993  994  995  996  997  998  999
## T1_1    3    0    0    0    0    0    0    0    0    0    0    0    0    0    3    0    0    0
## T1_2    0    0    0    0    0    0    0    2    0    0    0    0    0    0    4    0    2    0
## T1_3    3    0    0    0    0    0    0    0    0    0    0    0    0    0    7    0    0    0
## T7_1    0    1    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    1    0    1    0    0    0    0    7    0    2    0    1    0    0
## T7_3    0    0    0    0    0    0    2    0    0    0    0    2    0    0    0    1    3    1
## DF_1    0    0    0    0    0    0    0    0    0    0    0    1    1    2    1    0    0    0
##       1000 1001 1002 1003 1004 1005 1006 1007 1008 1009 1010 1011 1012 1013 1014
## T1_1    1    0    0    2    3    1    1    0    0    0    0    0    1    0    0
## T1_2    1    0    1    1    1    1    3    0    0    0    0    0    2    0    0
## T1_3    1    0    0    0    1    3    0    0    0    0    0    0    0    0    0
## T7_1    3    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## T7_2    0    3    6    0    0    0    1    0    2    0    0    0    0    0    2
## T7_3    2    2    1    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    5    0    0    0    0    0    0    0    0    0    0    0    0
##       1015 1016 1017 1018 1019 1020 1021 1022 1023 1024 1025 1026 1027 1028 1029
## T1_1    0    0    0    3    0    0    0    0    0    2    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## T1_3    0    0    0    3    0    0    0    0    0    2    0    0    0    0    0
## T7_1    0    0    0    0    0    1    0    0    0    0    0    0    0    0    2
## T7_2    0    0    0    0    0    1    1    0    0    0    2    0    0    1    1
## T7_3    0    0    0    0    0    0    3    0    0    0    1    0    0    0    2
## DF_1    2    5    0    0    0    0    0    0    0    0    1    0    0    0    0
```

```
##      1030 1031 1032 1033 1034 1035 1036 1037 1038 1039 1040 1041 1042 1043 1044
## T1_1    0    3    0    0    0    0    0    2    0    0    0    0    0    0    0
## T1_2    1    1    1    0    0    0    0   11    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    4    0    0    0    0    0    0    0
## T7_1    0    0    0    0    1    0    0    0    0    0    0    3    3    0    0
## T7_2    0    0    0    0    3    0    0    2    0    0    0    1    0    0    0
## T7_3    0    0    0    0    1    0    0    6    5    0    0    3    1    0    0
## DF_1    0    0    0    2    3    0    2    2    0    0    0    1    0    0    0
##      1045 1046 1047 1048 1049 1050 1051 1052 1053 1054 1055 1056 1057 1058 1059
## T1_1    0    0    0    0    0    1    0    0    0    0    1    0    0    0    1
## T1_2    0    0    0    0    4    1    0    0    0    0    0    2    0    1    0
## T1_3    0    0    5    0    0    0    0    0    0    0    1    0    2    1    0
## T7_1    0    0    0    0    0    2    1    0    0    1    0    0    0    0    0
## T7_2    0    0    0    0    0    0    2    0    0    2    0    0    1    2    0
## T7_3    0    0    0    5    0    3    5    0    0    1    0    0    5    4    3
## DF_1    0    0    0    0    0    3    1    0    1    1    0    0    0    9    0
##      1060 1061 1062 1063 1064 1065 1066 1067 1068 1069 1070 1071 1072 1073 1074
## T1_1    0    0    0    0    0    0    0    4    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    1    0    0    1    0    0    0    0
## T1_3    0    0    0    0    0    0    0    2    0    0    3    0    0    0    0
## T7_1    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    1    1    0    0    0
## T7_3    0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
## DF_1    1    0    0    0    2    0    0    0    0    0    0    0    0    0    0
##      1075 1076 1077 1078 1079 1080 1081 1082 1083 1084 1085 1086 1087 1088 1089
## T1_1    0    0    3    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    1    0    0    1    2    0    0    1    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## T7_1    0    0    0    0    0    0    0    1    0    0    0    1    0    3    0
## T7_2    0    0    1    0    0    0    0    2    0    0    0    1    0    0    0
## T7_3    0    0    0    0    0    0    0    2    0    0    0    1    0    1    0
## DF_1    0    0    1    0    5    0    0    0    0    0    0    0    0    0    0
##      1090 1091 1092 1093 1094 1095 1096 1097 1098 1099 1100 1101 1102 1103 1104
## T1_1    0    0    0    1    1    0    0    0    0    0    0    1    0    0    0
## T1_2    0    0    0    0    3    0    0    0    0    0    0    1    0    0    0
## T1_3    0    0    0    1    0    0    2    0    0    0    0    0    0    0    0
## T7_1    0    0    1    0    0    0    0    0    0    0    0    2    0    0    0
## T7_2    1    0    0    0    0    0    1    6    0    0    0    2    0    0    2
## T7_3    3    0    1    0    0    0    0    0    0    0    3    2    0    0    1
## DF_1    0    0    0    0    0    0    0    3    3    0    3    2    0    3    1
##      1105 1106 1107 1108 1109 1110 1111 1112 1113 1114 1115 1116 1117 1118 1119
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    5    2    0
## T1_2    0    0    0    2    0    0    0    0    0    0    0    0    1    1    0
## T1_3    0    0    0    0    5    0    0    0    1    0    0    0    0    0    0
## T7_1    0    0    0    1    0    1    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    5    0    0    0    0    0    0    3    0    0    0    0    0    0
## DF_1    0    0    2    0    0    1    0    0    0    0    0    1    0    0    2
##      1120 1121 1122 1123 1124 1125 1126 1127 1128 1129 1130 1131 1132 1133 1134
## T1_1    0    0    1    1    0    0    0    1    0    3    1    0    0    2    0
## T1_2    3    2    1    1    0    0    0    0    0    3    2    1    0    1    0
## T1_3    1    0    0    1    0    0    0    1    0    0    0    1    0    1    0
## T7_1    0    0    0    1    0    0    0    3    0    0    0    1    0    2    0
## T7_2    0    0    0    1    0    1    0    0    0    0    0    2    0    0    3
```

```
## T7_3     1     0     0     0     0     0     0     3     0     0     0     3     0     4     0
## DF_1     2     0     0     0     0     1     0     4     0     0     0     0     1     0     0
##       1135  1136  1137  1138  1139  1140  1141  1142  1143  1144  1145  1146  1147  1148  1149
## T1_1     0     0     0     0     0     0     1     0     0     0     0     0     0     0     1
## T1_2     5     0     0     0     0     0     1     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     2     0     0     0     0     0     0     0     1     0     0
## T7_1     0     0     5     1     1     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     1     0     0     1     0     0     0     4     1     0     0     0     1
## T7_3     0     1     0     0     3     0     0     0     0     3     5     0     0     0     1
## DF_1     0     0     1     2     0     1     0     0     0     0     1     0     0     1     0
##       1150  1151  1152  1153  1154  1155  1156  1157  1158  1159  1160  1161  1162  1163  1164
## T1_1     0     0     0     1     3     0     0     0     0     0     0     0     0     0     0
## T1_2     1     1     3     2     2     1     0     1     0     1     0     2     0     0     0
## T1_3     0     0     2     0     2     1     0     0     0     0     0     0     0     0     1
## T7_1     0     0     1     2     0     0     0     0     0     5     1     0     1     0     1
## T7_2     0     0     0     0     0     0     0     0     1     1     0     0     1     0     0
## T7_3     0     0     1     0     0     0     0     0     0     3     2     0     2     0     0
## DF_1     0     0     0     0     0     0     0     0     0     2     0     0     2     0     1
##       1165  1166  1167  1168  1169  1170  1171  1172  1173  1174  1175  1176  1177  1178  1179
## T1_1     1     0     0     1     0     0     1     0     0     0     0     0     0     0     0
## T1_2     1     0     0     2     0     3     0     1     0     0     0     2     0     0     1
## T1_3     1     0     1     0     0     0     0     4     0     0     0     1     1     0     0
## T7_1     0     0     0     1     0     1     1     0     0     0     0     0     0     0     0
## T7_2     0     2     0     0     1     1     0     1     0     2     0     0     1     0     3
## T7_3     0     0     0     2     0     3     0     0     0     2     0     0     1     1     0
## DF_1     0     0     0     0     0     1     1     0     0     0     0     0     1     1     0
##       1180  1181  1182  1183  1184  1185  1186  1187  1188  1189  1190  1191  1192  1193  1194
## T1_1     0     0     1     0     0     0     0     0     0     0     1     0     0     0     0
## T1_2     0     0     0     0     1     0     1     0     1     0     0     0     0     0     0
## T1_3     0     0     0     0     4     0     0     0     0     0     0     0     0     1     0
## T7_1     0     0     0     0     0     1     1     1     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     1     0     0     1     0     0     0     0     2     0
## T7_3     1     5     0     0     0     0     0     0     3     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     1     1     0     0     0     0     1     2     0
##       1195  1196  1197  1198  1199  1200  1201  1202  1203  1204  1205  1206  1207  1208  1209
## T1_1     0     0     1     1     0     0     0     0     2     1     0     1     3     0     4
## T1_2     2     0     1     0     0     0     0     0     0     0     0     1     1     0     0
## T1_3     0     0     0     0     0     0     0     0     0     1     0     0     0     0     1
## T7_1     0     0     0     0     0     0     0     4     0     0     0     0     0     0     0
## T7_2     3     0     0     0     0     3     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     2     0     1     4     0     0     0     0
## DF_1     0     1     0     0     0     1     0     0     0     0     0     0     0     0     0
##       1210  1211  1212  1213  1214  1215  1216  1217  1218  1219  1220  1221  1222  1223  1224
## T1_1     0     0     1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     6     0     0     1     0     0     4     0     0     0     0     1     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0     0     1     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     1     0     1     0     0     0     0     0     0     0
## T7_3     0     0     0     0     1     3     0     2     0     0     2     0     0     0     1
## DF_1     0     0     0     0     1     0     0     0     0     0     0     0     0     0     0
##       1225  1226  1227  1228  1229  1230  1231  1232  1233  1234  1235  1236  1237  1238  1239
## T1_1     0     1     0     0     1     0     0     0     0     0     0     1     0     0     0
## T1_2     0     0     0     0     0     0     1     0     0     0     0     1     1     0     0
## T1_3     0     0     0     0     2     0     0     0     0     0     0     0     0     0     0
```

```
## T7_1    0    0    0    0    0    0    0    0    2    0    0    0    0    0    0
## T7_2    0    0    0    0    0    1    0    4    0    0    1    0    0    0    0
## T7_3    0    0    0    0    0    0    0    2    0    0    1    0    0    0    0
## DF_1    0    0    0    0    0    0    0    1    0    0    2    0    0    0    0
##      1240 1241 1242 1243 1244 1245 1246 1247 1248 1249 1250 1251 1252 1253 1254
## T1_1    0    0    2    1    0    1    0    0    0    1    0    0    0    0    0
## T1_2    2    0    3    4    0    0    0    0    0    3    0    2    0    1    0
## T1_3    0    2    2    0    0    0    0    0    1    0    0    0    0    0    0
## T7_1    0    0    1    2    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    1    2    2    0    0    0    0    0    0    0    0    1    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    2
## DF_1    0    0    0    3    0    0    0    0    0    0    0    0    1    2    0
##      1255 1256 1257 1258 1259 1260 1261 1262 1263 1264 1265 1266 1267 1268 1269
## T1_1    0    3    0    0    1    0    0    0    0    0    0    0    0    0    0
## T1_2    0    2    0    4    0    0    0    0    0    1    0    0    0    0    0
## T1_3    0    2    1    0    1    0    0    0    0    0    0    0    0    0    0
## T7_1    2    0    1    0    0    0    0    0    4    0    0    0    0    2    0
## T7_2    1    0    0    0    1    0    0    0    0    0    0    0    0    0    4
## T7_3    0    0    0    0    0    0    0    0    0    0    0    1    0    1    1
## DF_1    0    0    0    0    0    0    1    0    0    0    0    2    0    0    2
##      1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283 1284
## T1_1    0    0    1    0    0    1    0    0    0    0    0    0    0    0    1
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    2
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    2
## T7_1    0    0    0    1    4    0    0    0    0    0    0    0    0    0    1
## T7_2    0    0    1    0    1    0    0    0    0    2    2    0    0    0    2
## T7_3    0    0    0    0    2    1    0    0    4    0    2    0    0    0    0
## DF_1    0    1    1    0    1    0    1    0    0    0    0    2    0    0    0
##      1285 1286 1287 1288 1289 1290 1291 1292 1293 1294 1295 1296 1297 1298 1299
## T1_1    0    1    0    0    0    0    0    0    0    0    0    2    0    0    0
## T1_2    0    1    0    2    0    0    3    2    0    0    0    0    0    0    0
## T1_3    0    0    0    0    1    0    0    3    0    0    0    0    0    0    0
## T7_1    1    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T7_2    1    0    2    1    0    0    1    0    0    1    0    2    1    0    0
## T7_3    2    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## DF_1    0    3    0    0    0    0    1    0    0    0    0    1    2    1    0
##      1300 1301 1302 1303 1304 1305 1306 1307 1308 1309 1310 1311 1312 1313 1314
## T1_1    4    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    4    0    0    0    1    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    4    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    4    0    0    0    0    1
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    3    0    0    0    0    0    0    0    0    0    0    0    0    1
##      1315 1316 1317 1318 1319 1320 1321 1322 1323 1324 1325 1326 1327 1328 1329
## T1_1    2    0    2    0    0    0    2    0    0    0    0    1    0    2    0
## T1_2    1    1    1    0    1    0    0    0    0    0    0    2    0    0    0
## T1_3    3    0    0    1    1    0    0    0    0    0    0    5    0    0    0
## T7_1    0    3    1    0    0    0    0    0    0    0    6    0    0    0    0
## T7_2    0    0    1    0    0    0    0    0    0    0    2    0    0    0    0
## T7_3    0    5    1    0    1    0    0    0    0    0    1    0    0    0    0
## DF_1    0    0    0    0    0    0    0    3    0    0    6    0    2    0    0
##      1330 1331 1332 1333 1334 1335 1336 1337 1338 1339 1340 1341 1342 1343 1344
## T1_1    0    0    0    0    0    1    0    0    5    0    0    0    0    0    0
```

```
## T1_2      0     0     0     0     2     2     0     0     2     0     0     0     0     0     0
## T1_3      0     0     2     0     2     3     0     0     3     0     1     0     0     0     0
## T7_1      0     0     0     1     1     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     1     0     0     3     0     0     0     0     3     0     0     0     1
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     4     0     2     0     0     0     0     0     0     0     0     0     0     0
##        1345  1346  1347  1348  1349  1350  1351  1352  1353  1354  1355  1356  1357  1358  1359
## T1_1      1     0     0     0     0     0     0     0     2     0     0     3     1     0     0
## T1_2      0     0     0     0     0     0     0     1     0     0     0     0     0     0     4
## T1_3      0     0     0     0     0     1     0     0     0     0     0     0     1     0     0
## T7_1      1     0     0     0     0     1     0     0     0     1     0     0     0     0     0
## T7_2      0     0     0     5     0     2     2     0     2     0     3     0     0     0     0
## T7_3      0     0     0     0     0     1     1     0     0     1     2     0     0     0     0
## DF_1      1     0     3     0     0     0     2     0     0     1     4     0     0     1     0
##        1360  1361  1362  1363  1364  1365  1366  1367  1368  1369  1370  1371  1372  1373  1374
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     1     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     1     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     3     0     0     0     0     0     0     0     0     0
## T7_2      3     1     0     0     0     4     0     0     0     0     2     3     0     0     2
## T7_3      0     0     0     2     0     4     0     0     0     0     0     0     0     1     0
## DF_1      0     0     0     0     1     8     0     0     2     0     0     0     0     0     0
##        1375  1376  1377  1378  1379  1380  1381  1382  1383  1384  1385  1386  1387  1388  1389
## T1_1      0     2     0     0     0     0     0     0     0     2     1     0     0     0     0
## T1_2      0     1     0     0     0     2     0     0     0     0     0     0     0     0     0
## T1_3      0     1     0     0     0     2     0     0     0     0     1     0     0     0     0
## T7_1      0     0     2     0     1     1     0     0     0     0     0     1     1     0     0
## T7_2      4     0     1     0     0     0     0     0     0     0     7     0     0     1     0
## T7_3      0     0     0     0     0     1     0     4     0     0     4     0     0     2     0
## DF_1      0     0     0     0     1     0     0     0     0     0     0     0     0     1     0
##        1390  1391  1392  1393  1394  1395  1396  1397  1398  1399  1400  1401  1402  1403  1404
## T1_1      0     1     0     1     0     0     1     0     0     0     1     0     0     0     0
## T1_2      0     1     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     1     0     0     0     0     0     0     0     0
## T7_1      0     0     3     5     0     0     0     0     2     0     0     1     0     0     0
## T7_2      0     0     0     1     0     4     0     0     1     0     0     2     0     0     0
## T7_3      0     0     2     8     0     0     0     0     0     0     0     0     4     0     0
## DF_1      0     0     0     7     0     0     2     0     0     0     0     0     0     0     0
##        1405  1406  1407  1408  1409  1410  1411  1412  1413  1414  1415  1416  1417  1418  1419
## T1_1      0     0     0     0     0     0     0     0     1     0     0     0     0     0     0
## T1_2      0     0     0     0     0     1     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     1     0     0     0     0     0     0
## T7_1      0     2     0     0     0     3     0     0     0     0     1     0     0     0     5
## T7_2      0     0     0     0     0     0     4     3     0     4     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     5     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     2     0     0     0     0
##        1420  1421  1422  1423  1424  1425  1426  1427  1428  1429  1430  1431  1432  1433  1434
## T1_1      0     1     0     0     5     0     0     0     0     1     0     0     0     0     0
## T1_2      4     3     0     0     0     0     0     3     0     0     0     0     0     0     0
## T1_3      1     0     0     0     2     1     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     1     0     1     0     2     0     0     0     0     2
## T7_2      0     0     0     0     0     0     0     0     0     1     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     4     0     0     0
```

```
##      1435 1436 1437 1438 1439 1440 1441 1442 1443 1444 1445 1446 1447 1448 1449
## T1_1    0    1    0    0    0    0    0    0    0    0    0    0    0    0    1
## T1_2    0    1    2    0    0    0    0    0    0    0    0    0    0    0    1
## T1_3    0    0    2    0    0    0    0    0    0    0    0    2    0    0    0
## T7_1    0    1    3    0    0    0    1    5    0    0    0    0    0    0    3
## T7_2    0    0    0    0    0    4    1    0    0    0    4    0    0    0    2
## T7_3    0    0    0    3    0    0    1    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    1    0    0    4    0    0    6    0    2
##      1450 1451 1452 1453 1454 1455 1456 1457 1458 1459 1460 1461 1462 1463 1464
## T1_1    0    0    0    0    0    0    0    0    0    2    0    0    1    0    0
## T1_2    0    0    0    0    0    0    0    0    0    2    0    0    1    0    0
## T1_3    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    1    0    0    1    0    5    0    0    1
## T7_2    0    4    0    0    0    0    1    0    0   14    0    0    0    0    1
## T7_3    1    0    0    0    0    0    2    0    4    0    0    0    0    0    1
## DF_1    0    0    1    0    0    0    0    0    0    0    2    0    0    0    2
##      1465 1466 1467 1468 1469 1470 1471 1472 1473 1474 1475 1476 1477 1478 1479
## T1_1    0    1    0    2    2    1    0    1    0    0    4    0    0    0    0
## T1_2    0    0    0    0    1    0    1    1    0    0    1    0    0    2    0
## T1_3    0    0    0    4    0    0    0    1    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    1    0    0    0    0    0    0    0    1    0
## T7_2    0    0    1    0    1    0    3    1    0    0    0    1    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    1    0    1    0
## DF_1    0    0    0    0    0    0    1    5    0    0    0    0    1    0    3
##      1480 1481 1482 1483 1484 1485 1486 1487 1488 1489 1490 1491 1492 1493 1494
## T1_1    0    0    0    0    0    1    1    0    0    0    1    0    0    0    0
## T1_2    0    0    0    0    0    0    1    0    5    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    4    0    0    1    0    0    0    0    0    0    0    2
## T7_2    0    1    0    0    5    1    0    0    0    4    0    0    0    0    1
## T7_3    0    0    0    0    0    0    0    0    0    4    0    0    0    0    1
## DF_1    1    0    1    1    0    0    0    0    0    1    0    0    1    8    2
##      1495 1496 1497 1498 1499 1500 1501 1502 1503 1504 1505 1506 1507 1508 1509
## T1_1    1    0    0    0    0    1    0    0    0    1    0    0    0    0    0
## T1_2    4    0    0    0    1    0    0    0    0    0    0    0    0    2    0
## T1_3    2    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## T7_1    3    0    0    0    4    0    0    0    0    0    0    0    0    0    0
## T7_2    4    0    0    0    0    0    3    0    0    0    0    1    0    0    0
## T7_3    0    2    0    0    1    0    0    4    0    0    4    0    1    0    0
## DF_1    0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
##      1510 1511 1512 1513 1514 1515 1516 1517 1518 1519 1520 1521 1522 1523 1524
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    3    0    0    0    0    0    2    0
## T1_3    0    0    0    0    0    0    0    2    0    0    0    0    0    0    2
## T7_1    0    0    0    0    0    0    0    1    0    1    1    0    0    0    0
## T7_2    0    0    0    0    0    0    3    1    0    1    0    0    3    0    0
## T7_3    0    0    0    0    0    5    2    0    4    0    3    0    0    1    0
## DF_1    1    0    0    0    0    0    1    0    0    0    0    0    0    1    0
##      1525 1526 1527 1528 1529 1530 1531 1532 1533 1534 1535 1536 1537 1538 1539
## T1_1    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    1    0    0    0    0    0    1    0    0    0
## T7_1    0    0    0    0    5    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    2    0    0    0    0    0    0    4    0    0    0
```

```
## T7_3       0     0     0     0     1     4     0     0     0     0     3     3     0     0     0
## DF_1       0     1     3     3     2     0     0     0     0     0     0     0     0     0     0
##         1540 1541 1542 1543 1544 1545 1546 1547 1548 1549 1550 1551 1552 1553 1554
## T1_1       0     0     0     0     0     0     0     0     0     1     0     1     0     0     0
## T1_2       0     0     0     0     0     0     1     0     0     1     0     2     1     0     0
## T1_3       0     0     0     0     0     0     3     0     0     2     0     0     0     0     0
## T7_1       0     0     0     0     0     0     0     0     0     0     0     0     1     0     0
## T7_2       0     0     0     4     0     0     0     0     0     0     0     0     2     0     0
## T7_3       0     2     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1       0     0     1     0     0     1     0     0     0     0     0     0     2     0     0
##         1555 1556 1557 1558 1559 1560 1561 1562 1563 1564 1565 1566 1567 1568 1569
## T1_1       0     0     0     0     0     0     0     0     0     1     0     0     0     1     0
## T1_2       0     0     1     0     0     0     0     4     0     4     4     0     4     1     0
## T1_3       0     0     0     0     1     0     0     1     0     0     0     0     0     2     0
## T7_1       0     0     0     0     0     0     0     1     1     0     1     0     0     0     0
## T7_2       1     0     0     0     2     0     5     0     0     0     0     0     0     0     0
## T7_3       1     0     2     0     1     0     0     0     0     0     0     0     0     1     0
## DF_1       1     0     0     0     0     0     0     0     0     0     0     0     0     1     0
##         1570 1571 1572 1573 1574 1575 1576 1577 1578 1579 1580 1581 1582 1583 1584
## T1_1       0     0     0     0     0     0     1     0     0     0     0     0     0     0     0
## T1_2       0     0     0     1     0     0     0     0     0     0     0     0     0     2     0
## T1_3       0     0     0     0     0     0     3     0     0     0     0     0     0     0     0
## T7_1       0     4     2     1     0     0     0     0     0     0     0     0     0     0     0
## T7_2       0     3     0     2     0     0     0     4     0     0     0     0     0     0     0
## T7_3       1     3     0     1     0     0     0     0     0     1     0     0     0     0     0
## DF_1       0     2     0     2     2     2     0     0     0     0     4     0     0     0     0
##         1585 1586 1587 1588 1589 1590 1591 1592 1593 1594 1595 1596 1597 1598 1599
## T1_1       0     0     0     0     0     0     0     0     0     0     0     0     1     0     0
## T1_2       1     0     0     3     1     0     0     0     0     3     0     0     0     0     0
## T1_3       3     0     0     0     1     0     0     1     0     0     0     0     0     0     0
## T7_1       2     0     0     0     0     0     0     0     0     0     0     4     0     1     0
## T7_2       0     0     0     0     0     0     0     4     0     0     0     0     0     0     0
## T7_3       0     0     0     0     0     0     0     2     0     0     0     0     3     0     0
## DF_1       0     0     0     1     0     0     0     0     0     0     0     0     0     0     0
##         1600 1601 1602 1603 1604 1605 1606 1607 1608 1609 1610 1611 1612 1613 1614
## T1_1       0     0     0     0     0     0     1     0     0     0     0     0     0     0     2
## T1_2       0     0     0     0     0     1     0     0     0     0     0     0     0     0     2
## T1_3       0     0     0     0     0     0     0     1     0     0     3     0     0     0     2
## T7_1       0     0     2     0     0     0     0     0     0     0     0     4     0     0     0
## T7_2       0     0     0     0     1     1     0     0     0     1     0     0     0     0     0
## T7_3       0     1     0     0     0     0     0     0     0     0     0     1     0     0     0
## DF_1       0     0     3     0     0     0     0     0     0     0     0     1     0     0     2
##         1615 1616 1617 1618 1619 1620 1621 1622 1623 1624 1625 1626 1627 1628 1629
## T1_1       0     0     0     0     0     0     0     0     0     0     0     1     0     0     0
## T1_2       0     0     0     0     0     0     0     0     0     0     0     1     0     1     0
## T1_3       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2       0     0     0     0     0     0     0     0     2     0     0     0     0     0     0
## T7_3       2     3     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1       0     0     0     0     0     0     0     1     0     0     0     0     0     0     0
##         1630 1631 1632 1633 1634 1635 1636 1637 1638 1639 1640 1641 1642 1643 1644
## T1_1       0     3     1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2       0     0     0     1     0     1     0     0     0     0     0     0     0     0     0
## T1_3       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
```

```
## T7_1      0    0    0    0    0    0    1    1    0    0    0    0    0    0    0
## T7_2      0    0    3    0    0    0    0    0    0    0    0    1    0    0    0
## T7_3      0    0    0    0    0    0    4    2    0    0    0    0    0    0    0
## DF_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    3
##        1645 1646 1647 1648 1649 1650 1651 1652 1653 1654 1655 1656 1657 1658 1659
## T1_1      0    0    2    0    2    0    0    2    0    0    0    0    0    0    0
## T1_2      1    0    1    0    2    0    0    0    0    0    0    0    0    0    0
## T1_3      0    0    1    0    0    0    0    1    0    0    0    0    0    0    0
## T7_1      0    0    1    0    0    0    1    0    0    0    1    0    0    3    0
## T7_2      0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3      1    0    1    0    0    3    2    0    0    0    1    0    0    0    1
## DF_1      0    0    1    2    0    0    1    0    2    1    0    0    0    0    3
##        1660 1661 1662 1663 1664 1665 1666 1667 1668 1669 1670 1671 1672 1673 1674
## T1_1      0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T1_2      0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T1_3      0    0    0    0    2    0    0    0    0    0    0    1    0    0    0
## T7_1      0    0    0    0    0    0    2    0    0    1    1    0    0    0    0
## T7_2      0    0    0    2    0    0    0    0    0    0    1    0    0    3    2
## T7_3      0    0    0    0    0    0    0    0    0    0    0    0    0    3    2
## DF_1      0    0    0    0    0    0    0    0    0    0    0    0    0    2    1
##        1675 1676 1677 1678 1679 1680 1681 1682 1683 1684 1685 1686 1687 1688 1689
## T1_1      0    1    0    0    0    0    0    0    2    0    0    0    0    0    0
## T1_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    3
## T1_3      0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## T7_1      0    1    0    0    0    0    3    0    0    3    0    0    0    3    0
## T7_2      0    2    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3      0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1      0    0    0    0    0    0    0    2    0    0    0    0    0    0    0
##        1690 1691 1692 1693 1694 1695 1696 1697 1698 1699 1700 1701 1702 1703 1704
## T1_1      0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## T1_2      0    3    0    0    0    3    0    0    0    0    1    0    1    0    0
## T1_3      0    0    0    0    0    0    0    0    0    0    2    0    0    0    0
## T7_1      1    0    0    0    3    0    1    0    0    0    0    0    0    0    0
## T7_2      0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## T7_3      0    0    0    0    0    0    0    3    0    0    0    0    0    0    0
## DF_1      2    0    0    0    0    0    1    0    0    0    0    0    1    0    4
##        1705 1706 1707 1708 1709 1710 1711 1712 1713 1714 1715 1716 1717 1718 1719
## T1_1      0    0    0    0    0    0    1    1    0    0    0    0    0    0    0
## T1_2      0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## T1_3      0    0    0    0    0    0    1    0    1    0    0    0    0    0    0
## T7_1      1    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2      0    0    0    0    0    0    4    0    0    0    0    0    0    0    0
## T7_3      0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## DF_1      3    0    0    0    0    0    0    0    0    0    1    0    0    0    0
##        1720 1721 1722 1723 1724 1725 1726 1727 1728 1729 1730 1731 1732 1733 1734
## T1_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2      1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3      0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T7_1      0    0    0    0    1    0    0    0    0    2    0    0    0    0    0
## T7_2      0    0    0    0    0    6    3    2    0    0    0    0    1    3    2
## T7_3      0    0    0    0    0    0    0    1    0    0    0    0    0    0    2
## DF_1      1    0    0    0    0    0    0    4    0    0    0    0    0    0    0
##        1735 1736 1737 1738 1739 1740 1741 1742 1743 1744 1745 1746 1747 1748 1749
## T1_1      1    0    0    0    0    0    0    0    0    0    0    2    0    0    0
```

```
## T1_2      0     0     0     0     0     0     0     0     0     0     0     2     0     0     0
## T1_3      0     0     0     0     0     1     0     0     0     0     0     1     1     0     0
## T7_1      0     0     0     0     1     0     1     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     1     0     0     0     0     0     0     0     0
## T7_3      0     0     3     0     0     2     2     0     0     0     2     1     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     2     0     1     0     0     0
##        1750  1751  1752  1753  1754  1755  1756  1757  1758  1759  1760  1761  1762  1763  1764
## T1_1      0     0     0     0     0     0     0     0     0     0     0    10     0     0     0
## T1_2      1     1     0     0     0     0     0     0     0     0     0     1     0     1     0
## T1_3      0     1     0     0     0     0     0     0     0     0     0     0     0     1     0
## T7_1      0     0     0     0     3     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     2     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
##        1765  1766  1767  1768  1769  1770  1771  1772  1773  1774  1775  1776  1777  1778  1779
## T1_1      1     0     0     0     0     0     0     0     0     0     1     0     0     0     0
## T1_2      0     0     0     0     0     0     0     2     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      1     1     0     0     3     0     0     0     4     0     0     0     0     0     0
## T7_2      2     2     0     0     0     1     0     0     0     3     0     0     0     0     0
## T7_3      0     0     0     0     0     1     0     0     0     0     0     4     0     0     0
## DF_1      0     1     0     0     0     0     0     0     1     0     0     0     0     0     0
##        1780  1781  1782  1783  1784  1785  1786  1787  1788  1789  1790  1791  1792  1793  1794
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     1     0     0     1     6     0     0
## T7_2      0     1     0     0     0     0     0     0     0     0     0     0     2     0     0
## T7_3      0     1     0     0     1     1     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     2     0     0     0     3     0     0     0
##        1795  1796  1797  1798  1799  1800  1801  1802  1803  1804  1805  1806  1807  1808  1809
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     2
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     2
## T7_1      1     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     2     0     0     0     4     0     0
## T7_3      0     1     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      2     0     1     0     0     0     0     0     0     0     0     0     0     1     0
##        1810  1811  1812  1813  1814  1815  1816  1817  1818  1819  1820  1821  1822  1823  1824
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     3
## T1_2      0     1     0     0     0     0     0     0     1     3     1     0     0     0     2
## T1_3      0     0     0     0     1     0     0     0     0     0     1     1     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     3     0     0     0
## T7_2      0     0     0     0     0     4     0     0     0     0     1     0     0     0     0
## T7_3      0     0     0     0     0     0     2     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     2     0     0     0     0     0     1     0     0     0
##        1825  1826  1827  1828  1829  1830  1831  1832  1833  1834  1835  1836  1837  1838  1839
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     2     0     0     0     0     0     0     0     0     0     0     3
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      1     1     0     0     0     0     0     1     0     0     0     0     0     3     0
## T7_2      1     0     0     0     0     1     0     0     0     0     0     0     0     0     0
## T7_3      0     3     0     0     0     0     0     0     3     0     0     0     0     0     0
## DF_1      0     0     0     0     0     1     0     0     0     0     0     0     0     0     0
```

```
##      1840 1841 1842 1843 1844 1845 1846 1847 1848 1849 1850 1851 1852 1853 1854
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T7_3    5    3    0    0    2    0    0    0    0    0    2    0    0    0    0
## DF_1    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
##      1855 1856 1857 1858 1859 1860 1861 1862 1863 1864 1865 1866 1867 1868 1869
## T1_1    0    0    3    0    0    0    1    0    0    0    0    0    0    0    0
## T1_2    0    0    1    0    0    0    0    0    1    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    3
## T7_2    0    0    0    0    0    0    0    0    2    3    2    0    0    0    0
## T7_3    0    0    0    0    0    0    0    3    0    0    0    0    0    0    0
## DF_1    0    0    0    0    1    0    0    0    1    0    1    0    0    4    0
##      1870 1871 1872 1873 1874 1875 1876 1877 1878 1879 1880 1881 1882 1883 1884
## T1_1    0    0    0    0    0    0    0    0    1    0    0    2    0    1    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    3    0    1    0    0    0    0    3    0    1    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    8    0    0
## T7_2    0    1    0    0    0    0    0    0    0    2    0    0    0    0    0
## T7_3    1    1    0    0    0    0    0    0    0    0    0    2    0    0    0
## DF_1    0    1    0    0    0    0    0    0    0    0    0    2    1    0    0
##      1885 1886 1887 1888 1889 1890 1891 1892 1893 1894 1895 1896 1897 1898 1899
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    1    3
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## T7_1    1    0    0    1    3    0    0    0    0    0    2    0    0    0    0
## T7_2    1    0    0    2    0    0    2    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
##      1900 1901 1902 1903 1904 1905 1906 1907 1908 1909 1910 1911 1912 1913 1914
## T1_1    0    0    0    2    0    0    0    0    0    0    0    0    0    0    1
## T1_2    0    0    1    0    0    0    0    0    0    0    0    0    0    0    1
## T1_3    0    0    0    2    0    0    0    0    0    0    0    0    0    0    1
## T7_1    0    0    0    0    0    0    0    1    0    0    0    0    0    0    1
## T7_2    3    0    0    0    3    0    0    0    0    0    0    0    0    0    1
## T7_3    0    0    0    0    0    0    0    3    0    3    0    0    4    0    1
## DF_1    0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
##      1915 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929
## T1_1    0    0    0    3    0    0    0    1    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    2    0
## T1_3    0    0    0    0    1    0    0    0    0    0    0    0    0    1    0
## T7_1    0    0    0    0    0    0    0    0    2    0    0    0    0    0    0
## T7_2    0    1    0    0    0    0    0    0    0    0    1    0    0    1    0
## T7_3    2    0    0    0    0    0    0    0    2    0    0    1    0    1    0
## DF_1    0    0    0    0    0    0    0    2    0    2    0    0    0    0    0
##      1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944
## T1_1    0    0    0    0    0    0    0    0    0    2    0    1    1    0    0
## T1_2    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## T1_3    1    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## T7_1    1    2    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    3
```

```
## T7_3    1    1    0    0    0    1    0    0    0    0    2    0    0    0    2
## DF_1    0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
##      1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    2    0    0    0    0    0    0    0    0    0    0    0    1    0
## T7_2    0    2    2    0    0    2    0    0    0    0    0    2    3    0    2
## T7_3    0    4    3    0    0    4    0    0    0    0    0    0    0    0    0
## DF_1    3    2    0    1    0    0    0    0    0    0    1    0    0    0    0
##      1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974
## T1_1    0    0    0    0    0    0    2    0    0    0    0    0    0    0    0
## T1_2    0    0    1    0    0    1    1    2    0    0    0    0    0    0    0
## T1_3    0    0    1    1    0    0    1    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    1    1    2    0    0    0    0    0    1
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    3    3
## T7_3    0    0    0    0    0    0    0    0    0    0    0    3    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    3    0    1
##      1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989
## T1_1    0    0    0    0    0    0    0    0    0    0    0    2    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    4    2    0    0    6    0    0    3    0    3    0    0
## DF_1    0    0    0    0    0    0    0    0    2    0    0    0    0    0    0
##      1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004
## T1_1    0    0    0    0    0    0    0    3    0    0    0    0    0    0    1
## T1_2    0    0    0    0    0    0    0    0    1    0    0    0    0    3    0
## T1_3    0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    2    0    0    2    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
##      2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019
## T1_1    1    0    0    0    0    0    0    0    0    0    4    0    0    0    0
## T1_2    0    0    0    1    0    0    0    0    0    0    1    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    1    0    0    0    0    2    0
## T7_2    0    2    0    2    0    0    0    0    1    0    0    0    0    0    0
## T7_3    0    0    0    3    4    0    0    0    0    0    1    0    0    1    1
## DF_1    0    0    3    0    0    0    0    0    2    0    0    3    0    2    0
##      2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034
## T1_1    0    0    0    0    0    0    0    0    0    0    0    2    0    0    0
## T1_2    0    0    3    0    0    0    0    0    0    0    0    1    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    3    0    0    1
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    3    0    0    2    0    0    0    3    1    0    0    0    0    1    1
## T7_3    0    0    0    0    0    3    0    0    1    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    2    0    0    0    1
##      2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049
## T1_1    0    0    0    0    0    0    0    2    0    2    0    0    0    0    1
## T1_2    0    0    0    0    0    0    0    1    0    1    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
```

```
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    1    1    0    0    0    0    0    0    0    0    3    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    1    0    0    2    0    0    0    0    0    0    0    0    0
##      2050 2051 2052 2053 2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064
## T1_1    0    0    0    0    0    0    0    0    0    1    1    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    3    1    0    2
## T7_2    0    1    0    1    0    1    0    1    0    0    1    0    0    0    1
## T7_3    0    0    0    0    0    0    2    0    0    0    0    0    0    0    0
## DF_1    0    0    2    0    0    0    0    0    0    0    0    0    0    3    0
##      2065 2066 2067 2068 2069 2070 2071 2072 2073 2074 2075 2076 2077 2078 2079
## T1_1    0    0    0    1    0    0    0    0    1    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    2    0    0    1    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    3    0    0    0    0    0    0    2    2    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
##      2080 2081 2082 2083 2084 2085 2086 2087 2088 2089 2090 2091 2092 2093 2094
## T1_1    0    0    0    0    1    0    1    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## T1_3    0    2    0    3    4    0    0    0    0    0    2    0    0    0    0
## T7_1    0    0    0    0    0    0    0    3    0    1    0    0    0    3    0
## T7_2    1    0    0    0    0    6    0    0    0    0    0    0    0    1    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    2    0    0    0    0    0    0    0
##      2095 2096 2097 2098 2099 2100 2101 2102 2103 2104 2105 2106 2107 2108 2109
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## T1_2    2    0    0    0    0    0    0    0    1    0    0    0    0    0    1
## T1_3    0    0    0    0    0    0    0    0    1    0    0    0    1    0    0
## T7_1    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T7_2    2    0    0    0    2    0    3    0    1    3    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      2110 2111 2112 2113 2114 2115 2116 2117 2118 2119 2120 2121 2122 2123 2124
## T1_1    0    0    0    0    0    0    0    0    0    3    0    0    0    0    1
## T1_2    0    0    0    0    0    0    0    0    1    0    0    5    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    1    0    0    0    1    0    0    0    0    0    0    1    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    1    0    0    3    0    1    0    0    0    0    0    0    0
##      2125 2126 2127 2128 2129 2130 2131 2132 2133 2134 2135 2136 2137 2138 2139
## T1_1    0    0    0    0    0    0    0    0    0    0    2    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    3    0    0    0    0    1    0    0    0    0    0    0
## T7_2    0    0    0    0    0    1    0    0    0    0    0    0    3    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      2140 2141 2142 2143 2144 2145 2146 2147 2148 2149 2150 2151 2152 2153 2154
## T1_1    0    1    0    0    0    0    0    0    1    0    0    0    5    0    0
```

```
## T1_2      0    5    0    0    1    0    0    0    0    0    0    0    0    0    0
## T1_3      0    1    0    0    1    0    0    0    1    0    0    0    0    0    0
## T7_1      0    0    0    0    0    0    0    0    0    0    0    0    0    2    4
## T7_2      0    0    0    0    0    0    0    0    3    0    0    0    0    0    0
## T7_3      0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1      0    3    0    0    0    0    1    0    0    0    0    0    0    0    0
##        2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2165 2166 2167 2168 2169
## T1_1      0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## T1_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3      0    0    0    0    0    0    1    0    3    0    0    0    3    0    1
## T7_1      0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2      0    0    0    0    0    0    0    0    0    1    0    0    0    0    2
## T7_3      0    0    0    0    2    0    0    0    0    0    0    0    0    0    0
## DF_1      0    1    1    1    0    0    0    0    0    0    1    0    0    0    0
##        2170 2171 2172 2173 2174 2175 2176 2177 2178 2179 2180 2181 2182 2183 2184
## T1_1      0    0    0    0    2    0    0    0    0    0    0    0    0    0    0
## T1_2      0    0    0    0    0    0    0    1    0    1    0    1    2    0    0
## T1_3      0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## T7_1      0    0    0    0    0    0    0    4    0    1    0    0    1    2    1
## T7_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1      0    0    0    0    0    0    0    0    0    1    0    0    0    0    1
##        2185 2186 2187 2188 2189 2190 2191 2192 2193 2194 2195 2196 2197 2198 2199
## T1_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2      1    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## T1_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1      0    0    2    0    0    1    5    0    1    0    1    1    0    0    0
## T7_2      0    0    0    0    0    0    0    0    0    0    0    2    0    0    0
## T7_3      0    0    0    0    0    0    0    0    1    0    0    2    0    0    0
## DF_1      0    0    0    0    2    0    0    0    0    0    0    0    0    0    2
##        2200 2201 2202 2203 2204 2205 2206 2207 2208 2209 2210 2211 2212 2213 2214
## T1_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2      0    2    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1      3    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2      0    2    0    0    0    2    0    0    0    0    0    0    0    0    0
## T7_3      0    0    1    0    0    0    0    2    0    0    3    0    0    0    0
## DF_1      0    0    0    0    0    0    0    0    3    0    0    0    0    0    1
##        2215 2216 2217 2218 2219 2220 2221 2222 2223 2224 2225 2226 2227 2228 2229
## T1_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2      0    0    2    0    2    0    0    0    0    0    0    0    0    0    0
## T1_3      0    2    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1      3    0    0    0    1    1    0    0    0    0    0    0    0    1    0
## T7_2      0    1    0    0    0    0    0    2    0    1    0    0    0    0    0
## T7_3      0    0    0    0    0    1    0    1    0    2    0    0    0    3    2
## DF_1      0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
##        2230 2231 2232 2233 2234 2235 2236 2237 2238 2239 2240 2241 2242 2243 2244
## T1_1      0    0    0    3    0    0    0    1    0    0    0    0    0    0    0
## T1_2      0    0    0    0    0    0    0    3    1    0    0    0    0    0    1
## T1_3      0    0    1    0    0    0    0    0    0    2    0    0    0    0    0
## T7_1      0    0    2    0    0    0    0    0    0    1    0    0    0    0    0
## T7_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3      0    0    1    0    1    0    3    0    0    1    0    0    0    0    0
## DF_1      3    0    0    0    0    1    0    0    0    1    0    2    2    0    0
```

```
##      2245 2246 2247 2248 2249 2250 2251 2252 2253 2254 2255 2256 2257 2258 2259
## T1_1    1    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    2    0    0    0    0    0
## T7_1    0    0    0    0    0    1    0    0    1    4    0    0    0    0    0
## T7_2    1    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## T7_3    0    3    0    0    0    2    0    0    0    1    1    0    3    0    0
## DF_1    0    0    0    1    0    0    0    0    0    2    1    1    0    0    0
##      2260 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    2    0    0    0    0    0    2    0    0    0
## T1_3    1    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    1    0    0    0    0    1    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    2
## DF_1    0    0    1    0    0    0    0    0    0    0    0    1    0    0    0
##      2275 2276 2277 2278 2279 2280 2281 2282 2283 2284 2285 2286 2287 2288 2289
## T1_1    0    0    0    2    0    0    0    0    0    0    0    1    0    0    0
## T1_2    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    1    2    0    0    1    0    0    1
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    1    0    0    0    0    0    3
## DF_1    0    0    0    0    3    0    0    0    0    0    0    1    0    0    0
##      2290 2291 2292 2293 2294 2295 2296 2297 2298 2299 2300 2301 2302 2303 2304
## T1_1    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    2    0    0    0    0    0    0    0    1    0    1    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    3    0    0
## T7_3    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## DF_1    3    0    0    0    0    0    0    0    0    0    0    0    1    0    0
##      2305 2306 2307 2308 2309 2310 2311 2312 2313 2314 2315 2316 2317 2318 2319
## T1_1    0    0    0    3    0    0    0    0    0    0    0    4    0    0    0
## T1_2    1    0    0    0    0    0    0    0    0    0    0    5    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    1    0    0    0    2    0    0    0    0    0    0    0    0    0    3
## T7_2    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    3    0    0    0    0    0    0    0    0    0
## DF_1    0    1    0    0    0    0    0    0    0    0    0    0    0    3    4
##      2320 2321 2322 2323 2324 2325 2326 2327 2328 2329 2330 2331 2332 2333 2334
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    2    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    2    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    1    0    1    0    0    5    2    0    0    0    0    0    0    0
##      2335 2336 2337 2338 2339 2340 2341 2342 2343 2344 2345 2346 2347 2348 2349
## T1_1    0    3    0    0    0    0    0    0    0    0    0    3    0    0    2
## T1_2    0    1    0    0    0    0    0    0    0    0    3    0    0    0    1
## T1_3    0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    1    0    0    1    0    0    2    1    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
```

```
## T7_3       0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##         2350 2351 2352 2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364
## T1_1       0    0    0    0    0    0    0    2    0    0    0    3    0    0    0
## T1_2       0    0    0    0    0    1    0    0    1    0    0    0    0    2    0
## T1_3       0    0    0    0    0    0    0    3    0    0    1    0    0    0    0
## T7_1       0    0    0    0    0    0    0    0    0    0    0    0    0    2    0
## T7_2       0    0    0    0    3    0    0    0    0    0    3    0    0    0    0
## T7_3       0    0    0    0    0    0    0    0    0    0    1    0    0    1    0
## DF_1       0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
##         2365 2366 2367 2368 2369 2370 2371 2372 2373 2374 2375 2376 2377 2378 2379
## T1_1       0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T1_2       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3       0    0    0    2    0    0    0    0    0    0    0    0    0    0    0
## T7_1       0    0    3    0    1    0    0    1    2    0    0    0    0    0    1
## T7_2       0    0    0    1    0    0    0    0    0    0    0    0    3    0    0
## T7_3       2    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## DF_1       0    0    0    0    0    0    0    0    2    0    0    0    0    0    0
##         2380 2381 2382 2383 2384 2385 2386 2387 2388 2389 2390 2391 2392 2393 2394
## T1_1       0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## T1_2       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1       0    0    0    0    1    0    0    0    0    0    0    0    0    3    0
## T7_2       0    0    0    0    1    0    1    0    0    0    0    0    0    0    0
## T7_3       0    0    0    0    2    0    0    0    3    1    0    0    0    0    0
## DF_1       0    0    4    0    0    0    0    0    0    0    0    0    0    0    0
##         2395 2396 2397 2398 2399 2400 2401 2402 2403 2404 2405 2406 2407 2408 2409
## T1_1       0    0    0    0    0    0    0    0    2    1    0    0    0    0    0
## T1_2       0    0    0    0    0    0    0    0    1    2    0    0    0    0    0
## T1_3       0    0    0    1    0    0    0    0    0    0    0    0    0    2    0
## T7_1       0    0    1    0    0    2    0    0    0    0    0    0    0    0    3
## T7_2       0    0    3    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3       0    0    0    0    2    0    0    0    0    0    0    0    0    0    0
## DF_1       0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
##         2410 2411 2412 2413 2414 2415 2416 2417 2418 2419 2420 2421 2422 2423 2424
## T1_1       0    0    0    1    0    0    0    0    0    1    0    0    0    0    0
## T1_2       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3       0    2    0    0    0    0    0    0    0    1    0    0    0    1    0
## T7_1       0    0    0    2    0    0    0    0    0    0    0    0    0    2    0
## T7_2       0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## T7_3       0    0    0    0    0    0    0    0    0    0    0    0    0    0    2
## DF_1       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##         2425 2426 2427 2428 2429 2430 2431 2432 2433 2434 2435 2436 2437 2438 2439
## T1_1       0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## T1_2       0    0    0    0    0    0    0    0    3    1    0    0    0    0    0
## T1_3       1    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## T7_1       0    0    0    0    0    0    1    0    0    1    0    2    2    0    0
## T7_2       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3       0    0    0    0    0    0    0    0    0    0    0    2    0    0    0
## DF_1       0    0    0    0    0    0    0    2    0    0    0    1    0    1    0
##         2440 2441 2442 2443 2444 2445 2446 2447 2448 2449 2450 2451 2452 2453 2454
## T1_1       0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## T1_2       0    0    0    0    0    0    0    0    2    0    0    0    0    0    0
## T1_3       0    0    1    0    0    0    0    0    0    0    0    2    0    0    0
```

```
## T7_1     0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
## T7_2     0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## T7_3     2    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1     0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
##       2455 2456 2457 2458 2459 2460 2461 2462 2463 2464 2465 2466 2467 2468 2469
## T1_1     0    0    0    0    0    0    0    0    0    2    0    0    0    0    0
## T1_2     0    0    0    0    2    0    2    0    0    0    0    0    0    0    0
## T1_3     0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T7_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2     2    0    0    0    0    0    0    1    0    0    0    0    2    0    0
## T7_3     0    2    0    0    0    0    0    1    0    0    0    0    0    0    0
## DF_1     0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
##       2470 2471 2472 2473 2474 2475 2476 2477 2478 2479 2480 2481 2482 2483 2484
## T1_1     0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2     0    2    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3     0    0    0    0    2    0    0    0    0    0    0    0    2    0    0
## T7_1     0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## T7_2     0    1    0    0    0    0    0    0    2    2    0    0    0    0    0
## T7_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    2
## DF_1     0    6    0    0    0    0    0    3    1    0    0    0    0    0    0
##       2485 2486 2487 2488 2489 2490 2491 2492 2493 2494 2495 2496 2497 2498 2499
## T1_1     0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
## T1_2     0    0    0    1    0    1    0    0    0    0    2    0    0    0    1
## T1_3     0    0    0    1    0    2    0    0    0    0    0    0    0    0    1
## T7_1     0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## T7_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## T7_3     2    0    0    0    4    1    0    0    0    1    0    0    0    0    0
## DF_1     0    0    0    0    0    0    0    0    0    0    0    2    0    0    0
##       2500 2501 2502 2503 2504 2505 2506 2507 2508 2509 2510 2511 2512 2513 2514
## T1_1     0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## T1_2     0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## T1_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1     0    0    0    0    0    0    0    2    0    0    0    0    0    0    0
## T7_2     0    2    0    0    2    0    0    0    0    0    0    0    0    0    0
## T7_3     0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## DF_1     2    0    0    0    0    1    0    0    0    0    0    0    0    1    0
##       2515 2516 2517 2518 2519 2520 2521 2522 2523 2524 2525 2526 2527 2528 2529
## T1_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2     0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## T1_3     0    0    2    0    0    0    0    0    0    0    1    0    0    0    0
## T7_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2     0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## T7_3     0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## DF_1     0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
##       2530 2531 2532 2533 2534 2535 2536 2537 2538 2539 2540 2541 2542 2543 2544
## T1_1     0    1    0    0    0    1    2    0    0    0    0    0    0    0    0
## T1_2     0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## T1_3     0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1     0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## T7_2     0    0    0    0    0    0    0    1    0    0    0    1    0    0    2
## T7_3     0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##       2545 2546 2547 2548 2549 2550 2551 2552 2553 2554 2555 2556 2557 2558 2559
## T1_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
## T1_2     0    0    0    0    1    0    0    0    0    0    0    0    0    1    0
## T1_3     0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T7_1     0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2     0    1    0    0    0    2    0    0    0    0    0    0    0    0    0
## T7_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1     0    2    0    0    0    0    0    0    0    0    0    0    0    0    2
##       2560 2561 2562 2563 2564 2565 2566 2567 2568 2569 2570 2571 2572 2573 2574
## T1_1     2    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## T1_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1     0    2    0    0    0    0    0    0    0    0    0    1    0    0    0
## T7_2     0    0    0    0    0    0    0    0    0    2    0    0    0    0    0
## T7_3     0    0    0    0    0    0    0    2    0    0    0    0    0    0    0
## DF_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##       2575 2576 2577 2578 2579 2580 2581 2582 2583 2584 2585 2586 2587 2588 2589
## T1_1     0    0    0    0    0    0    0    0    5    0    1    0    0    0    0
## T1_2     0    0    1    0    0    2    0    0    1    0    0    0    0    0    0
## T1_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1     0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2     0    0    0    0    0    0    0    0    0    0    0    0    0    2    0
## T7_3     0    0    0    0    0    0    0    2    0    0    0    0    0    0    0
## DF_1     0    0    0    0    0    0    0    0    0    0    0    2    0    0    0
##       2590 2591 2592 2593 2594 2595 2596 2597 2598 2599 2600 2601 2602 2603 2604
## T1_1     0    0    0    0    1    0    0    0    0    0    0    0    2    0    0
## T1_2     0    0    0    1    1    0    0    0    0    0    2    0    0    0    0
## T1_3     0    0    0    0    1    0    0    0    1    0    0    0    0    0    0
## T7_1     0    0    0    0    2    0    0    0    2    0    0    0    0    0    0
## T7_2     2    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3     0    0    0    0    3    0    0    0    0    0    0    0    0    0    0
## DF_1     0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
##       2605 2606 2607 2608 2609 2610 2611 2612 2613 2614 2615 2616 2617 2618 2619
## T1_1     0    0    0    0    0    0    0    0    0    0    2    0    0    0    0
## T1_2     0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## T1_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1     2    2    0    0    1    0    0    0    0    0    0    2    2    0    2
## T7_2     0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T7_3     1    0    0    0    1    0    0    0    0    0    0    1    0    0    0
## DF_1     0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
##       2620 2621 2622 2623 2624 2625 2626 2627 2628 2629 2630 2631 2632 2633 2634
## T1_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    2
## T1_2     0    0    0    0    0    0    0    0    0    0    0    3    0    0    1
## T1_3     0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## T7_1     1    0    0    0    0    0    2    0    0    0    0    0    0    2    0
## T7_2     1    0    0    0    0    1    0    0    0    0    1    0    0    0    0
## T7_3     0    0    0    0    0    1    0    0    0    0    0    0    1    0    0
## DF_1     0    0    1    1    0    0    0    0    0    1    0    0    0    0    0
##       2635 2636 2637 2638 2639 2640 2641 2642 2643 2644 2645 2646 2647 2648 2649
## T1_1     0    0    0    0    0    0    2    0    0    0    0    0    0    1    0
## T1_2     0    0    0    0    0    2    1    0    0    0    0    0    0    0    0
## T1_3     0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## T7_1     1    0    1    2    0    0    0    0    0    0    0    0    0    0    0
## T7_2     2    0    0    0    0    0    0    0    2    0    0    0    0    0    0
## T7_3     0    1    0    2    0    0    0    0    0    0    0    0    0    0    0
## DF_1     0    0    0    0    0    0    0    0    0    0    0    2    1    0    0
```

```
##      2650 2651 2652 2653 2654 2655 2656 2657 2658 2659 2660 2661 2662 2663 2664
## T1_1    0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## T1_2    0    0    0    0    0    2    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    3    0    0    1    0    0    0    1
## T7_1    0    0    0    0    0    0    0    1    0    0    0    1    0    0    0
## T7_2    0    0    0    2    0    0    0    0    0    0    0    0    0    0    2
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
##      2665 2666 2667 2668 2669 2670 2671 2672 2673 2674 2675 2676 2677 2678 2679
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    2    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    2    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    2    0    0    1    0    0    0    0
## DF_1    0    0    2    0    0    2    0    0    0    0    0    0    0    0    0
##      2680 2681 2682 2683 2684 2685 2686 2687 2688 2689 2690 2691 2692 2693 2694
## T1_1    0    0    0    0    2    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    2    0    0    0    0    0    1    0    0    0
## T7_2    0    0    1    0    0    0    0    0    0    0    0    2    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    2    0    1    0    0    0
## DF_1    0    0    3    0    0    0    2    0    0    0    0    1    0    0    0
##      2695 2696 2697 2698 2699 2700 2701 2702 2703 2704 2705 2706 2707 2708 2709
## T1_1    0    2    0    0    0    0    0    0    0    0    0    0    1    0    0
## T1_2    0    0    2    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    2    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    1    0    0    0    2    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    1    2    0    0    0    0    0    0    0    2
##      2710 2711 2712 2713 2714 2715 2716 2717 2718 2719 2720 2721 2722 2723 2724
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    1    2    0    0    0    0    0    2    0    1
## T1_3    0    0    2    0    0    1    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    1    0    0    0    0    0    0    0    0    0    1    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    1    0    0    0    0    0    0    0    0    0    1    0
##      2725 2726 2727 2728 2729 2730 2731 2732 2733 2734 2735 2736 2737 2738 2739
## T1_1    0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## T1_2    0    0    1    0    1    1    0    1    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    2    3    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    1    0    0    0    0    0    0    0    1
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## DF_1    0    0    0    2    0    0    0    0    0    0    2    0    0    0    0
##      2740 2741 2742 2743 2744 2745 2746 2747 2748 2749 2750 2751 2752 2753 2754
## T1_1    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    2    0
## T1_3    0    0    0    0    2    0    0    3    0    0    3    0    0    0    0
## T7_1    0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

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```
## T7_3    0    1    0    0    0    0    0    0    0    0    0    0    2    0    2
## DF_1    0    0    1    0    0    2    2    0    0    2    0    0    0    0    0
##      2755 2756 2757 2758 2759 2760 2761 2762 2763 2764 2765 2766 2767 2768 2769
## T1_1    0    0    2    0    0    0    0    0    0    0    1    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    2    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    1    0    0    0    0    0    0    2    0    0
## T7_3    0    0    0    1    0    0    0    0    0    0    0    0    0    0    2
## DF_1    0    0    0    0    0    0    0    0    0    0    1    2    0    0    0
##      2770 2771 2772 2773 2774 2775 2776 2777 2778 2779 2780 2781 2782 2783 2784
## T1_1    0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## T1_2    1    0    0    0    0    0    1    0    0    0    0    2    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    2    0    0    0    0    2
## T7_3    0    0    2    0    0    0    0    0    0    0    0    0    1    0    0
## DF_1    0    2    0    0    0    0    0    0    0    0    0    0    0    0    0
##      2785 2786 2787 2788 2789 2790 2791 2792 2793 2794 2795 2796 2797 2798 2799
## T1_1    0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## T1_3    0    0    0    0    0    0    3    0    0    0    0    0    0    0    0
## T7_1    0    0    1    0    0    0    0    0    0    0    0    0    1    0    0
## T7_2    2    0    1    0    0    0    0    0    0    0    0    2    0    1    0
## T7_3    1    2    0    1    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    1    0    2    0    0    1    0    0    0    0    0    0
##      2800 2801 2802 2803 2804 2805 2806 2807 2808 2809 2810 2811 2812 2813 2814
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    2    0    1    0    0    2    0    0    0    0    0    0
## T7_1    0    0    0    0    0    1    0    0    0    0    0    0    0    0    2
## T7_2    0    0    0    0    0    0    0    0    0    1    0    0    1    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    1    0    0    0    1    0    0    0    0    0    0    0    0    0
##      2815 2816 2817 2818 2819 2820 2821 2822 2823 2824 2825 2826 2827 2828 2829
## T1_1    0    0    1    2    0    1    0    1    0    0    0    0    0    0    2
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## T7_1    3    0    0    0    0    5    0    0    0    0    0    0    0    0    1
## T7_2    0    0    0    0    0    0    0    1    1    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    2    0    0    0    0    0    0    2    0    0    1
##      2830 2831 2832 2833 2834 2835 2836 2837 2838 2839 2840 2841 2842 2843 2844
## T1_1    0    2    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    2    0
## T7_1    0    0    0    0    2    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    1    0    0    0    0    1    0    1    0    0    2    0    0
##      2845 2846 2847 2848 2849 2850 2851 2852 2853 2854 2855 2856 2857 2858 2859
## T1_1    0    2    0    0    0    0    0    0    0    0    0    0    0    1    0
## T1_2    0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    2    0    0
```

```
## T7_1      0     0     0     0     0     1     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     2     0     0     1     0
## T7_3      0     0     0     0     0     1     0     0     0     0     0     2     0     0     2
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
##        2860  2861  2862  2863  2864  2865  2866  2867  2868  2869  2870  2871  2872  2873  2874
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     2     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     2     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     1     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
##        2875  2876  2877  2878  2879  2880  2881  2882  2883  2884  2885  2886  2887  2888  2889
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     2     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     2     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     1     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     1     1     2     0
##        2890  2891  2892  2893  2894  2895  2896  2897  2898  2899  2900  2901  2902  2903  2904
## T1_1      0     0     0     0     1     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     1     0     0     0     0     0
## T1_3      0     2     0     0     1     0     0     0     0     1     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     3     0     1     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     2     0     1     1     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     1     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     2     0     0     0     0     0     1
##        2905  2906  2907  2908  2909  2910  2911  2912  2913  2914  2915  2916  2917  2918  2919
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     1     1     0     0     1     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     1     0     0     0     0     0     0     0
## T7_1      0     0     0     1     0     0     0     0     0     1     0     0     0     2     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     2     0     0     1     0     0     1     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
##        2920  2921  2922  2923  2924  2925  2926  2927  2928  2929  2930  2931  2932  2933  2934
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      1     0     0     0     0     0     0     0     0     0     0     0     1     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     2     0     1     0
## T7_1      0     0     0     0     0     4     0     0     0     1     2     0     0     0     0
## T7_2      0     1     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     1     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     2     0     0     0     0     0     0
##        2935  2936  2937  2938  2939  2940  2941  2942  2943  2944  2945  2946  2947  2948  2949
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     1     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      1     0     0     0     0     0     0     0     0     0     0     0     0     0     1
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0     2     0     0
## T7_3      2     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     2     0     0     0
##        2950  2951  2952  2953  2954  2955  2956  2957  2958  2959  2960  2961  2962  2963  2964
## T1_1      1     0     0     0     0     0     2     0     0     0     0     0     0     0     0
```

```
## T1_2      0    0    0    0    0    0    0    0    2    0    0    0    0    0    0
## T1_3      0    0    0    0    0    0    0    0    0    0    0    0    2    0    0
## T7_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2      2    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## T7_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1      0    0    0    0    0    0    0    0    0    0    0    2    0    1    0
##        2965 2966 2967 2968 2969 2970 2971 2972 2973 2974 2975 2976 2977 2978 2979
## T1_1      1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2      0    0    0    0    0    1    0    0    0    0    0    2    0    0    0
## T1_3      0    0    0    0    0    0    0    0    0    0    0    2    0    0    0
## T7_1      0    0    0    0    0    0    0    0    0    2    2    0    0    0    0
## T7_2      0    2    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3      0    0    0    0    0    0    0    0    0    0    2    0    0    0    0
## DF_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##        2980 2981 2982 2983 2984 2985 2986 2987 2988 2989 2990 2991 2992 2993 2994
## T1_1      0    0    0    0    0    0    0    1    0    0    0    0    1    0    0
## T1_2      0    0    0    0    1    0    0    1    0    0    0    0    1    0    0
## T1_3      0    2    1    0    1    0    0    0    0    0    0    0    0    0    0
## T7_1      0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2      0    0    0    0    0    2    3    0    0    0    0    0    0    0    0
## T7_3      0    0    1    0    0    0    1    0    0    0    0    0    0    0    0
## DF_1      0    0    0    1    0    0    1    1    0    0    2    0    0    0    0
##        2995 2996 2997 2998 2999 3000 3001 3002 3003 3004 3005 3006 3007 3008 3009
## T1_1      0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## T1_2      0    0    0    0    0    1    0    0    0    0    0    0    1    0    0
## T1_3      0    0    1    0    1    1    0    0    0    0    0    0    2    0    0
## T7_1      1    0    0    0    1    0    0    2    2    0    0    0    0    0    0
## T7_2      0    0    0    0    0    0    2    0    0    0    0    0    0    0    0
## T7_3      1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1      0    0    0    0    0    0    0    1    0    0    0    2    0    0    0
##        3010 3011 3012 3013 3014 3015 3016 3017 3018 3019 3020 3021 3022 3023 3024
## T1_1      0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## T1_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3      0    0    0    0    0    0    0    0    0    0    2    0    0    0    0
## T7_1      0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## T7_2      0    0    0    0    0    0    0    0    0    0    2    0    0    0    0
## T7_3      0    0    0    0    0    2    0    2    0    0    0    0    0    0    2
## DF_1      0    0    0    0    2    0    0    0    2    0    0    0    0    0    0
##        3025 3026 3027 3028 3029 3030 3031 3032 3033 3034 3035 3036 3037 3038 3039
## T1_1      0    0    0    0    0    0    0    0    0    0    2    0    0    0    0
## T1_2      0    0    2    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3      0    0    0    0    0    0    0    0    2    0    0    0    0    0    0
## T7_1      0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## T7_2      0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## T7_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1      0    0    0    2    0    0    0    0    0    0    0    0    0    0    1
##        3040 3041 3042 3043 3044 3045 3046 3047 3048 3049 3050 3051 3052 3053 3054
## T1_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## T1_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3      0    0    0    0    0    0    2    0    0    0    0    0    0    0    0
## T7_1      0    0    0    0    2    0    0    0    0    0    0    0    0    2    1
## T7_2      0    0    0    0    0    1    0    0    0    3    0    0    0    0    1
## T7_3      0    0    0    0    0    0    0    1    0    0    0    1    0    3    0
## DF_1      0    0    0    0    0    0    0    0    4    0    0    0    0    0    0
```

```
##       3055 3056 3057 3058 3059 3060 3061 3062 3063 3064 3065 3066 3067 3068 3069
## T1_1     0    0    0    0    0    1    0    0    0    0    0    0    1    0    0
## T1_2     0    0    0    0    2    0    2    0    0    0    0    0    0    0    2
## T1_3     0    0    0    0    0    2    0    0    0    0    0    0    3    0    0
## T7_1     0    0    0    2    0    0    0    0    0    1    0    1    0    0    0
## T7_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3     2    0    0    0    0    0    0    0    0    1    0    1    0    0    0
## DF_1     0    0    0    0    0    0    0    0    0    3    0    0    0    2    0
##       3070 3071 3072 3073 3074 3075 3076 3077 3078 3079 3080 3081 3082 3083 3084
## T1_1     1    0    0    0    0    0    0    0    0    0    0    0    0    0    2
## T1_2     1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3     0    4    0    0    0    1    0    0    0    0    0    0    0    1    0
## T7_1     0    0    0    0    4    0    0    0    0    0    0    0    0    0    0
## T7_2     0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
## T7_3     0    0    0    0    0    0    0    1    0    0    0    3    0    0    0
## DF_1     0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
##       3085 3086 3087 3088 3089 3090 3091 3092 3093 3094 3095 3096 3097 3098 3099
## T1_1     0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2     0    1    0    0    0    0    0    0    0    0    0    2    0    0    0
## T1_3     3    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## T7_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2     0    0    2    0    0    0    0    1    2    0    0    1    1    0    0
## T7_3     0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1     0    0    2    0    0    0    0    0    0    0    0    0    0    0    0
##       3100 3101 3102 3103 3104 3105 3106 3107 3108 3109 3110 3111 3112 3113 3114
## T1_1     0    0    0    0    0    0    0    1    0    0    0    1    0    0    0
## T1_2     0    0    0    0    0    0    0    0    0    0    0    2    0    0    0
## T1_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1     0    2    0    0    0    1    0    0    0    0    0    0    2    0    0
## T7_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3     0    0    0    0    0    2    0    0    0    0    0    0    0    0    0
## DF_1     0    0    0    0    0    0    0    0    0    0    0    0    0    2    1
##       3115 3116 3117 3118 3119 3120 3121 3122 3123 3124 3125 3126 3127 3128 3129
## T1_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3     0    0    0    0    0    0    0    0    0    0    0    2    0    0    0
## T7_1     0    0    0    0    0    0    0    0    3    0    0    0    0    0    0
## T7_2     0    0    0    0    0    0    0    0    0    0    2    0    0    0    0
## T7_3     0    0    0    2    0    0    0    0    0    0    0    0    0    0    0
## DF_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    2
##       3130 3131 3132 3133 3134 3135 3136 3137 3138 3139 3140 3141 3142 3143 3144
## T1_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2     0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## T1_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1     0    0    0    0    0    0    0    0    0    2    0    0    2    0    0
## T7_2     2    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3     0    0    0    2    0    0    0    0    0    0    0    0    0    0    0
## DF_1     0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
##       3145 3146 3147 3148 3149 3150 3151 3152 3153 3154 3155 3156 3157 3158 3159
## T1_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2     0    0    0    0    0    0    0    0    0    0    2    2    0    1    0
## T1_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
## T7_3     0     0     0     0     0     0     0     0     0     2     0     0     0     1     0
## DF_1     0     0     3     0     0     0     0     2     0     0     0     0     2     0     0
##       3160 3161 3162 3163 3164 3165 3166 3167 3168 3169 3170 3171 3172 3173 3174
## T1_1     0     0     0     0     2     0     0     0     0     0     0     2     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     1     0     0     0     0     0     0     0     0
## T7_1     0     2     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     1     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     1     0     3     2     0     2     0     0     0     2     0     1     0     0     2
##       3175 3176 3177 3178 3179 3180 3181 3182 3183 3184 3185 3186 3187 3188 3189
## T1_1     0     0     1     1     0     0     0     0     0     0     1     0     0     0     0
## T1_2     0     0     1     1     0     0     0     0     0     0     1     1     0     0     0
## T1_3     0     0     1     1     0     1     0     0     0     0     0     0     0     2     0
## T7_1     0     0     1     0     0     0     0     0     0     0     1     0     0     0     0
## T7_2     2     0     0     0     0     1     0     0     0     1     0     0     0     0     2
## T7_3     0     3     0     0     0     0     0     0     0     1     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
##       3190 3191 3192 3193 3194 3195 3196 3197 3198 3199 3200 3201 3202 3203 3204
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     1     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     1     0     0     0     0     0     0     0     0     0     0     0
## T7_2     2     0     2     3     0     0     0     0     0     0     0     0     0     0     2
## T7_3     0     2     0     2     0     2     0     0     0     0     0     0     0     0     1
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0     0     1     0
##       3205 3206 3207 3208 3209 3210 3211 3212 3213 3214 3215 3216 3217 3218 3219
## T1_1     0     0     0     0     0     1     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     1     0     1     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     2     3     0     0     0     2     0     0     0     0     2     0     0     0
## T7_3     0     0     0     1     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     2     0     0     0     0     0     0     0     0     0     2
##       3220 3221 3222 3223 3224 3225 3226 3227 3228 3229 3230 3231 3232 3233 3234
## T1_1     0     0     0     1     0     0     0     0     0     0     0     0     3     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     2     0     0     0     0     0     1     0     0     2     0     0
## T7_1     0     0     0     0     0     0     0     0     2     0     0     0     0     0     0
## T7_2     0     0     0     0     2     0     0     0     1     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     1     0     0     0     0     0     0     0     0     1     0     0     0     0
##       3235 3236 3237 3238 3239 3240 3241 3242 3243 3244 3245 3246 3247 3248 3249
## T1_1     1     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     1     0     0     0     0     0     1     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     2     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0     2     0     2
## T7_3     4     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     1     0     2     0     0     0     0     0     1     0     0     0     0     0     0
##       3250 3251 3252 3253 3254 3255 3256 3257 3258 3259 3260 3261 3262 3263 3264
## T1_1     0     2     0     0     0     0     0     0     0     0     1     0     0     1     2
## T1_2     0     0     0     0     0     0     0     0     0     0     2     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     1     0     0     0     0
```

```
## T7_1      0     0     0     0     0     0     1     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     2     0     0     0     0     0     0     1     0     0     0     0     0
##        3265  3266  3267  3268  3269  3270  3271  3272  3273  3274  3275  3276  3277  3278  3279
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     2     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     2     0     0     0     0     0     0     3     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     1     0     0     2
## T7_3      0     0     0     0     0     0     0     0     0     0     0     1     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0     1     2     0
##        3280  3281  3282  3283  3284  3285  3286  3287  3288  3289  3290  3291  3292  3293  3294
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      2     0     0     0     0     0     0     2     0     0     1     0     0     0     0
## T1_3      0     0     0     1     0     0     0     0     0     0     0     3     0     0     0
## T7_1      1     0     0     2     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     2     0     0     0     1     0     0     0     1     0     0     0     0     0
## T7_3      2     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     1     0     0     0     0     0     0     0     0     0     2
##        3295  3296  3297  3298  3299  3300  3301  3302  3303  3304  3305  3306  3307  3308  3309
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0     2     0     0
## T1_3      0     0     0     0     0     0     0     1     0     1     0     0     0     0     0
## T7_1      1     0     0     0     0     0     1     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     2     0     0     0     0     1     0     2     0     0     0     3
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
##        3310  3311  3312  3313  3314  3315  3316  3317  3318  3319  3320  3321  3322  3323  3324
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     4     0     0     0     0     1
## T7_3      0     0     0     0     0     0     0     0     0     1     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
##        3325  3326  3327  3328  3329  3330  3331  3332  3333  3334  3335  3336  3337  3338  3339
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     2     0     0     0     0     2     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     2     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     1     0     0     0     0     1
##        3340  3341  3342  3343  3344  3345  3346  3347  3348  3349  3350  3351  3352  3353  3354
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0     0     1     0
## T1_3      2     0     0     0     0     0     0     0     0     0     0     2     0     1     0
## T7_1      0     0     2     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     3     0     0     0     0     3     0     0     0     1     0     0     0
## T7_3      0     2     0     0     0     2     0     0     1     0     0     0     0     0     0
## DF_1      0     0     2     3     0     0     0     0     0     0     2     0     0     0     0
##        3355  3356  3357  3358  3359  3360  3361  3362  3363  3364  3365  3366  3367  3368  3369
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
```

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```
## T1_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1      0    0    0    0    0    0    0    2    2    0    1    0    0    0    0
## T7_2      0    1    0    0    0    3    0    0    0    0    0    0    0    0    0
## T7_3      1    0    0    0    0    0    0    0    0    0    0    3    0    0    0
## DF_1      0    0    0    0    0    0    0    0    0    2    0    0    0    1    0
##        3370 3371 3372 3373 3374 3375 3376 3377 3378 3379 3380 3381 3382 3383 3384
## T1_1      0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2      0    0    0    2    0    1    0    0    0    0    0    0    0    0    0
## T1_3      0    0    0    0    0    0    0    1    0    0    2    0    0    0    0
## T7_1      0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## T7_2      0    0    1    0    0    0    0    0    0    0    1    0    0    0    0
## T7_3      0    0    2    0    0    0    4    0    0    0    0    0    0    0    0
## DF_1      0    1    0    0    0    0    0    0    0    2    0    0    0    2    0
##        3385 3386 3387 3388 3389 3390 3391 3392 3393 3394 3395 3396 3397 3398 3399
## T1_1      0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## T1_2      0    0    0    0    0    0    2    0    0    0    0    0    0    2    0
## T1_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1      0    0    0    2    0    0    0    0    0    0    0    0    0    1    0
## T7_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3      1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1      0    0    0    0    0    0    0    1    2    0    0    0    0    0    0
##        3400 3401 3402 3403 3404 3405 3406 3407 3408 3409 3410 3411 3412 3413 3414
## T1_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    2
## T1_2      0    0    0    0    2    2    0    0    0    0    0    0    0    0    0
## T1_3      0    0    0    0    0    0    0    0    2    0    0    0    0    0    0
## T7_1      0    0    2    1    0    0    0    0    0    1    2    1    0    0    0
## T7_2      0    0    0    0    0    0    0    0    0    1    1    0    0    0    0
## T7_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## DF_1      0    0    0    0    0    0    2    0    0    0    0    0    0    0    0
##        3415 3416 3417 3418 3419 3420 3421 3422 3423 3424 3425 3426 3427 3428 3429
## T1_1      0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## T1_2      0    1    0    0    2    0    0    0    0    0    0    0    0    0    0
## T1_3      0    0    0    0    0    0    0    0    0    0    0    0    0    2    0
## T7_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3      0    0    0    3    0    0    0    0    0    0    0    0    0    0    0
## DF_1      0    0    0    1    0    0    0    0    0    0    0    0    1    0    0
##        3430 3431 3432 3433 3434 3435 3436 3437 3438 3439 3440 3441 3442 3443 3444
## T1_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1      0    0    0    1    0    0    0    0    0    0    0    0    2    0    0
## T7_2      0    0    0    0    0    0    0    0    0    0    0    0    0    2    0
## T7_3      2    0    0    0    0    0    0    0    0    0    0    0    2    0    0
## DF_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##        3445 3446 3447 3448 3449 3450 3451 3452 3453 3454 3455 3456 3457 3458 3459
## T1_1      0    0    2    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2      0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## T1_3      0    0    0    1    0    0    2    0    0    0    0    0    0    0    0
## T7_1      2    0    0    0    0    2    0    0    0    0    0    0    0    0    0
## T7_2      0    0    0    0    0    0    0    2    0    0    0    0    0    0    0
## T7_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    2
```

```
##      3460 3461 3462 3463 3464 3465 3466 3467 3468 3469 3470 3471 3472 3473 3474
## T1_1    1    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## T1_2    3    0    0    0    0    2    0    1    0    0    1    0    0    0    1
## T1_3    0    0    0    1    0    0    0    3    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    2    0    0    0    1    0    0
## DF_1    0    0    0    0    0    0    0    0    0    1    0    0    0    0    1
##      3475 3476 3477 3478 3479 3480 3481 3482 3483 3484 3485 3486 3487 3488 3489
## T1_1    0    0    0    0    0    0    1    0    0    0    0    0    1    0    0
## T1_2    0    0    0    0    1    0    0    0    0    0    0    2    0    0    1
## T1_3    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    1    0    0    0    0    0    0    0    3    0    0    0    1
## T7_2    0    0    0    0    0    3    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
##      3490 3491 3492 3493 3494 3495 3496 3497 3498 3499 3500 3501 3502 3503 3504
## T1_1    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    1    0    0    0    0    0    2    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    2    0    0    0
## T7_3    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    1    0    0    0    0    0    0    0    0    0    0    0    1
##      3505 3506 3507 3508 3509 3510 3511 3512 3513 3514 3515 3516 3517 3518 3519
## T1_1    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## T1_2    0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## T1_3    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    2    0    0    0    0    0    0    0    0    0    0    0
## T7_3    3    0    0    0    0    0    0    0    2    0    0    0    3    2    0
## DF_1    0    1    0    0    0    0    0    0    0    1    0    0    0    0    0
##      3520 3521 3522 3523 3524 3525 3526 3527 3528 3529 3530 3531 3532 3533 3534
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    2
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    2    0
## T7_1    0    0    1    0    2    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    2    0
## T7_3    0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      3535 3536 3537 3538 3539 3540 3541 3542 3543 3544 3545 3546 3547 3548 3549
## T1_1    0    2    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    2    0    2    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    2    0    0    0    0    0    0    0    0    0    0    0    0
##      3550 3551 3552 3553 3554 3555 3556 3557 3558 3559 3560 3561 3562 3563 3564
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    2    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
```

```
## T7_3    0    0    0    0    0    0    0    0    0    6    0    0    0    0    0
## DF_1    0    2    0    2    0    0    2    1    0    0    0    0    0    0    0
##       3565 3566 3567 3568 3569 3570 3571 3572 3573 3574 3575 3576 3577 3578 3579
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    1    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    1    1    0    0    0    0    0    0    1    0    0    0    0
## T7_2    0    0    0    0    2    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    2    0    0    1    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    2    0    0    0    0    1    0    2    0    0
##       3580 3581 3582 3583 3584 3585 3586 3587 3588 3589 3590 3591 3592 3593 3594
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    1    0    0    2    0    0    0    0    0    0    0    0    2    0
## T1_3    2    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    2    0    0    0
##       3595 3596 3597 3598 3599 3600 3601 3602 3603 3604 3605 3606 3607 3608 3609
## T1_1    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    2    0    0    0    1    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    1    1    2    0
##       3610 3611 3612 3613 3614 3615 3616 3617 3618 3619 3620 3621 3622 3623 3624
## T1_1    0    0    1    0    0    0    0    0    1    0    0    0    0    0    0
## T1_2    0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    2    0    0    0    0    0    0    0    0    0    1    0    0    0
## T7_1    0    0    2    0    0    0    0    0    1    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## T7_3    0    0    0    0    0    2    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    2    3    0    0    0    0    0    0
##       3625 3626 3627 3628 3629 3630 3631 3632 3633 3634 3635 3636 3637 3638 3639
## T1_1    1    0    0    0    2    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    1    0    0    0    1    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    2    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    3    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##       3640 3641 3642 3643 3644 3645 3646 3647 3648 3649 3650 3651 3652 3653 3654
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    2    0    0    2    0    0    0    2    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    2    0    0    0    3    0
## T7_1    1    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## T7_2    0    0    2    2    0    2    0    0    0    0    0    0    0    0    0
## T7_3    2    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    2
##       3655 3656 3657 3658 3659 3660 3661 3662 3663 3664 3665 3666 3667 3668 3669
## T1_1    2    0    0    0    0    0    0    0    1    0    1    0    0    0    0
## T1_2    0    0    0    0    0    0    2    0    0    0    1    0    0    0    2
## T1_3    0    0    0    0    0    0    0    0    0    0    1    2    0    2    1
```

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```
## T7_1      0    0    0    0    0    0    0    0    0    1    0    0    2    0    0
## T7_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1      0    0    2    0    0    0    0    0    0    0    0    0    0    0    1
##        3670 3671 3672 3673 3674 3675 3676 3677 3678 3679 3680 3681 3682 3683 3684
## T1_1      0    0    0    0    0    0    1    0    3    0    0    0    0    2    0
## T1_2      0    0    0    0    0    0    0    2    0    0    0    0    0    0    0
## T1_3      0    2    0    1    0    0    0    0    0    0    0    0    0    1    0
## T7_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3      0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##        3685 3686 3687 3688 3689 3690 3691 3692 3693 3694 3695 3696 3697 3698 3699
## T1_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2      0    0    0    1    0    0    2    0    0    3    0    0    0    0    0
## T1_3      0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## T7_1      0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## T7_2      2    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1      0    2    2    0    0    0    0    0    1    0    0    2    0    0    0
##        3700 3701 3702 3703 3704 3705 3706 3707 3708 3709 3710 3711 3712 3713 3714
## T1_1      0    2    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1      0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## T7_2      0    0    0    0    2    0    0    0    0    0    0    0    0    0    0
## T7_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1      0    0    0    0    0    0    0    0    0    1    2    0    2    0    0
##        3715 3716 3717 3718 3719 3720 3721 3722 3723 3724 3725 3726 3727 3728 3729
## T1_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2      0    0    0    0    0    0    0    0    0    1    0    0    0    2    0
## T1_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3      0    0    1    0    0    0    1    0    0    0    0    2    0    0    0
## DF_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##        3730 3731 3732 3733 3734 3735 3736 3737 3738 3739 3740 3741 3742 3743 3744
## T1_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2      0    0    0    2    1    0    0    0    0    0    0    0    0    0    0
## T1_3      0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T7_1      0    0    0    0    0    0    0    0    0    0    0    2    0    2    0
## T7_2      0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## T7_3      0    0    0    0    0    0    0    2    0    0    0    0    1    0    0
## DF_1      0    0    0    0    0    0    0    0    2    1    0    0    0    0    0
##        3745 3746 3747 3748 3749 3750 3751 3752 3753 3754 3755 3756 3757 3758 3759
## T1_1      1    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## T1_2      0    2    1    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3      1    0    1    0    0    0    0    0    0    0    0    1    0    0    0
## T7_1      2    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## T7_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3      0    0    0    0    0    2    0    0    2    0    0    0    0    0    2
## DF_1      0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
##        3760 3761 3762 3763 3764 3765 3766 3767 3768 3769 3770 3771 3772 3773 3774
## T1_1      0    0    0    2    0    0    0    0    0    0    0    0    0    0    1
```

```
## T1_2      0    2    0    0    1    0    0    0    0    0    0    0    0    0    0
## T1_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    2
## T7_1      0    0    0    0    2    0    0    0    0    0    1    0    0    0    0
## T7_2      0    0    3    0    0    1    1    0    0    0    0    0    0    0    0
## T7_3      0    0    0    1    0    0    1    0    0    0    0    0    0    0    0
## DF_1      0    0    0    0    0    0    0    2    2    0    0    0    0    0    1
##        3775 3776 3777 3778 3779 3780 3781 3782 3783 3784 3785 3786 3787 3788 3789
## T1_1      0    0    0    0    0    0    2    1    0    0    0    0    0    0    0
## T1_2      0    2    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1      2    0    0    0    0    2    0    0    0    0    0    0    2    0    0
## T7_2      0    0    1    0    0    0    0    0    0    0    0    0    0    1    0
## T7_3      0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## DF_1      0    0    0    0    0    0    0    0    0    2    0    0    0    0    0
##        3790 3791 3792 3793 3794 3795 3796 3797 3798 3799 3800 3801 3802 3803 3804
## T1_1      0    0    0    0    0    0    0    0    0    0    0    0    0    2    0
## T1_2      0    0    0    0    0    0    0    0    0    0    1    1    0    0    0
## T1_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2      0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3      0    1    2    0    0    0    2    0    0    0    0    0    0    0    0
## DF_1      0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
##        3805 3806 3807 3808 3809 3810 3811 3812 3813 3814 3815 3816 3817 3818 3819
## T1_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2      0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## T1_3      0    0    0    0    0    1    0    0    0    0    0    0    1    0    0
## T7_1      0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## T7_2      0    0    0    0    0    3    2    0    0    0    0    0    0    0    0
## T7_3      0    0    0    0    0    0    4    0    1    0    0    0    0    0    2
## DF_1      0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
##        3820 3821 3822 3823 3824 3825 3826 3827 3828 3829 3830 3831 3832 3833 3834
## T1_1      1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1      0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
## T7_2      0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3      1    0    0    0    0    0    0    1    0    0    0    0    0    0    0
## DF_1      0    1    0    0    1    0    0    1    0    0    0    0    2    0    0
##        3835 3836 3837 3838 3839 3840 3841 3842 3843 3844 3845 3846 3847 3848 3849
## T1_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2      0    0    0    0    0    0    1    0    0    0    0    2    0    0    0
## T1_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2      0    0    0    0    0    0    0    0    0    0    1    0    0    0    2
## T7_3      0    0    0    2    2    0    0    0    0    0    0    0    0    0    0
## DF_1      0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
##        3850 3851 3852 3853 3854 3855 3856 3857 3858 3859 3860 3861 3862 3863 3864
## T1_1      0    0    1    0    0    0    0    0    0    0    0    0    1    0    0
## T1_2      0    0    1    0    0    0    0    0    2    0    0    0    1    0    0
## T1_3      0    0    0    0    0    0    0    0    0    0    0    0    0    2    0
## T7_1      0    0    2    0    2    1    0    0    0    0    0    0    0    0    0
## T7_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    2
## T7_3      0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## DF_1      0    0    0    0    0    2    1    0    0    0    0    1    0    0    0
```

```
##      3865 3866 3867 3868 3869 3870 3871 3872 3873 3874 3875 3876 3877 3878 3879
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## T1_3    0    2    1    2    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    1    0    2    0    0    0    0    0    0    2
## T7_2    0    0    0    0    0    0    0    0    0    3    0    1    0    0    0
## T7_3    0    0    0    0    2    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    1    2    0    0    0    0    1    2    0    0
##      3880 3881 3882 3883 3884 3885 3886 3887 3888 3889 3890 3891 3892 3893 3894
## T1_1    4    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## T1_2    0    0    0    0    0    1    0    0    0    4    1    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    1    0    1    0    0    1    0    0    2    0    0    1    0    0    0
## T7_2    2    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    1    0    0    0    2    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      3895 3896 3897 3898 3899 3900 3901 3902 3903 3904 3905 3906 3907 3908 3909
## T1_1    0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    2    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    1    0    0    0    0    4    0    1
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    2    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      3910 3911 3912 3913 3914 3915 3916 3917 3918 3919 3920 3921 3922 3923 3924
## T1_1    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    2    0    0
## T7_1    0    0    0    0    0    0    0    0    2    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    1    0    0    0    2    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    1    0    1    0    0    0    0
##      3925 3926 3927 3928 3929 3930 3931 3932 3933 3934 3935 3936 3937 3938 3939
## T1_1    0    0    0    2    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    1    0    2    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    2    0    0    2    0    2    0    0    0    0    0    0    0    0
## T7_2    2    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    1    0    0    0    0    0    2
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      3940 3941 3942 3943 3944 3945 3946 3947 3948 3949 3950 3951 3952 3953 3954
## T1_1    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    2    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    2    0    0    0    0    0    0    0    0    2    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    1    0    0    1    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    1    0    1    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      3955 3956 3957 3958 3959 3960 3961 3962 3963 3964 3965 3966 3967 3968 3969
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## T1_2    0    0    0    0    0    0    0    0    0    0    1    0    2    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    2    2    0    0    0
## T7_2    0    0    2    0    0    0    0    0    0    0    0    0    0    0    1
```

```
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     2     0     1     0     0     0     0     0     0     0     0
##       3970 3971 3972 3973 3974 3975 3976 3977 3978 3979 3980 3981 3982 3983 3984
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     1     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     2     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     1     0     0     2     0     0     0     0     0     0     0     0     0     1     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     2     0     0
## DF_1     0     2     3     0     0     0     0     0     0     2     0     0     0     2     0
##       3985 3986 3987 3988 3989 3990 3991 3992 3993 3994 3995 3996 3997 3998 3999
## T1_1     0     1     0     1     0     0     0     1     0     0     0     0     1     0     0
## T1_2     0     0     0     0     0     0     0     1     0     0     0     0     1     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     1     0     0     3     0     0     0     1     0     0     0     0     1
## T7_2     0     0     1     0     0     0     0     0     0     0     0     0     0     0     1
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     1
## DF_1     1     1     0     0     0     0     0     0     1     1     0     0     0     0     0
##       4000 4001 4002 4003 4004 4005 4006 4007 4008 4009 4010 4011 4012 4013 4014
## T1_1     0     0     1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     2     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     1     0     0     0     0     0     0     0     0     0
## T7_1     0     1     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     1     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     1     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     2     0     0     0     0     0     0     0     0     0     0
##       4015 4016 4017 4018 4019 4020 4021 4022 4023 4024 4025 4026 4027 4028 4029
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     2     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     1     0     0     0     0     0     0     1
## T7_1     0     0     0     0     0     0     0     1     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     1     0     0     0     0     0     0     2     1
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     2
## DF_1     0     0     2     0     0     0     2     0     0     0     2     0     0     0     0
##       4030 4031 4032 4033 4034 4035 4036 4037 4038 4039 4040 4041 4042 4043 4044
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     1     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     1     2     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0     1     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     3     0     0     1     0     0
## DF_1     0     0     0     0     0     1     0     0     0     0     0     0     0     0     0
##       4045 4046 4047 4048 4049 4050 4051 4052 4053 4054 4055 4056 4057 4058 4059
## T1_1     2     0     0     0     0     0     1     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     1     0     0     0     0     1     0     2
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0     1     0     0
## T7_1     0     0     1     0     0     1     0     0     0     0     2     0     0     1     1
## T7_2     0     1     0     0     0     0     0     0     0     0     0     0     0     0     1
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     1     0     0     0     0     0     0     0     0     0     0     0
##       4060 4061 4062 4063 4064 4065 4066 4067 4068 4069 4070 4071 4072 4073 4074
## T1_1     0     0     0     0     0     0     0     0     0     1     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
```

```
## T7_1      0      0      0      0      2      0      2      0      0      1      0      0      0      1      0
## T7_2      0      0      0      0      0      2      0      0      0      0      0      0      0      0      0
## T7_3      0      0      0      0      0      0      0      1      0      0      0      0      0      2      0
## DF_1      0      0      0      0      0      0      0      0      0      0      0      0      0      0      1
##        4075 4076 4077 4078 4079 4080 4081 4082 4083 4084 4085 4086 4087 4088 4089
## T1_1      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## T1_2      0      0      0      0      0      0      1      0      0      0      0      0      0      0      0
## T1_3      0      0      0      0      0      0      0      0      0      0      2      0      0      0      0
## T7_1      0      0      0      0      0      0      0      0      0      1      0      0      0      0      0
## T7_2      0      0      2      0      0      0      0      0      0      0      0      0      0      0      0
## T7_3      1      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## DF_1      0      0      0      0      0      0      1      0      0      0      0      0      0      0      0
##        4090 4091 4092 4093 4094 4095 4096 4097 4098 4099 4100 4101 4102 4103 4104
## T1_1      0      0      0      0      2      0      0      0      0      0      0      0      0      0      0
## T1_2      0      1      0      1      0      0      0      0      0      0      0      0      0      0      0
## T1_3      1      0      0      0      0      0      0      0      0      0      1      0      0      0      0
## T7_1      0      0      0      0      0      0      0      0      2      0      0      0      0      0      0
## T7_2      0      0      0      0      0      0      0      1      0      0      0      0      0      0      0
## T7_3      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## DF_1      0      1      2      0      0      0      0      0      0      0      0      1      0      0      0
##        4105 4106 4107 4108 4109 4110 4111 4112 4113 4114 4115 4116 4117 4118 4119
## T1_1      0      0      2      0      1      0      0      0      0      0      0      2      0      0      0
## T1_2      0      0      0      1      1      0      0      0      0      0      0      0      0      0      0
## T1_3      0      2      0      0      0      0      0      0      0      0      0      0      0      0      0
## T7_1      0      0      0      0      0      0      0      2      0      0      0      0      0      0      0
## T7_2      0      0      0      0      0      0      0      0      0      0      2      0      0      0      0
## T7_3      0      0      1      0      0      0      0      0      0      0      0      2      0      0      0
## DF_1      0      0      0      0      0      0      2      0      0      0      0      1      0      0      0
##        4120 4121 4122 4123 4124 4125 4126 4127 4128 4129 4130 4131 4132 4133 4134
## T1_1      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## T1_2      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## T1_3      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## T7_1      0      0      0      0      0      0      0      0      0      0      1      0      0      0      2
## T7_2      0      0      0      0      2      0      0      0      0      0      0      1      0      0      0
## T7_3      0      0      0      0      0      0      0      0      0      0      0      1      0      0      0
## DF_1      0      0      0      0      0      3      0      0      0      0      1      0      2      0      0
##        4135 4136 4137 4138 4139 4140 4141 4142 4143 4144 4145 4146 4147 4148 4149
## T1_1      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## T1_2      2      0      0      0      0      0      0      0      0      0      0      0      0      2      0
## T1_3      0      0      0      0      0      0      0      0      0      0      2      0      0      0      0
## T7_1      2      0      0      0      0      1      1      0      0      2      0      1      0      0      0
## T7_2      0      2      0      0      1      5      1      0      0      0      0      0      0      0      0
## T7_3      0      0      0      0      0      1      0      0      0      0      0      2      0      0      0
## DF_1      0      0      0      0      1      0      0      0      0      0      0      0      1      0      0
##        4150 4151 4152 4153 4154 4155 4156 4157 4158 4159 4160 4161 4162 4163 4164
## T1_1      0      0      0      0      1      0      0      0      0      0      0      0      0      0      0
## T1_2      0      0      0      0      0      0      0      0      0      0      0      2      0      0      0
## T1_3      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## T7_1      0      0      0      0      0      0      2      0      0      0      0      0      0      1      0
## T7_2      0      0      0      0      0      0      0      0      2      0      0      0      0      0      0
## T7_3      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## DF_1      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
##        4165 4166 4167 4168 4169 4170 4171 4172 4173 4174 4175 4176 4177 4178 4179
## T1_1      0      0      0      1      2      0      0      0      0      0      0      0      0      0      0
```

```
## T1_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3      0    0    0    0    0    2    0    1    0    0    0    0    0    0    0
## T7_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2      0    0    0    1    0    0    0    0    0    0    0    2    0    0    0
## T7_3      0    0    0    1    0    0    0    0    0    0    0    2    0    0    0
## DF_1      0    0    0    0    0    0    0    0    0    1    0    1    0    0    2
##        4180 4181 4182 4183 4184 4185 4186 4187 4188 4189 4190 4191 4192 4193 4194
## T1_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2      0    0    0    0    0    1    0    0    0    1    0    0    0    0    1
## T1_3      0    0    0    0    0    2    0    0    0    0    0    0    0    0    0
## T7_1      0    1    0    0    0    0    0    0    0    0    1    0    0    0    0
## T7_2      1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3      0    0    0    0    2    0    0    0    0    0    0    0    0    0    0
## DF_1      0    0    0    0    0    0    2    0    0    0    0    0    2    1    0
##        4195 4196 4197 4198 4199 4200 4201 4202 4203 4204 4205 4206 4207 4208 4209
## T1_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    2
## T1_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## T7_3      0    0    0    0    0    0    0    0    0    0    2    0    0    3    0
## DF_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##        4210 4211 4212 4213 4214 4215 4216 4217 4218 4219 4220 4221 4222 4223 4224
## T1_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2      0    0    0    0    0    0    2    0    0    0    0    0    0    0    0
## T1_3      0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## T7_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2      0    0    0    0    0    0    0    0    2    0    0    0    0    1    0
## T7_3      0    0    0    0    0    2    0    0    0    0    0    0    0    0    0
## DF_1      0    2    2    0    0    0    0    0    0    0    0    0    0    0    0
##        4225 4226 4227 4228 4229 4230 4231 4232 4233 4234 4235 4236 4237 4238 4239
## T1_1      1    1    0    0    0    0    0    0    0    1    0    0    0    0    0
## T1_2      1    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## T1_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1      0    0    0    0    0    1    0    0    0    0    0    0    0    2    1
## T7_2      0    0    2    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1      0    0    0    0    0    0    0    1    0    0    0    4    0    0    0
##        4240 4241 4242 4243 4244 4245 4246 4247 4248 4249 4250 4251 4252 4253 4254
## T1_1      0    0    0    2    0    0    0    0    0    0    0    0    0    0    0
## T1_2      2    0    0    0    0    0    0    0    0    0    0    0    0    2    0
## T1_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1      0    1    0    0    0    0    0    0    0    0    0    0    0    1    1
## T7_2      0    0    0    0    0    0    0    0    2    0    0    0    0    0    0
## T7_3      0    2    0    0    0    0    0    0    0    0    0    0    0    0    1
## DF_1      0    0    0    0    2    0    0    0    0    0    0    0    0    0    0
##        4255 4256 4257 4258 4259 4260 4261 4262 4263 4264 4265 4266 4267 4268 4269
## T1_1      3    0    0    0    0    0    0    0    0    4    0    0    0    0    1
## T1_2      0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## T1_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1      2    0    0    1    0    0    0    0    0    0    0    2    0    0    0
## T7_2      0    0    1    0    0    1    0    0    0    0    2    0    0    0    0
## T7_3      0    0    0    0    0    0    0    0    0    0    0    0    0    2    0
## DF_1      0    0    1    0    2    0    0    0    0    0    0    0    1    0    0
```

```
##      4270 4271 4272 4273 4274 4275 4276 4277 4278 4279 4280 4281 4282 4283 4284
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    2    0    0
## T1_2    0    0    2    0    0    0    0    0    0    0    0    0    0    2    0
## T1_3    0    0    0    0    2    0    0    1    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    5    0    0    0    0    3    0    0    2    0    0    2    0    0    0
##      4285 4286 4287 4288 4289 4290 4291 4292 4293 4294 4295 4296 4297 4298 4299
## T1_1    0    0    2    0    0    0    0    0    0    0    0    0    1    0    0
## T1_2    0    0    1    0    2    0    0    0    0    0    0    0    0    0    0
## T1_3    1    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## T7_1    0    0    0    0    0    0    2    0    0    0    0    0    0    0    0
## T7_2    0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    1    0    0    3    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      4300 4301 4302 4303 4304 4305 4306 4307 4308 4309 4310 4311 4312 4313 4314
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    1    0    0    2
## T1_3    0    0    0    0    0    0    0    0    0    2    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    1    1
## T7_2    0    0    0    0    0    2    0    1    0    0    0    0    0    0    0
## T7_3    0    0    0    3    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    1    1    0    0    1    0    0    0
##      4315 4316 4317 4318 4319 4320 4321 4322 4323 4324 4325 4326 4327 4328 4329
## T1_1    0    0    2    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    2    0    0    0    0    0    0    0    0    1    0    0    0
## DF_1    0    0    0    0    0    2    0    0    0    0    0    0    0    2    0
##      4330 4331 4332 4333 4334 4335 4336 4337 4338 4339 4340 4341 4342 4343 4344
## T1_1    0    0    0    0    0    0    2    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    2    0    0    0    0    0    0    0    0    0    0
## T1_3    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      4345 4346 4347 4348 4349 4350 4351 4352 4353 4354 4355 4356 4357 4358 4359
## T1_1    0    0    0    0    0    0    2    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    2    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    2    0    0    0    0    0    2    1    0    0
## T7_2    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    3    2    0    0    0
## DF_1    0    0    0    0    1    0    0    0    0    1    0    1    0    1    0
##      4360 4361 4362 4363 4364 4365 4366 4367 4368 4369 4370 4371 4372 4373 4374
## T1_1    0    0    0    0    0    0    0    0    0    0    2    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    2
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    3    0    0    0    0    0    0
```

```
## T7_3     0    0    0    2    0    0    2    0    0    1    0    0    0    0    0
## DF_1     0    0    0    0    0    2    0    0    0    0    0    0    0    0    0
##       4375 4376 4377 4378 4379 4380 4381 4382 4383 4384 4385 4386 4387 4388 4389
## T1_1     0    0    0    0    2    0    0    0    0    0    0    0    0    0    0
## T1_2     0    0    0    0    0    2    0    0    0    0    0    0    0    0    0
## T1_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2     0    0    0    0    0    0    0    0    0    2    0    0    0    0    0
## T7_3     0    0    0    0    0    0    3    0    0    0    2    0    0    0    0
## DF_1     0    0    0    0    0    0    0    0    0    0    0    1    0    0    1
##       4390 4391 4392 4393 4394 4395 4396 4397 4398 4399 4400 4401 4402 4403 4404
## T1_1     0    0    1    0    0    0    0    0    0    0    1    0    0    3    0
## T1_2     0    1    0    0    0    0    0    0    0    0    1    0    0    0    0
## T1_3     0    1    3    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1     0    0    0    2    0    0    1    0    0    0    0    0    0    0    0
## T7_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3     1    0    0    0    0    0    2    0    0    0    0    0    0    0    0
## DF_1     0    0    0    0    0    2    0    0    0    0    0    1    0    0    0
##       4405 4406 4407 4408 4409 4410 4411 4412 4413 4414 4415 4416 4417 4418 4419
## T1_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2     0    0    0    0    0    1    0    0    0    0    0    2    0    0    0
## T1_3     0    0    0    0    0    1    0    0    0    2    0    1    0    0    0
## T7_1     0    0    0    0    0    0    2    0    0    0    0    0    0    0    0
## T7_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1     2    0    0    2    1    0    0    0    0    0    0    0    0    0    2
##       4420 4421 4422 4423 4424 4425 4426 4427 4428 4429 4430 4431 4432 4433 4434
## T1_1     0    0    0    0    0    0    0    0    0    2    0    0    0    0    0
## T1_2     0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## T1_3     1    0    0    0    0    2    0    0    0    0    0    0    0    0    0
## T7_1     4    0    0    0    0    0    2    0    0    0    0    0    1    0    0
## T7_2     0    0    0    0    0    0    2    0    0    0    0    0    0    0    0
## T7_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1     0    0    0    0    0    0    0    0    0    0    2    0    0    0    0
##       4435 4436 4437 4438 4439 4440 4441 4442 4443 4444 4445 4446 4447 4448 4449
## T1_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2     0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## T1_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## T7_3     0    0    0    0    0    2    0    0    0    0    3    0    0    0    0
## DF_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##       4450 4451 4452 4453 4454 4455 4456 4457 4458 4459 4460 4461 4462 4463 4464
## T1_1     0    2    0    2    0    0    0    2    0    0    0    0    0    0    0
## T1_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3     0    0    0    0    0    1    0    1    0    0    0    0    0    0    0
## T7_1     1    0    0    0    0    2    2    0    0    0    0    1    0    0    0
## T7_2     1    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## T7_3     0    1    0    0    2    0    0    0    0    0    0    0    0    0    0
## DF_1     0    0    0    0    1    0    0    0    0    0    0    0    0    2    0
##       4465 4466 4467 4468 4469 4470 4471 4472 4473 4474 4475 4476 4477 4478 4479
## T1_1     1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2     2    0    0    0    0    0    1    0    0    0    1    0    0    0    0
## T1_3     0    0    0    0    0    0    0    0    0    2    0    0    0    0    0
```

```
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## T7_2    0    0    3    0    0    0    0    0    0    0    0    0    0    1    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    2    0    0    0
## DF_1    0    2    1    0    0    1    0    0    0    0    0    0    0    0    0
##      4480 4481 4482 4483 4484 4485 4486 4487 4488 4489 4490 4491 4492 4493 4494
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    3    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## T7_1    0    0    0    0    3    0    0    0    0    0    1    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## T7_3    0    0    2    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    2
##      4495 4496 4497 4498 4499 4500 4501 4502 4503 4504 4505 4506 4507 4508 4509
## T1_1    0    0    0    0    1    0    0    0    0    1    0    0    0    0    0
## T1_2    2    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T1_3    2    0    0    0    0    0    1    0    0    1    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    1    0    0    2    1    0    0    0    0    0    1    1    0
##      4510 4511 4512 4513 4514 4515 4516 4517 4518 4519 4520 4521 4522 4523 4524
## T1_1    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    1    1    1    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
##      4525 4526 4527 4528 4529 4530 4531 4532 4533 4534 4535 4536 4537 4538 4539
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    2    1    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    1    0    0    0    0    0    0    1    2    0    0    1    0    0
##      4540 4541 4542 4543 4544 4545 4546 4547 4548 4549 4550 4551 4552 4553 4554
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## T7_1    2    0    0    0    0    0    0    0    1    0    0    1    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    1    0    0    0    0    0    0    0    0    1
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      4555 4556 4557 4558 4559 4560 4561 4562 4563 4564 4565 4566 4567 4568 4569
## T1_1    0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## T1_2    0    0    1    0    0    0    1    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## T7_3    0    0    0    0    0    0    0    0    0    0    1    0    1    0    0
## DF_1    0    0    0    0    0    0    0    0    0    1    0    0    0    1    0
##      4570 4571 4572 4573 4574 4575 4576 4577 4578 4579 4580 4581 4582 4583 4584
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
## T1_2       0     0     0     0     0     0     0     0     0     0     0     0     0     1     0
## T1_3       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1       1     0     0     1     1     0     0     0     0     0     0     0     1     0     0
## T7_2       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1       0     0     0     0     0     0     0     1     0     0     0     1     0     1     0
##         4585  4586  4587  4588  4589  4590  4591  4592  4593  4594  4595  4596  4597  4598  4599
## T1_1       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3       0     0     0     0     0     1     0     0     0     0     0     0     0     0     0
## T7_1       0     0     0     0     0     1     1     0     0     0     0     0     0     0     0
## T7_2       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1       0     1     1     2     0     0     0     0     0     0     0     0     0     0     0
##         4600  4601  4602  4603  4604  4605  4606  4607  4608  4609  4610  4611  4612  4613  4614
## T1_1       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1       0     0     0     0     0     0     0     0     0     0     2     0     0     0     0
## T7_2       0     0     0     0     0     0     0     0     0     0     0     1     0     0     0
## T7_3       0     0     0     0     1     0     0     0     0     0     0     0     0     0     0
## DF_1       0     0     0     0     0     0     0     0     0     0     0     0     0     1     0
##         4615  4616  4617  4618  4619  4620  4621  4622  4623  4624  4625  4626  4627  4628  4629
## T1_1       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3       0     0     0     0     0     0     0     0     0     0     0     0     0     1     0
## T7_1       1     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2       0     0     0     0     0     0     1     0     0     0     0     0     0     0     0
## T7_3       0     0     0     1     0     0     0     0     0     0     1     0     0     0     0
## DF_1       0     0     0     0     0     0     0     1     0     0     0     0     0     0     1
##         4630  4631  4632  4633  4634  4635  4636  4637  4638  4639  4640  4641  4642  4643  4644
## T1_1       0     0     0     0     1     1     0     0     0     0     0     0     0     0     0
## T1_2       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1       0     0     0     0     0     0     0     0     1     0     0     0     0     0     0
## T7_2       0     1     0     0     0     0     0     1     0     0     0     1     0     0     0
## T7_3       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1       0     0     0     0     0     0     1     0     0     0     0     0     0     1     0
##         4645  4646  4647  4648  4649  4650  4651  4652  4653  4654  4655  4656  4657  4658  4659
## T1_1       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2       0     0     0     0     1     0     0     0     0     0     0     0     0     0     0
## T1_3       0     0     1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1       0     1     0     0     0     0     0     0     1     0     0     0     0     0     0
## T7_2       0     0     0     0     0     0     0     0     0     0     0     0     0     1     0
## T7_3       0     0     0     0     0     0     1     0     0     0     0     0     0     0     0
## DF_1       0     0     0     0     0     0     0     0     0     0     0     0     0     0     1
##         4660  4661  4662  4663  4664  4665  4666  4667  4668  4669  4670  4671  4672  4673  4674
## T1_1       0     0     0     0     0     0     0     0     0     0     0     0     1     0     0
## T1_2       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3       0     0     0     0     0     1     0     1     0     0     0     0     0     0     0
## T7_1       0     0     0     0     0     0     0     0     1     0     0     0     0     0     0
## T7_2       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1       1     0     1     0     0     0     0     0     0     0     0     0     0     0     0
```

```
##      4675 4676 4677 4678 4679 4680 4681 4682 4683 4684 4685 4686 4687 4688 4689
## T1_1    0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## T1_2    0    0    0    1    0    0    1    0    0    0    0    1    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    2    0    0    0    0    0    0    0    0    0    1    0    0    1    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      4690 4691 4692 4693 4694 4695 4696 4697 4698 4699 4700 4701 4702 4703 4704
## T1_1    0    0    0    0    0    0    1    0    0    0    2    0    0    0    0
## T1_2    0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
##      4705 4706 4707 4708 4709 4710 4711 4712 4713 4714 4715 4716 4717 4718 4719
## T1_1    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## T1_2    0    0    0    0    0    2    0    0    1    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## T7_3    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## DF_1    1    0    0    0    0    0    0    0    1    0    0    0    0    0    0
##      4720 4721 4722 4723 4724 4725 4726 4727 4728 4729 4730 4731 4732 4733 4734
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    1    0    1
## T7_2    0    0    0    0    0    1    0    0    1    0    0    2    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
##      4735 4736 4737 4738 4739 4740 4741 4742 4743 4744 4745 4746 4747 4748 4749
## T1_1    0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## T1_2    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## T7_2    1    0    0    0    0    0    0    1    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    1    1    0    0    1    0    0    1    0    0    0    0    0    1
##      4750 4751 4752 4753 4754 4755 4756 4757 4758 4759 4760 4761 4762 4763 4764
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    1    1    1
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    2    1    0    0    0    0    0    0    0    0    0    0    0    0
##      4765 4766 4767 4768 4769 4770 4771 4772 4773 4774 4775 4776 4777 4778 4779
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## T1_3    0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
## T7_3     0     0     0     0     0     0     1     0     0     0     0     1     0     0     0
## DF_1     0     0     0     1     0     0     0     0     0     0     0     0     1     1     0
##       4780 4781 4782 4783 4784 4785 4786 4787 4788 4789 4790 4791 4792 4793 4794
## T1_1     0     0     0     1     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     1
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     1     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     1     0     0     0     0     0     0     0     0     0     0
##       4795 4796 4797 4798 4799 4800 4801 4802 4803 4804 4805 4806 4807 4808 4809
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     1     0     0     0     1     1     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     1     0     0     0     0     1     0     0     0     0     2     0     0     0
## DF_1     2     0     0     0     0     0     0     0     0     0     0     0     0     0     0
##       4810 4811 4812 4813 4814 4815 4816 4817 4818 4819 4820 4821 4822 4823 4824
## T1_1     0     0     0     0     0     0     0     0     0     0     0     1     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     1     1     0     0     0     0     0     0     0     1     1     0
## T7_2     0     1     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
##       4825 4826 4827 4828 4829 4830 4831 4832 4833 4834 4835 4836 4837 4838 4839
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     1     0     0     0     0     1     0     0     0     0     0     0     0     0     2
## T1_3     0     0     0     1     0     0     0     0     0     1     0     0     1     0     0
## T7_1     0     0     0     0     1     0     0     0     0     0     0     0     0     1     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     1     0     0     1     0     0     0
## DF_1     0     0     0     0     0     0     0     1     0     0     1     0     0     0     0
##       4840 4841 4842 4843 4844 4845 4846 4847 4848 4849 4850 4851 4852 4853 4854
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0     1     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     1     0     0     0     0     0     0     0     0
## DF_1     0     0     1     0     0     0     0     1     0     0     0     0     0     0     0
##       4855 4856 4857 4858 4859 4860 4861 4862 4863 4864 4865 4866 4867 4868 4869
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     1     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     1     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     1     0     1     0     0     1
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     1     0     0     0     1     0     0
##       4870 4871 4872 4873 4874 4875 4876 4877 4878 4879 4880 4881 4882 4883 4884
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     1     0     0     0
```

```
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## T7_3    0    0    0    0    0    1    1    0    0    0    0    0    0    0    0
## DF_1    1    0    0    0    0    0    0    0    0    1    0    0    0    0    1
##      4885 4886 4887 4888 4889 4890 4891 4892 4893 4894 4895 4896 4897 4898 4899
## T1_1    0    0    0    0    0    0    2    0    0    0    0    0    0    0    1
## T1_2    0    0    0    0    0    0    2    0    0    1    0    0    0    0    0
## T1_3    0    1    0    0    0    0    1    0    1    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    1    2    0    0    0    1    0    1    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      4900 4901 4902 4903 4904 4905 4906 4907 4908 4909 4910 4911 4912 4913 4914
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    1    0    1    0    0    0    0    0    0    1    0    1
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## DF_1    1    0    0    0    0    0    1    0    0    0    2    0    0    0    0
##      4915 4916 4917 4918 4919 4920 4921 4922 4923 4924 4925 4926 4927 4928 4929
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## T1_2    0    0    0    0    0    0    1    0    0    0    0    0    1    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    2    0    0    0    0    0    1    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## T7_3    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## DF_1    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      4930 4931 4932 4933 4934 4935 4936 4937 4938 4939 4940 4941 4942 4943 4944
## T1_1    2    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
##      4945 4946 4947 4948 4949 4950 4951 4952 4953 4954 4955 4956 4957 4958 4959
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    1    0    0    1    0    0
## T7_1    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## DF_1    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
##      4960 4961 4962 4963 4964 4965 4966 4967 4968 4969 4970 4971 4972 4973 4974
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## T7_3    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    1    0    1    0    1    0    0    1
##      4975 4976 4977 4978 4979 4980 4981 4982 4983 4984 4985 4986 4987 4988 4989
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
## T1_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3      0    0    0    2    0    0    0    0    0    0    0    0    0    0    0
## T7_1      0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## T7_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1      0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
##        4990 4991 4992 4993 4994 4995 4996 4997 4998 4999 5000 5001 5002 5003 5004
## T1_1      0    0    0    0    0    0    0    0    0    2    0    0    0    0    0
## T1_2      0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
## T1_3      0    0    0    0    1    0    0    0    0    4    0    0    0    0    0
## T7_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2      0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## T7_3      0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## DF_1      0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
##        5005 5006 5007 5008 5009 5010 5011 5012 5013 5014 5015 5016 5017 5018 5019
## T1_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2      0    0    0    0    0    0    1    1    0    0    0    0    0    0    0
## T1_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1      0    1    0    0    0    0    0    0    0    0    0    1    0    1    0
## T7_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3      0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1      1    1    0    0    0    0    0    0    0    0    0    0    0    0    0
##        5020 5021 5022 5023 5024 5025 5026 5027 5028 5029 5030 5031 5032 5033 5034
## T1_1      0    0    0    0    1    0    0    0    0    0    1    0    0    0    0
## T1_2      0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## T1_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1      0    0    0    0    0    0    1    0    0    0    0    0    1    0    0
## T7_2      0    0    0    0    0    0    0    1    0    0    0    0    0    1    1
## T7_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##        5035 5036 5037 5038 5039 5040 5041 5042 5043 5044 5045 5046 5047 5048 5049
## T1_1      1    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1      0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T7_2      0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## T7_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1      0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
##        5050 5051 5052 5053 5054 5055 5056 5057 5058 5059 5060 5061 5062 5063 5064
## T1_1      0    0    1    0    1    0    0    0    0    0    0    0    0    0    0
## T1_2      0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## T1_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1      1    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## T7_2      0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##        5065 5066 5067 5068 5069 5070 5071 5072 5073 5074 5075 5076 5077 5078 5079
## T1_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3      0    0    1    0    1    0    0    0    0    0    0    0    0    0    0
## T7_1      0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
## T7_2      0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## T7_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1      0    0    0    0    0    0    1    0    0    1    1    0    0    0    1
```

```
##      5080 5081 5082 5083 5084 5085 5086 5087 5088 5089 5090 5091 5092 5093 5094
## T1_1    0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    2    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    1    1    0    0    0    0    0    0    0    1    1    0    0    0    0
## T7_2    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## DF_1    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
##      5095 5096 5097 5098 5099 5100 5101 5102 5103 5104 5105 5106 5107 5108 5109
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    1    0    0    1    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## T7_3    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
##      5110 5111 5112 5113 5114 5115 5116 5117 5118 5119 5120 5121 5122 5123 5124
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    1    0    1    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
##      5125 5126 5127 5128 5129 5130 5131 5132 5133 5134 5135 5136 5137 5138 5139
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    2    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      5140 5141 5142 5143 5144 5145 5146 5147 5148 5149 5150 5151 5152 5153 5154
## T1_1    0    1    0    0    0    1    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    2    0    0    0    1    1    1    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
##      5155 5156 5157 5158 5159 5160 5161 5162 5163 5164 5165 5166 5167 5168 5169
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## T7_1    0    0    0    1    0    0    0    0    0    0    0    0    0    1    0
## T7_2    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    1    0    0    0    0    0    0    0    0    1    0    0    0    0
##      5170 5171 5172 5173 5174 5175 5176 5177 5178 5179 5180 5181 5182 5183 5184
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## T7_2    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
```

```
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     1     0     0     0     0     0     0     0     1     1     0     0     0     0     0
##       5185 5186 5187 5188 5189 5190 5191 5192 5193 5194 5195 5196 5197 5198 5199
## T1_1     0     0     0     0     0     0     0     0     0     0     0     1     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     1     0     0     0     0     0     0
## T7_1     0     0     0     1     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     1     1     0     0     1     0     0     1     0     0     0     0     0     0     0
##       5200 5201 5202 5203 5204 5205 5206 5207 5208 5209 5210 5211 5212 5213 5214
## T1_1     0     1     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     1     0     0     1     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     1     1     0     0     0     0     0     0     0
##       5215 5216 5217 5218 5219 5220 5221 5222 5223 5224 5225 5226 5227 5228 5229
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     1     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0     0     1     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     1     0     1     0     1     0     0     0     1     0
##       5230 5231 5232 5233 5234 5235 5236 5237 5238 5239 5240 5241 5242 5243 5244
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     1     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     1     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     1     0     0     0     0     0     0     0     0     0     0     0     1     1
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0     1     0     0
##       5245 5246 5247 5248 5249 5250 5251 5252 5253 5254 5255 5256 5257 5258 5259
## T1_1     0     1     0     0     0     0     0     0     0     1     0     0     0     0     0
## T1_2     0     1     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0     1     1     0
## T7_1     0     0     0     0     0     0     0     0     0     0     1     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     1     0     0     0     0     0     0     0     0     0     0     0
##       5260 5261 5262 5263 5264 5265 5266 5267 5268 5269 5270 5271 5272 5273 5274
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0     1     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     1     0     0     0     0     0     1     0     0     0     0
## T7_2     0     0     0     0     0     1     1     0     0     1     0     0     0     0     1
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     0     1     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
##       5275 5276 5277 5278 5279 5280 5281 5282 5283 5284 5285 5286 5287 5288 5289
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     1     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     1     0     0     0     0     0     0     0     1     0     1     0     1     0
```

```
## T7_1    0    0    1    0    1    1    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
##      5290 5291 5292 5293 5294 5295 5296 5297 5298 5299 5300 5301 5302 5303 5304
## T1_1    0    0    0    0    0    0    0    0    0    0    0    2    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## T7_1    0    0    0    2    0    0    0    0    1    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    1    0    0    0    0    0    1    0
## T7_3    0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
##      5305 5306 5307 5308 5309 5310 5311 5312 5313 5314 5315 5316 5317 5318 5319
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    1    0    1    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      5320 5321 5322 5323 5324 5325 5326 5327 5328 5329 5330 5331 5332 5333 5334
## T1_1    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## T7_1    0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    1    0    0    1    0    0    0
##      5335 5336 5337 5338 5339 5340 5341 5342 5343 5344 5345 5346 5347 5348 5349
## T1_1    0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## DF_1    0    0    0    0    0    0    0    0    0    1    0    1    0    0    0
##      5350 5351 5352 5353 5354 5355 5356 5357 5358 5359 5360 5361 5362 5363 5364
## T1_1    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## T1_2    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
##      5365 5366 5367 5368 5369 5370 5371 5372 5373 5374 5375 5376 5377 5378 5379
## T1_1    0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    1    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    1    0    0    0    0    0    0    0    1    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
##      5380 5381 5382 5383 5384 5385 5386 5387 5388 5389 5390 5391 5392 5393 5394
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
## T1_2     0     0     0     0     0     0     0     0     0     0     1     0     0     0     0
## T1_3     0     1     1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     1     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     1     0     0     0     0     0     0     0
##       5395 5396 5397 5398 5399 5400 5401 5402 5403 5404 5405 5406 5407 5408 5409
## T1_1     0     1     1     0     0     0     0     0     0     0     0     0     1     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     1     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     1     0     0     0     0     0     0     1     0     0     0     0
##       5410 5411 5412 5413 5414 5415 5416 5417 5418 5419 5420 5421 5422 5423 5424
## T1_1     0     0     1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     1
## T1_3     0     0     0     0     0     0     0     0     1     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     1     0     0     0     1     1     0     0     0
## T7_2     0     0     0     1     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     1     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     1     0     0     0
##       5425 5426 5427 5428 5429 5430 5431 5432 5433 5434 5435 5436 5437 5438 5439
## T1_1     0     0     0     0     0     0     0     0     1     1     0     0     0     0     0
## T1_2     0     0     0     0     0     1     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     1     0     0     0     0     0     0     0     0
## T7_1     0     1     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
##       5440 5441 5442 5443 5444 5445 5446 5447 5448 5449 5450 5451 5452 5453 5454
## T1_1     0     0     0     0     0     0     0     0     1     0     0     0     0     0     0
## T1_2     0     0     0     0     1     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     1     0     0     1
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
##       5455 5456 5457 5458 5459 5460 5461 5462 5463 5464 5465 5466 5467 5468 5469
## T1_1     0     0     0     0     1     0     1     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     1     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     1     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0     1     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
##       5470 5471 5472 5473 5474 5475 5476 5477 5478 5479 5480 5481 5482 5483 5484
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     1     0     0     0     0     0     1     1     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     1     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
```

```
##      5485 5486 5487 5488 5489 5490 5491 5492 5493 5494 5495 5496 5497 5498 5499
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    1    0    0    0    0    0    0    0    0    1    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## DF_1    0    0    1    0    1    0    0    0    0    0    0    0    0    0    1
##      5500 5501 5502 5503 5504 5505 5506 5507 5508 5509 5510 5511 5512 5513 5514
## T1_1    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## T1_2    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    1    0    0    1    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    1    0    0    0    1    0
## T7_3    0    0    0    0    1    0    1    0    0    0    1    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
##      5515 5516 5517 5518 5519 5520 5521 5522 5523 5524 5525 5526 5527 5528 5529
## T1_1    0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
##      5530 5531 5532 5533 5534 5535 5536 5537 5538 5539 5540 5541 5542 5543 5544
## T1_1    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## T1_2    1    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## T7_2    0    0    0    0    0    0    0    0    1    0    0    0    0    1    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
##      5545 5546 5547 5548 5549 5550 5551 5552 5553 5554 5555 5556 5557 5558 5559
## T1_1    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## T1_3    0    0    0    1    0    0    0    0    0    0    0    0    0    0    1
## T7_1    0    0    0    0    0    1    0    0    0    0    0    1    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    1    0    0    0    0    0    1    0    0    0    0    1    0
##      5560 5561 5562 5563 5564 5565 5566 5567 5568 5569 5570 5571 5572 5573 5574
## T1_1    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    1    0    0    0    0    0    1    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    1    1    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    2    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      5575 5576 5577 5578 5579 5580 5581 5582 5583 5584 5585 5586 5587 5588 5589
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     0     1     0
## DF_1     0     0     0     0     1     1     0     0     0     0     0     0     0     0     0
##       5590 5591 5592 5593 5594 5595 5596 5597 5598 5599 5600 5601 5602 5603 5604
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     1     1     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     1     0     0     1     0     0     0     0     0     0     0     1     0
## T7_2     0     0     0     0     1     0     0     0     0     0     0     1     0     0     0
## T7_3     0     0     0     1     0     0     0     0     0     0     0     0     0     0     1
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
##       5605 5606 5607 5608 5609 5610 5611 5612 5613 5614 5615 5616 5617 5618 5619
## T1_1     0     1     0     0     0     0     0     0     0     0     0     1     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     1     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     1     1     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     1     0     0     0     0     0     0     1     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     1     0     0     0     0     0     0     0     0     0     1     0     0
##       5620 5621 5622 5623 5624 5625 5626 5627 5628 5629 5630 5631 5632 5633 5634
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0     1     0     0
## T1_3     0     0     0     1     0     0     0     0     0     1     0     0     0     0     0
## T7_1     1     0     1     1     0     0     0     0     0     0     0     1     0     0     0
## T7_2     0     0     0     0     0     1     0     1     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
##       5635 5636 5637 5638 5639 5640 5641 5642 5643 5644 5645 5646 5647 5648 5649
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     1     0     0     0     0     0     0     0     0
## T7_1     0     1     0     0     0     1     0     1     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     1     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     1     0     0     0     0     0     0     0     1     0     0     0     0
##       5650 5651 5652 5653 5654 5655 5656 5657 5658 5659 5660 5661 5662 5663 5664
## T1_1     0     0     0     0     0     0     0     1     0     0     0     0     0     1     1
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     1     0     0     0     1     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     1     0     0     1     0     0     0     0     0
##       5665 5666 5667 5668 5669 5670 5671 5672 5673 5674 5675 5676 5677 5678 5679
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     1     0     0     0     0     0     0     0     0     0     1     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     1     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     1     0     0     1     0     0     0     0     0     0
##       5680 5681 5682 5683 5684 5685 5686 5687 5688 5689 5690 5691 5692 5693 5694
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0     1     1     0
```

```
## T7_1    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    2    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
##      5695 5696 5697 5698 5699 5700 5701 5702 5703 5704 5705 5706 5707 5708 5709
## T1_1    0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    1    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    1    0    0    0    0    0    1
##      5710 5711 5712 5713 5714 5715 5716 5717 5718 5719 5720 5721 5722 5723 5724
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    1    1    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## DF_1    0    0    1    0    0    2    1    0    0    0    0    0    1    0    1
##      5725 5726 5727 5728 5729 5730 5731 5732 5733 5734 5735 5736 5737 5738 5739
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    1    0    0    0    1    0    1    0    0    0    0
##      5740 5741 5742 5743 5744 5745 5746 5747 5748 5749 5750 5751 5752 5753 5754
## T1_1    0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## T7_2    0    1    0    0    0    0    0    1    0    0    0    0    0    0    1
## T7_3    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## DF_1    0    0    0    1    0    0    0    0    0    0    0    1    0    0    1
##      5755 5756 5757 5758 5759 5760 5761 5762 5763 5764 5765 5766 5767 5768 5769
## T1_1    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## T1_3    0    0    1    0    0    0    1    0    0    0    0    0    0    0    0
## T7_1    0    0    0    1    0    0    0    0    0    0    0    0    0    0    1
## T7_2    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      5770 5771 5772 5773 5774 5775 5776 5777 5778 5779 5780 5781 5782 5783 5784
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    1    1    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    2    0    0    1    0    0    0    0    0    1    0    0    0
##      5785 5786 5787 5788 5789 5790 5791 5792 5793 5794 5795 5796 5797 5798 5799
## T1_1    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
```

```
## T1_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3      1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1      0    0    0    0    0    0    1    0    0    1    0    1    0    0    0
## T7_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3      0    0    0    0    0    0    0    0    0    0    1    0    0    1    0
## DF_1      0    0    0    1    0    1    0    0    0    0    0    0    1    0    1
##        5800 5801 5802 5803 5804 5805 5806 5807 5808 5809 5810 5811 5812 5813 5814
## T1_1      0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## T1_2      0    0    0    0    0    0    0    0    0    2    0    0    0    0    0
## T1_3      0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## T7_1      0    1    0    0    0    1    0    0    0    0    0    0    0    0    0
## T7_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3      0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1      0    0    0    0    0    0    0    1    0    0    0    0    0    0    1
##        5815 5816 5817 5818 5819 5820 5821 5822 5823 5824 5825 5826 5827 5828 5829
## T1_1      0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T1_2      0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## T1_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1      0    0    0    1    0    0    0    0    2    0    0    0    0    1    0
## T7_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3      0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## DF_1      0    0    0    0    0    0    1    1    0    0    0    0    0    0    1
##        5830 5831 5832 5833 5834 5835 5836 5837 5838 5839 5840 5841 5842 5843 5844
## T1_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2      1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1      0    0    0    0    0    0    2    0    0    0    0    0    0    0    0
## T7_2      0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## T7_3      0    0    0    0    0    0    0    0    0    0    1    0    0    1    0
## DF_1      0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
##        5845 5846 5847 5848 5849 5850 5851 5852 5853 5854 5855 5856 5857 5858 5859
## T1_1      0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T1_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2      1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3      0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1      0    0    0    0    0    1    0    0    0    0    0    0    0    0    1
##        5860 5861 5862 5863 5864 5865 5866 5867 5868 5869 5870 5871 5872 5873 5874
## T1_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1      0    0    0    1    0    0    0    1    0    0    0    0    0    0    0
## T7_2      0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## T7_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1      0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
##        5875 5876 5877 5878 5879 5880 5881 5882 5883 5884 5885 5886 5887 5888 5889
## T1_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2      0    0    0    0    0    1    0    0    0    0    0    0    0    0    1
## T1_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2      0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## T7_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1      0    0    0    1    0    0    0    0    0    0    0    1    0    0    0
```

```
##      5890 5891 5892 5893 5894 5895 5896 5897 5898 5899 5900 5901 5902 5903 5904
## T1_1    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    1    1    0    0    0    1    0    0    1    0    0
## T1_3    0    0    0    0    0    0    0    2    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    1    0    0    0    0    0    0    1    0    0    0    0    3    0
## T7_3    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      5905 5906 5907 5908 5909 5910 5911 5912 5913 5914 5915 5916 5917 5918 5919
## T1_1    0    0    0    1    0    0    0    1    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## T1_3    0    0    0    0    0    0    0    0    1    1    0    0    0    0    0
## T7_1    0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    1    0    0    0    0    1    0    0    0    0    0    1    0    1    0
## T7_3    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      5920 5921 5922 5923 5924 5925 5926 5927 5928 5929 5930 5931 5932 5933 5934
## T1_1    0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## T1_2    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    1    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    1    1    1    1    1    0    2    0    0    1    0    0    0    0    0
##      5935 5936 5937 5938 5939 5940 5941 5942 5943 5944 5945 5946 5947 5948 5949
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## T1_2    0    0    0    0    1    0    0    0    0    0    0    1    0    0    0
## T1_3    0    1    0    1    0    0    0    1    1    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    1    0    0    0    0    0    1    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      5950 5951 5952 5953 5954 5955 5956 5957 5958 5959 5960 5961 5962 5963 5964
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## T1_3    0    2    0    0    0    0    0    1    1    0    1    0    0    0    0
## T7_1    1    0    0    0    1    0    0    0    1    0    0    0    0    0    0
## T7_2    0    0    0    1    0    0    1    0    0    1    0    0    0    0    0
## T7_3    0    0    0    0    0    1    0    1    0    0    0    0    0    0    0
## DF_1    0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
##      5965 5966 5967 5968 5969 5970 5971 5972 5973 5974 5975 5976 5977 5978 5979
## T1_1    0    0    0    0    1    1    0    0    0    1    0    0    0    0    1
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    2    0    0    0    0    0    0
## T7_1    0    0    0    1    0    0    1    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## DF_1    0    0    0    0    1    0    0    0    0    0    0    0    0    1    0
##      5980 5981 5982 5983 5984 5985 5986 5987 5988 5989 5990 5991 5992 5993 5994
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    1    0    0    0    0    0    0    1
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
## T7_3     0    0    3    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1     0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
##        5995 5996 5997 5998 5999 6000 6001 6002 6003 6004 6005 6006 6007 6008 6009
## T1_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3     0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## T7_1     0    0    1    0    0    0    0    0    1    1    0    0    0    0    0
## T7_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3     0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## DF_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##        6010 6011 6012 6013 6014 6015 6016 6017 6018 6019 6020 6021 6022 6023 6024
## T1_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## T1_2     0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## T1_3     0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## T7_1     0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T7_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1     0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
##        6025 6026 6027 6028 6029 6030 6031 6032 6033 6034 6035 6036 6037 6038 6039
## T1_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2     0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T1_3     0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2     0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## T7_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1     0    0    0    0    0    1    0    0    0    0    0    0    0    1    0
##        6040 6041 6042 6043 6044 6045 6046 6047 6048 6049 6050 6051 6052 6053 6054
## T1_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1     0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T7_2     0    0    0    1    0    0    0    0    0    1    0    0    0    0    0
## T7_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##        6055 6056 6057 6058 6059 6060 6061 6062 6063 6064 6065 6066 6067 6068 6069
## T1_1     0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## T1_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3     0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1     0    0    0    1    1    0    0    0    0    0    0    0    0    0    0
## T7_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
##        6070 6071 6072 6073 6074 6075 6076 6077 6078 6079 6080 6081 6082 6083 6084
## T1_1     0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## T1_2     0    0    0    0    0    0    1    0    0    0    0    1    0    0    0
## T1_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1     0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
## T7_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3     0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
## DF_1     0    0    1    0    1    0    0    0    1    1    0    0    0    1    0
##        6085 6086 6087 6088 6089 6090 6091 6092 6093 6094 6095 6096 6097 6098 6099
## T1_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
## T7_1    0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    1    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## DF_1    0    0    0    0    0    0    1    1    0    0    0    0    0    0    0
##      6100 6101 6102 6103 6104 6105 6106 6107 6108 6109 6110 6111 6112 6113 6114
## T1_1    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    1    0    0    0    1    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
##      6115 6116 6117 6118 6119 6120 6121 6122 6123 6124 6125 6126 6127 6128 6129
## T1_1    0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    1    1    0    1    0    0    0    0
## T7_1    0    0    1    0    0    0    0    0    0    0    0    1    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
##      6130 6131 6132 6133 6134 6135 6136 6137 6138 6139 6140 6141 6142 6143 6144
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    1    0    0    0    0    0    0    0    0    0    1    0    0    0    0
##      6145 6146 6147 6148 6149 6150 6151 6152 6153 6154 6155 6156 6157 6158 6159
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    1    0    0    1    1    0    1    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    1    1    0    0    0    0    0    1    0    0    0
##      6160 6161 6162 6163 6164 6165 6166 6167 6168 6169 6170 6171 6172 6173 6174
## T1_1    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## T1_2    0    0    0    0    0    0    1    0    0    0    1    0    1    1    1
## T1_3    0    0    0    0    0    0    1    0    0    0    0    1    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    1    0    0    1    0    0    0    0    0    0
## DF_1    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
##      6175 6176 6177 6178 6179 6180 6181 6182 6183 6184 6185 6186 6187 6188 6189
## T1_1    0    0    0    0    0    0    0    0    2    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## T1_3    1    1    0    0    0    0    0    0    0    1    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    1    0    0    0    0    0    1    0    0
##      6190 6191 6192 6193 6194 6195 6196 6197 6198 6199 6200 6201 6202 6203 6204
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
## T1_2    1    0    1    0    1    1    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    1    0    0    0    0    0    0    0    0    1
## T7_1    0    0    0    0    0    0    1    0    0    0    0    1    1    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## DF_1    0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
##      6205 6206 6207 6208 6209 6210 6211 6212 6213 6214 6215 6216 6217 6218 6219
## T1_1    0    0    0    0    0    1    0    0    0    0    0    0    1    1    0
## T1_2    0    0    0    0    0    0    0    0    0    0    1    0    0    0    1
## T1_3    0    1    0    0    0    0    3    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    1    0    1    0    0    0
## T7_3    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## DF_1    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      6220 6221 6222 6223 6224 6225 6226 6227 6228 6229 6230 6231 6232 6233 6234
## T1_1    1    1    0    0    0    0    0    0    1    0    0    0    1    0    0
## T1_2    0    0    1    0    0    0    0    0    0    0    0    1    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    1    0    0    0    1    0    0    0    1    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      6235 6236 6237 6238 6239 6240 6241 6242 6243 6244 6245 6246 6247 6248 6249
## T1_1    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## T1_2    0    0    1    0    0    0    0    1    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## T7_1    0    0    0    0    1    0    1    0    0    0    1    1    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
##      6250 6251 6252 6253 6254 6255 6256 6257 6258 6259 6260 6261 6262 6263 6264
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## DF_1    0    0    0    0    0    0    0    0    1    0    0    1    0    0    0
##      6265 6266 6267 6268 6269 6270 6271 6272 6273 6274 6275 6276 6277 6278 6279
## T1_1    0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    1    0    0    0    1    0    0    0
## T7_3    0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    1    1
##      6280 6281 6282 6283 6284 6285 6286 6287 6288 6289 6290 6291 6292 6293 6294
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
##      6295 6296 6297 6298 6299 6300 6301 6302 6303 6304 6305 6306 6307 6308 6309
## T1_1    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    2    0
## T1_3    1    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    1    1    0    0
##      6310 6311 6312 6313 6314 6315 6316 6317 6318 6319 6320 6321 6322 6323 6324
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    1    0    0    0    0    1    0    0    0
##      6325 6326 6327 6328 6329 6330 6331 6332 6333 6334 6335 6336 6337 6338 6339
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      6340 6341 6342 6343 6344 6345 6346 6347 6348 6349 6350 6351 6352 6353 6354
## T1_1    1    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
##      6355 6356 6357 6358 6359 6360 6361 6362 6363 6364 6365 6366 6367 6368 6369
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    1    1    0    1    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    2    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
##      6370 6371 6372 6373 6374 6375 6376 6377 6378 6379 6380 6381 6382 6383 6384
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      6385 6386 6387 6388 6389 6390 6391 6392 6393 6394 6395 6396 6397 6398 6399
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    1    1    0    1    0    0    0    0    0    0    0    1    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## T7_2    0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
```

```
## T7_3       1    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## DF_1       0    0    0    0    0    0    0    0    0    1    0    1    0    0    0
##         6400 6401 6402 6403 6404 6405 6406 6407 6408 6409 6410 6411 6412 6413 6414
## T1_1       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3       0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## T7_1       0    1    0    0    0    0    1    0    0    0    0    0    0    0    0
## T7_2       0    0    0    0    1    0    0    0    0    0    0    1    0    0    0
## T7_3       0    0    0    0    0    0    0    0    0    0    2    0    1    0    0
## DF_1       1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##         6415 6416 6417 6418 6419 6420 6421 6422 6423 6424 6425 6426 6427 6428 6429
## T1_1       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3       0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2       0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3       0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## DF_1       0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
##         6430 6431 6432 6433 6434 6435 6436 6437 6438 6439 6440 6441 6442 6443 6444
## T1_1       1    1    0    0    0    0    0    0    0    0    0    0    0    0    1
## T1_2       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1       0    0    0    1    0    1    0    0    0    0    0    0    0    0    0
## T7_2       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1       0    0    0    0    0    0    0    0    0    0    0    1    1    0    0
##         6445 6446 6447 6448 6449 6450 6451 6452 6453 6454 6455 6456 6457 6458 6459
## T1_1       1    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## T1_2       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1       0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1       0    0    0    0    0    0    0    0    0    0    0    0    2    0    0
##         6460 6461 6462 6463 6464 6465 6466 6467 6468 6469 6470 6471 6472 6473 6474
## T1_1       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3       0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## T7_1       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2       1    0    0    0    1    0    1    0    0    0    0    0    0    0    0
## T7_3       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1       0    1    0    0    0    0    0    0    0    0    0    1    0    1    0
##         6475 6476 6477 6478 6479 6480 6481 6482 6483 6484 6485 6486 6487 6488 6489
## T1_1       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2       0    0    0    0    1    0    0    0    1    0    0    0    0    0    1
## T7_3       0    1    1    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1       1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##         6490 6491 6492 6493 6494 6495 6496 6497 6498 6499 6500 6501 6502 6503 6504
## T1_1       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2       0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
## T7_1       1     0     0     0     0     1     0     0     0     0     0     0     0     0     0
## T7_2       0     0     0     0     0     0     0     0     1     0     0     0     0     0     0
## T7_3       0     0     0     0     0     0     0     0     0     1     0     1     0     0     0
## DF_1       0     0     0     0     0     0     0     0     0     1     0     0     0     1     0
##         6505  6506  6507  6508  6509  6510  6511  6512  6513  6514  6515  6516  6517  6518  6519
## T1_1       0     0     0     0     1     0     0     0     0     0     0     0     0     0     1
## T1_2       0     1     1     0     0     1     0     1     1     0     1     1     0     0     0
## T1_3       0     0     0     0     0     0     0     1     0     1     0     0     1     1     0
## T7_1       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2       0     0     0     0     0     0     0     0     0     1     0     0     0     0     0
## T7_3       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
##         6520  6521  6522  6523  6524  6525  6526  6527  6528  6529  6530  6531  6532  6533  6534
## T1_1       0     0     0     1     0     0     0     0     0     0     0     0     0     0     0
## T1_2       0     0     0     0     0     0     0     0     0     0     0     0     1     0     0
## T1_3       0     1     0     0     0     1     0     0     0     0     0     1     0     0     0
## T7_1       0     0     0     0     0     0     0     0     1     0     0     0     0     0     0
## T7_2       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1       1     0     1     0     0     0     0     0     0     0     0     0     0     0     0
##         6535  6536  6537  6538  6539  6540  6541  6542  6543  6544  6545  6546  6547  6548  6549
## T1_1       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2       0     0     0     0     1     1     0     0     0     0     0     0     0     0     0
## T1_3       0     0     1     0     0     0     0     0     1     0     0     0     0     0     1
## T7_1       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2       1     1     0     0     1     0     0     0     0     0     0     0     0     0     0
## T7_3       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1       0     0     0     0     0     0     1     0     0     0     0     0     1     1     0
##         6550  6551  6552  6553  6554  6555  6556  6557  6558  6559  6560  6561  6562  6563  6564
## T1_1       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2       0     0     0     0     0     0     0     1     0     1     0     0     0     0     0
## T1_3       1     0     0     0     1     0     0     0     0     0     0     0     0     0     0
## T7_1       0     0     0     0     0     0     0     0     2     0     1     0     0     0     0
## T7_2       0     0     1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1       0     0     0     0     0     0     0     0     0     1     0     0     0     0     1
##         6565  6566  6567  6568  6569  6570  6571  6572  6573  6574  6575  6576  6577  6578  6579
## T1_1       0     0     0     0     0     0     0     0     0     0     2     0     0     0     0
## T1_2       0     0     0     0     0     0     0     0     0     0     0     1     0     0     0
## T1_3       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1       0     0     1     0     1     1     0     0     0     0     0     0     0     0     0
## T7_2       0     0     0     0     0     0     0     0     1     0     0     0     0     0     0
## T7_3       0     0     0     0     0     0     0     0     0     1     0     0     0     0     0
## DF_1       0     0     0     0     0     1     0     0     0     0     0     0     0     0     0
##         6580  6581  6582  6583  6584  6585  6586  6587  6588  6589  6590  6591  6592  6593  6594
## T1_1       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3       0     0     0     0     0     0     0     0     0     0     0     2     0     0     0
## T7_1       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2       0     0     0     1     0     0     0     0     0     0     0     0     0     0     1
## T7_3       0     0     0     0     0     0     0     0     1     0     0     0     0     0     0
## DF_1       1     0     0     0     0     0     0     1     0     0     0     0     0     0     0
##         6595  6596  6597  6598  6599  6600  6601  6602  6603  6604  6605  6606  6607  6608  6609
## T1_1       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
```

```
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     1     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0     1     0     0
## T7_2      0     0     0     0     0     1     0     0     0     1     0     0     1     0     0
## T7_3      0     0     1     0     0     0     0     0     0     0     0     0     0     0     1
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0     0     1     0
##        6610  6611  6612  6613  6614  6615  6616  6617  6618  6619  6620  6621  6622  6623  6624
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      1     0     0     0     0     0     0     0     0     2     0     0     2     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     2     0     1     0     0     0     0     0     0     0     1
## T7_2      0     0     0     0     0     1     0     1     0     0     0     0     0     0     0
## T7_3      0     1     0     1     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     1     0     0     0     1     1     0     1     0
##        6625  6626  6627  6628  6629  6630  6631  6632  6633  6634  6635  6636  6637  6638  6639
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0     1     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     1     0     1     0     0     0     0     0     0     0     0     0     1     1
## T7_2      0     0     0     0     1     0     0     0     1     0     0     0     0     0     0
## T7_3      1     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     1     0     0     0     0     0     0     0     0     0     0     0     0
##        6640  6641  6642  6643  6644  6645  6646  6647  6648  6649  6650  6651  6652  6653  6654
## T1_1      0     0     0     0     0     0     0     0     0     1     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0     0     1     0
## T1_3      0     0     0     0     0     0     0     0     0     0     1     1     0     0     0
## T7_1      0     1     0     0     0     0     1     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     1     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     1     0     1     0     0     1     0     0     0     1     0     0
##        6655  6656  6657  6658  6659  6660  6661  6662  6663  6664  6665  6666  6667  6668  6669
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     1     0     0     0     0     1     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     1     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     1     0     0     0     0     0     0     0
##        6670  6671  6672  6673  6674  6675  6676  6677  6678  6679  6680  6681  6682  6683  6684
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     1     1     0     0
## T7_3      1     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     1     1     0     0     0     0     0     0     0     0
##        6685  6686  6687  6688  6689  6690  6691  6692  6693  6694  6695  6696  6697  6698  6699
## T1_1      0     0     0     0     0     0     0     0     0     1     0     0     0     1     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     1     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0     1     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     1
## DF_1      0     0     0     0     0     1     0     0     0     0     0     0     0     0     0
```

```
##      6700 6701 6702 6703 6704 6705 6706 6707 6708 6709 6710 6711 6712 6713 6714
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## T7_1    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    1    0    0    0    0    0    0    0    2    0    1    0
##      6715 6716 6717 6718 6719 6720 6721 6722 6723 6724 6725 6726 6727 6728 6729
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    1    0    0    0    1    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    1    1    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    1    0    0    0    0    1    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
##      6730 6731 6732 6733 6734 6735 6736 6737 6738 6739 6740 6741 6742 6743 6744
## T1_1    0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## T1_2    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
## T7_1    0    1    0    1    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    1    0    0    1    0    0    0    0    0    0
##      6745 6746 6747 6748 6749 6750 6751 6752 6753 6754 6755 6756 6757 6758 6759
## T1_1    0    0    0    0    0    0    0    1    0    1    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    1    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    1    0    1    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      6760 6761 6762 6763 6764 6765 6766 6767 6768 6769 6770 6771 6772 6773 6774
## T1_1    0    0    0    0    0    0    0    0    0    0    1    0    0    0    1
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
##      6775 6776 6777 6778 6779 6780 6781 6782 6783 6784 6785 6786 6787 6788 6789
## T1_1    0    0    0    0    0    0    0    0    0    0    0    2    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    1    0    0    0    0    1    1    0    0    0    0    0    1    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
##      6790 6791 6792 6793 6794 6795 6796 6797 6798 6799 6800 6801 6802 6803 6804
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    1    0    0    0    0    1    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    1    0    1    0    0    0    0    0    0    0    0    0    0
```

```
## T7_3     0     0     0     0     0     0     0     0     0     0     0     3     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
##        6805  6806  6807  6808  6809  6810  6811  6812  6813  6814  6815  6816  6817  6818  6819
## T1_1     0     0     0     0     1     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0     0     1     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     1     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     2     0     0     0
## DF_1     0     1     0     0     0     1     0     0     0     0     0     0     0     0     0
##        6820  6821  6822  6823  6824  6825  6826  6827  6828  6829  6830  6831  6832  6833  6834
## T1_1     0     0     0     0     0     0     0     0     0     1     0     1     0     0     0
## T1_2     0     0     0     0     0     1     0     0     0     0     0     0     0     0     0
## T1_3     1     1     0     0     0     0     0     0     1     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     1     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     1     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0     1     0     0
##        6835  6836  6837  6838  6839  6840  6841  6842  6843  6844  6845  6846  6847  6848  6849
## T1_1     0     0     0     0     0     1     0     0     0     0     1     0     0     0     0
## T1_2     0     0     0     0     0     0     0     1     1     0     0     0     0     1     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     1
## T7_1     0     0     0     0     0     0     0     0     0     0     0     1     1     0     1
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
##        6850  6851  6852  6853  6854  6855  6856  6857  6858  6859  6860  6861  6862  6863  6864
## T1_1     1     0     0     0     0     0     0     0     0     1     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0     0     1     0
## T7_2     0     0     0     1     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     1     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     1     0     0     0     0     0     0
##        6865  6866  6867  6868  6869  6870  6871  6872  6873  6874  6875  6876  6877  6878  6879
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     1     1     0     0     0     0     0     0     1     0     0     0     0     0     0
## T1_3     0     0     1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0     0     1     0
##        6880  6881  6882  6883  6884  6885  6886  6887  6888  6889  6890  6891  6892  6893  6894
## T1_1     0     0     0     0     0     0     1     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     1
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     1     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0     0     1     0
##        6895  6896  6897  6898  6899  6900  6901  6902  6903  6904  6905  6906  6907  6908  6909
## T1_1     0     0     0     0     1     0     0     0     0     0     1     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
```

```
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## DF_1    1    0    1    0    0    0    0    1    0    0    0    0    0    0    0
##      6910 6911 6912 6913 6914 6915 6916 6917 6918 6919 6920 6921 6922 6923 6924
## T1_1    0    0    0    0    0    0    1    0    0    0    0    0    0    1    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## T7_2    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      6925 6926 6927 6928 6929 6930 6931 6932 6933 6934 6935 6936 6937 6938 6939
## T1_1    0    0    0    0    0    0    0    1    0    0    0    0    0    1    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## T1_3    0    0    0    1    0    0    0    1    1    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      6940 6941 6942 6943 6944 6945 6946 6947 6948 6949 6950 6951 6952 6953 6954
## T1_1    0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    1    1    0    0    0    0
## T1_3    0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
## T7_1    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    1    0    1    0    0    0    0    0    0    0    0    0    0    0
##      6955 6956 6957 6958 6959 6960 6961 6962 6963 6964 6965 6966 6967 6968 6969
## T1_1    0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## T1_3    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T7_1    0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      6970 6971 6972 6973 6974 6975 6976 6977 6978 6979 6980 6981 6982 6983 6984
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    1    1    0    0    0    0    1    0
## T7_2    0    0    1    1    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      6985 6986 6987 6988 6989 6990 6991 6992 6993 6994 6995 6996 6997 6998 6999
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    1    0    0    0    0    1    0    0    0    0    1    0    0
## T1_3    1    1    0    0    1    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    1    0    0    1    0    0    0    1    0    0    1    0
## T7_2    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      7000 7001 7002 7003 7004 7005 7006 7007 7008 7009 7010 7011 7012 7013 7014
## T1_1    1    1    0    0    0    0    0    0    0    0    0    0    0    0    0
```

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```
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    1    1    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    1    0    1    0    0
##      7015 7016 7017 7018 7019 7020 7021 7022 7023 7024 7025 7026 7027 7028 7029
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## T1_3    0    0    0    0    0    0    0    2    0    1    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
##      7030 7031 7032 7033 7034 7035 7036 7037 7038 7039 7040 7041 7042 7043 7044
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    1    0    1    1    0    0    1    1    0    0    0    0    0
## T1_3    0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    1    0    2    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      7045 7046 7047 7048 7049 7050 7051 7052 7053 7054 7055 7056 7057 7058 7059
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## T7_2    0    0    0    0    1    0    0    0    0    1    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    2
##      7060 7061 7062 7063 7064 7065 7066 7067 7068 7069 7070 7071 7072 7073 7074
## T1_1    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## T1_2    0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    1    0    0    0    1    0    0    0    1    0    1    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    2    0    0    0    1    0    0    0    0    0    0    0    0
##      7075 7076 7077 7078 7079 7080 7081 7082 7083 7084 7085 7086 7087 7088 7089
## T1_1    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    1    0    0    1    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    1    0    0    0    0    0    0    0    1    0
##      7090 7091 7092 7093 7094 7095 7096 7097 7098 7099 7100 7101 7102 7103 7104
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
```

```
##       7105 7106 7107 7108 7109 7110 7111 7112 7113 7114 7115 7116 7117 7118 7119
## T1_1     0    1    0    0    1    0    0    0    0    0    0    0    0    0    0
## T1_2     0    0    0    1    0    0    0    0    0    0    1    0    0    0    0
## T1_3     0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
## T7_1     0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## T7_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1     1    0    1    0    0    0    1    0    0    0    0    0    0    0    0
##       7120 7121 7122 7123 7124 7125 7126 7127 7128 7129 7130 7131 7132 7133 7134
## T1_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2     0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
## T1_3     0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## T7_1     0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## T7_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1     0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
##       7135 7136 7137 7138 7139 7140 7141 7142 7143 7144 7145 7146 7147 7148 7149
## T1_1     0    0    0    0    1    0    0    0    0    1    1    0    0    0    0
## T1_2     0    0    0    0    0    0    1    0    0    0    0    0    0    0    1
## T1_3     0    1    0    0    0    0    0    0    0    0    1    0    0    0    0
## T7_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3     0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## DF_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##       7150 7151 7152 7153 7154 7155 7156 7157 7158 7159 7160 7161 7162 7163 7164
## T1_1     0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## T1_2     0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## T1_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2     0    0    0    0    0    0    1    0    0    1    0    0    0    0    0
## T7_3     0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## DF_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##       7165 7166 7167 7168 7169 7170 7171 7172 7173 7174 7175 7176 7177 7178 7179
## T1_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2     0    1    0    0    0    0    0    0    0    0    0    1    0    0    0
## T1_3     0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T7_1     0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## T7_2     0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##       7180 7181 7182 7183 7184 7185 7186 7187 7188 7189 7190 7191 7192 7193 7194
## T1_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1     0    0    0    0    0    0    0    0    1    0    0    0    1    0    0
##       7195 7196 7197 7198 7199 7200 7201 7202 7203 7204 7205 7206 7207 7208 7209
## T1_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
## T7_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1     0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
##       7210 7211 7212 7213 7214 7215 7216 7217 7218 7219 7220 7221 7222 7223 7224
## T1_1     0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## T1_2     0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## T1_3     0    0    1    0    1    0    0    0    0    0    0    0    1    1    0
## T7_1     0    0    0    1    0    0    0    0    0    0    1    0    0    0    0
## T7_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3     0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1     0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
##       7225 7226 7227 7228 7229 7230 7231 7232 7233 7234 7235 7236 7237 7238 7239
## T1_1     0    0    0    0    0    0    1    0    2    0    0    0    0    0    0
## T1_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3     0    0    0    0    0    0    0    0    1    0    0    0    0    1    1
## T7_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2     0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## T7_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##       7240 7241 7242 7243 7244 7245 7246 7247 7248 7249 7250 7251 7252 7253 7254
## T1_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3     0    0    0    0    0    0    0    0    0    0    1    0    0    0    1
## T7_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2     0    0    1    0    0    0    0    0    0    0    0    0    1    0    0
## T7_3     0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## DF_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##       7255 7256 7257 7258 7259 7260 7261 7262 7263 7264 7265 7266 7267 7268 7269
## T1_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2     0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## T1_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1     1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2     0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## T7_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1     0    1    0    0    0    0    0    1    0    0    0    0    0    1    0
##       7270 7271 7272 7273 7274 7275 7276 7277 7278 7279 7280 7281 7282 7283 7284
## T1_1     0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## T1_2     0    0    0    0    1    0    1    0    0    1    0    0    0    0    0
## T1_3     1    1    1    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## DF_1     0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
##       7285 7286 7287 7288 7289 7290 7291 7292 7293 7294 7295 7296 7297 7298 7299
## T1_1     0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## T1_2     0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3     0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T7_1     0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2     0    0    0    1    0    0    0    0    0    1    0    0    0    0    0
## T7_3     0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## DF_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##       7300 7301 7302 7303 7304 7305 7306 7307 7308 7309 7310 7311 7312 7313 7314
## T1_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2     1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3     0    0    0    0    0    0    0    0    1    1    0    0    0    0    1
```

```
## T7_1     0     0     1     0     0     0     0     0     0     0     0     0     1     0     0
## T7_2     0     0     0     0     0     0     0     1     0     0     0     0     0     0     0
## T7_3     0     0     0     1     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     1     0     0     0
##       7315 7316 7317 7318 7319 7320 7321 7322 7323 7324 7325 7326 7327 7328 7329
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     1     0     0     0     0     1
## T1_3     0     0     0     0     0     0     0     0     1     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     1     0     1     0     0     0     1     0     0     0     0     0     0     1     0
##       7330 7331 7332 7333 7334 7335 7336 7337 7338 7339 7340 7341 7342 7343 7344
## T1_1     0     0     0     0     1     1     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     1     0     0     0     0     0     1
## T1_3     0     0     0     0     0     0     0     1     0     0     0     0     1     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     1
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     1     0     0     0     0     0     0     0     0     0     0     1
##       7345 7346 7347 7348 7349 7350 7351 7352 7353 7354 7355 7356 7357 7358 7359
## T1_1     0     0     0     0     0     1     0     0     0     0     0     0     2     0     0
## T1_2     1     0     0     0     0     0     0     0     1     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     1     1     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     1     1     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     1     0     0     0     0     1
##       7360 7361 7362 7363 7364 7365 7366 7367 7368 7369 7370 7371 7372 7373 7374
## T1_1     0     0     0     0     0     0     0     0     0     1     1     0     0     0     0
## T1_2     0     1     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0     0     1     0
## T7_1     0     0     0     0     0     0     0     1     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
##       7375 7376 7377 7378 7379 7380 7381 7382 7383 7384 7385 7386 7387 7388 7389
## T1_1     0     0     0     0     0     0     0     0     0     1     0     0     0     0     1
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0     0     1     1
## T7_1     0     0     1     1     0     0     1     0     0     0     1     1     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     1     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
##       7390 7391 7392 7393 7394 7395 7396 7397 7398 7399 7400 7401 7402 7403 7404
## T1_1     0     0     0     0     0     0     0     0     0     0     0     1     0     0     0
## T1_2     1     0     0     0     0     0     1     0     0     0     0     0     0     0     0
## T1_3     0     0     0     1     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0     0     1     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     1     0     0     0     0     0     0     2     0     0     0
##       7405 7406 7407 7408 7409 7410 7411 7412 7413 7414 7415 7416 7417 7418 7419
## T1_1     0     1     0     0     0     0     0     0     0     0     0     0     0     0     0
```

```
## T1_2     0     0     0     0     0     0     0     0     0     0     1     0     0     0     1
## T1_3     0     0     0     0     0     0     0     0     1     0     0     0     1     0     0
## T7_1     0     0     0     0     0     0     0     0     0     1     0     0     0     1     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
##       7420 7421 7422 7423 7424 7425 7426 7427 7428 7429 7430 7431 7432 7433 7434
## T1_1     0     1     0     0     0     0     0     0     0     0     0     0     0     1     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0     1     1     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     1     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     1     1     0     0     0
##       7435 7436 7437 7438 7439 7440 7441 7442 7443 7444 7445 7446 7447 7448 7449
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     1     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     1     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
##       7450 7451 7452 7453 7454 7455 7456 7457 7458 7459 7460 7461 7462 7463 7464
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     1     0     0     0     0     0     0     0     0     0
## T1_3     1     0     0     0     0     0     0     0     1     0     0     1     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     1     1     0     0     0     0     1     0     0     0     0     0     0     0
##       7465 7466 7467 7468 7469 7470 7471 7472 7473 7474 7475 7476 7477 7478 7479
## T1_1     0     0     0     0     0     0     0     0     0     1     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0     1     0     0
## T1_3     0     0     0     1     0     1     0     0     0     0     1     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     1
## T7_2     0     0     0     0     0     0     1     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
##       7480 7481 7482 7483 7484 7485 7486 7487 7488 7489 7490 7491 7492 7493 7494
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     1     0     1     0     0     0
## T7_1     0     0     0     1     0     0     1     0     0     0     0     0     0     0     0
## T7_2     1     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     1     0     0     1     0     0     0     0     0     0     0
##       7495 7496 7497 7498 7499 7500 7501 7502 7503 7504 7505 7506 7507 7508 7509
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     2     0     0     0     1     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     1     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     1     0     0     1     0     0     1     0     0     0     0     0     0     0
```

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```
##      7510 7511 7512 7513 7514 7515 7516 7517 7518 7519 7520 7521 7522 7523 7524
## T1_1    0    1    1    0    0    0    0    0    1    1    0    1    0    0    0
## T1_2    0    0    0    0    0    0    1    1    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    1    0    1    1    0
##      7525 7526 7527 7528 7529 7530 7531 7532 7533 7534 7535 7536 7537 7538 7539
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    1    0    0    0    0    0    0    0    0    1    0    0
## T7_3    0    0    0    0    2    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      7540 7541 7542 7543 7544 7545 7546 7547 7548 7549 7550 7551 7552 7553 7554
## T1_1    0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## T1_3    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    1    0    0    0    0    1    0    1    0
##      7555 7556 7557 7558 7559 7560 7561 7562 7563 7564 7565 7566 7567 7568 7569
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    1    0    1    1    0    0    0    0    0    0
## T1_3    0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
##      7570 7571 7572 7573 7574 7575 7576 7577 7578 7579 7580 7581 7582 7583 7584
## T1_1    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## T1_2    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## T7_3    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      7585 7586 7587 7588 7589 7590 7591 7592 7593 7594 7595 7596 7597 7598 7599
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    1    0    0    0    1    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    1    0    1    0    1    0    0    0    0    0    0    0
##      7600 7601 7602 7603 7604 7605 7606 7607 7608 7609 7610 7611 7612 7613 7614
## T1_1    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    1    0    0    0    0    0    0    0    0    0    0    1    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    2    0    0    0    0    0
```

```
## T7_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1      0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
##        7615 7616 7617 7618 7619 7620 7621 7622 7623 7624 7625 7626 7627 7628 7629
## T1_1      0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## T1_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3      0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T7_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## T7_2      0    0    1    0    0    0    0    0    0    0    0    1    0    1    0
## T7_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1      0    1    0    1    0    1    0    0    0    0    0    0    0    0    0
##        7630 7631 7632 7633 7634 7635 7636 7637 7638 7639 7640 7641 7642 7643 7644
## T1_1      0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## T1_2      0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## T1_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## T7_1      0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2      0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## T7_3      0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## DF_1      0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
##        7645 7646 7647 7648 7649 7650 7651 7652 7653 7654 7655 7656 7657 7658 7659
## T1_1      0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## T1_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1      0    1    1    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2      0    0    0    0    0    0    0    0    1    1    0    1    0    0    0
## T7_3      0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## DF_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
##        7660 7661 7662 7663 7664 7665 7666 7667 7668 7669 7670 7671 7672 7673 7674
## T1_1      0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## T1_2      0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T1_3      0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## T7_1      0    0    0    0    0    1    2    0    0    0    0    0    0    0    0
## T7_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1      1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##        7675 7676 7677 7678 7679 7680 7681 7682 7683 7684 7685 7686 7687 7688 7689
## T1_1      0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## T1_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3      0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1      0    0    0    0    1    0    0    0    0    0    0    0    0    0    3
## T7_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1      1    0    0    0    0    0    0    0    0    0    0    0    1    1    0
##        7690 7691 7692 7693 7694 7695 7696 7697 7698 7699 7700 7701 7702 7703 7704
## T1_1      0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## T1_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## T7_1      0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## T7_2      0    0    0    0    0    1    0    0    0    0    0    0    1    0    0
## T7_3      0    2    0    0    1    0    0    0    0    0    0    0    0    0    0
## DF_1      0    0    1    0    0    0    0    1    0    0    0    0    1    0    0
##        7705 7706 7707 7708 7709 7710 7711 7712 7713 7714 7715 7716 7717 7718 7719
## T1_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2      0    0    0    1    0    0    0    0    0    0    0    0    0    0    1
## T1_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
## T7_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## T7_2      0    0    1    0    0    0    0    0    0    0    1    0    0    0    0
## T7_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1      0    0    0    0    0    0    1    0    0    0    0    0    0    1    0
##        7720 7721 7722 7723 7724 7725 7726 7727 7728 7729 7730 7731 7732 7733 7734
## T1_1      0    0    0    0    0    0    0    0    1    1    0    0    0    0    0
## T1_2      0    0    1    0    0    0    1    0    0    0    0    0    0    0    0
## T1_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1      0    0    0    0    0    0    0    1    0    0    0    0    0    0    1
##        7735 7736 7737 7738 7739 7740 7741 7742 7743 7744 7745 7746 7747 7748 7749
## T1_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2      0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## T1_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1      0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## T7_2      1    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3      0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1      0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
##        7750 7751 7752 7753 7754 7755 7756 7757 7758 7759 7760 7761 7762 7763 7764
## T1_1      0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
## T1_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2      0    0    0    0    2    1    0    0    0    0    0    0    0    0    0
## T7_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##        7765 7766 7767 7768 7769 7770 7771 7772 7773 7774 7775 7776 7777 7778 7779
## T1_1      0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## T1_2      0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## T1_3      0    0    0    0    0    0    0    0    0    1    0    0    1    0    1
## T7_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1      0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
##        7780 7781 7782 7783 7784 7785 7786 7787 7788 7789 7790 7791 7792 7793 7794
## T1_1      0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2      0    0    0    1    0    0    0    0    0    0    0    0    0    0    1
## T1_3      0    0    1    0    0    0    0    1    0    1    0    0    0    0    0
## T7_1      0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## T7_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1      0    0    0    0    1    0    0    0    1    0    0    0    0    0    0
##        7795 7796 7797 7798 7799 7800 7801 7802 7803 7804 7805 7806 7807 7808 7809
## T1_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2      0    0    0    1    0    0    0    0    0    0    1    0    0    1    1
## T1_3      0    0    0    0    0    0    0    0    0    0    0    2    1    0    0
## T7_1      0    1    0    0    0    1    0    0    0    0    0    0    0    0    0
## T7_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1      0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
##        7810 7811 7812 7813 7814 7815 7816 7817 7818 7819 7820 7821 7822 7823 7824
## T1_1      0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
```

```
## T1_2      0      1      0      0      0      0      0      1      0      0      0      0      0      0      0
## T1_3      0      0      0      0      0      1      0      1      0      0      0      0      0      0      0
## T7_1      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## T7_2      0      0      0      1      0      0      0      1      0      1      0      0      0      0      0
## T7_3      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## DF_1      0      0      0      0      1      0      0      0      0      0      0      1      1      0      0
##         7825 7826 7827 7828 7829 7830 7831 7832 7833 7834 7835 7836 7837 7838 7839
## T1_1      0      0      1      0      0      0      0      0      0      0      0      1      0      0      0
## T1_2      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## T1_3      1      1      1      0      1      0      0      0      0      0      0      0      0      0      0
## T7_1      0      0      0      0      0      0      1      0      0      0      0      0      0      0      0
## T7_2      0      0      0      0      0      0      0      0      0      0      0      0      0      0      1
## T7_3      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## DF_1      0      0      0      0      0      0      0      0      1      0      0      0      0      0      0
##         7840 7841 7842 7843 7844 7845 7846 7847 7848 7849 7850 7851 7852 7853 7854
## T1_1      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## T1_2      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## T1_3      0      0      0      0      0      0      1      0      0      0      0      0      0      0      1
## T7_1      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## T7_2      1      1      0      0      0      0      0      0      0      0      0      0      0      0      0
## T7_3      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## DF_1      0      0      0      0      0      0      0      0      0      1      0      0      0      0      0
##         7855 7856 7857 7858 7859 7860 7861 7862 7863 7864 7865 7866 7867 7868 7869
## T1_1      0      0      0      0      0      0      0      1      0      0      0      0      0      0      0
## T1_2      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## T1_3      0      0      0      0      0      0      1      0      0      0      0      1      0      0      0
## T7_1      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## T7_2      0      1      0      0      0      0      0      0      0      0      0      0      0      0      0
## T7_3      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## DF_1      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
##         7870 7871 7872 7873 7874 7875 7876 7877 7878 7879 7880 7881 7882 7883 7884
## T1_1      0      0      0      0      0      0      0      0      0      0      0      0      0      1      1
## T1_2      0      0      0      0      0      1      0      0      0      0      0      0      0      0      0
## T1_3      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## T7_1      0      0      0      0      0      1      0      0      0      0      0      0      0      0      0
## T7_2      0      0      0      0      0      0      0      0      0      0      0      0      1      0      0
## T7_3      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## DF_1      0      0      0      0      0      0      0      0      0      1      0      1      0      0      0
##         7885 7886 7887 7888 7889 7890 7891 7892 7893 7894 7895 7896 7897 7898 7899
## T1_1      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## T1_2      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## T1_3      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## T7_1      0      0      1      0      0      0      0      1      1      1      0      0      0      0      0
## T7_2      1      0      0      0      0      0      0      0      0      0      1      0      0      0      0
## T7_3      0      1      0      0      0      0      0      0      0      0      0      0      0      0      0
## DF_1      0      0      0      0      1      0      1      0      0      0      1      0      0      0      0
##         7900 7901 7902 7903 7904 7905 7906 7907 7908 7909 7910 7911 7912 7913 7914
## T1_1      0      0      1      0      0      0      0      0      0      0      0      0      0      0      1
## T1_2      0      1      0      0      0      0      0      0      0      0      0      0      0      0      0
## T1_3      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## T7_1      1      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## T7_2      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## T7_3      0      0      0      0      0      0      0      0      0      0      0      0      0      0      0
## DF_1      0      0      0      0      0      0      1      1      0      0      1      0      0      0      0
```

```
##      7915 7916 7917 7918 7919 7920 7921 7922 7923 7924 7925 7926 7927 7928 7929
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    1    0    0    1    0    1    0    1    0    0    0    0
##      7930 7931 7932 7933 7934 7935 7936 7937 7938 7939 7940 7941 7942 7943 7944
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    1    1    1    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    1    0    0    0    0    1    0    0    0    0    0    0    0    0
##      7945 7946 7947 7948 7949 7950 7951 7952 7953 7954 7955 7956 7957 7958 7959
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## T1_3    1    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      7960 7961 7962 7963 7964 7965 7966 7967 7968 7969 7970 7971 7972 7973 7974
## T1_1    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## T1_2    0    0    0    0    1    0    0    0    0    0    0    1    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      7975 7976 7977 7978 7979 7980 7981 7982 7983 7984 7985 7986 7987 7988 7989
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    1    0    0    0    0    0    0    0    0    0    0    1    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    1    0    1
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
##      7990 7991 7992 7993 7994 7995 7996 7997 7998 7999 8000 8001 8002 8003 8004
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    1    0    0    0    0    0    2    0    0    0    0    0    0
## T7_2    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      8005 8006 8007 8008 8009 8010 8011 8012 8013 8014 8015 8016 8017 8018 8019
## T1_1    0    1    0    0    0    0    1    0    0    0    0    0    0    0    0
## T1_2    0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    1    0    0    1    0    0    0    0    0    0    0
```

```
## T7_3    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## DF_1    0    0    1    1    0    0    0    0    0    0    0    1    0    0    0
##      8020 8021 8022 8023 8024 8025 8026 8027 8028 8029 8030 8031 8032 8033 8034
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    2    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## T7_2    1    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
##      8035 8036 8037 8038 8039 8040 8041 8042 8043 8044 8045 8046 8047 8048 8049
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      8050 8051 8052 8053 8054 8055 8056 8057 8058 8059 8060 8061 8062 8063 8064
## T1_1    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
##      8065 8066 8067 8068 8069 8070 8071 8072 8073 8074 8075 8076 8077 8078 8079
## T1_1    0    0    0    1    1    0    0    0    0    0    1    0    0    0    0
## T1_2    1    0    0    0    0    0    0    1    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    1    1    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
##      8080 8081 8082 8083 8084 8085 8086 8087 8088 8089 8090 8091 8092 8093 8094
## T1_1    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## T1_3    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    1    1    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    1    0    1    0
##      8095 8096 8097 8098 8099 8100 8101 8102 8103 8104 8105 8106 8107 8108 8109
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## T7_1    1    0    0    0    0    0    0    0    0    1    0    0    1    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    2    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
##      8110 8111 8112 8113 8114 8115 8116 8117 8118 8119 8120 8121 8122 8123 8124
## T1_1    0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
```

```
## T7_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2      0    0    0    0    0    0    0    0    0    0    0    1    1    0    0
## T7_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1      1    0    0    0    0    0    0    0    0    1    0    0    0    0    0
##        8125 8126 8127 8128 8129 8130 8131 8132 8133 8134 8135 8136 8137 8138 8139
## T1_1      0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## T1_2      0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3      0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## T7_1      0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## T7_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3      0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## DF_1      0    0    0    0    0    0    0    0    2    0    0    0    0    0    0
##        8140 8141 8142 8143 8144 8145 8146 8147 8148 8149 8150 8151 8152 8153 8154
## T1_1      0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## T1_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3      0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2      0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## T7_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1      0    0    0    0    1    0    0    0    0    0    0    2    0    0    0
##        8155 8156 8157 8158 8159 8160 8161 8162 8163 8164 8165 8166 8167 8168 8169
## T1_1      0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2      0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## T1_3      0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## T7_1      0    0    0    0    0    1    0    2    1    0    0    0    0    1    0
## T7_2      1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##        8170 8171 8172 8173 8174 8175 8176 8177 8178 8179 8180 8181 8182 8183 8184
## T1_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2      0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## T1_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3      0    0    0    0    1    1    0    0    1    0    0    0    0    0    0
## DF_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
##        8185 8186 8187 8188 8189 8190 8191 8192 8193 8194 8195 8196 8197 8198 8199
## T1_1      0    0    0    0    1    0    0    0    0    0    0    0    0    1    0
## T1_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1      0    0    0    2    0    0    1    1    0    0    0    0    0    0    1
## T7_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3      2    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1      0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
##        8200 8201 8202 8203 8204 8205 8206 8207 8208 8209 8210 8211 8212 8213 8214
## T1_1      0    0    0    0    0    0    0    1    0    0    0    0    0    0    1
## T1_2      0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## T1_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1      1    0    0    1    0    0    0    0    0    0    0    0    0    1    0
## T7_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3      1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##        8215 8216 8217 8218 8219 8220 8221 8222 8223 8224 8225 8226 8227 8228 8229
## T1_1      0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
```

```
## T1_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3      0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## T7_1      0    1    0    0    0    0    0    0    0    0    0    0    0    1    0
## T7_2      0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## T7_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##        8230 8231 8232 8233 8234 8235 8236 8237 8238 8239 8240 8241 8242 8243 8244
## T1_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2      0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## T1_3      0    0    0    0    1    0    0    1    0    0    0    0    1    0    0
## T7_1      0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## T7_2      0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## T7_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1      0    1    0    1    0    0    0    0    0    0    0    1    0    0    0
##        8245 8246 8247 8248 8249 8250 8251 8252 8253 8254 8255 8256 8257 8258 8259
## T1_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3      0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## T7_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2      0    1    0    0    0    0    0    0    0    0    0    0    1    0    0
## T7_3      0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## DF_1      0    0    0    0    0    0    0    0    1    0    0    0    0    0    1
##        8260 8261 8262 8263 8264 8265 8266 8267 8268 8269 8270 8271 8272 8273 8274
## T1_1      0    0    0    0    1    0    1    0    0    0    0    0    0    0    0
## T1_2      0    0    0    1    0    1    0    0    0    0    0    0    0    0    0
## T1_3      0    0    0    0    0    0    0    0    0    0    0    0    0    1    1
## T7_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##        8275 8276 8277 8278 8279 8280 8281 8282 8283 8284 8285 8286 8287 8288 8289
## T1_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2      0    0    0    0    0    1    0    0    0    0    1    0    0    0    0
## T1_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1      0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## T7_2      0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
## T7_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1      0    0    1    0    0    0    0    0    1    0    0    0    0    0    0
##        8290 8291 8292 8293 8294 8295 8296 8297 8298 8299 8300 8301 8302 8303 8304
## T1_1      0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## T1_2      1    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1      0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## T7_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1      0    0    0    0    1    1    0    0    0    0    0    1    0    0    0
##        8305 8306 8307 8308 8309 8310 8311 8312 8313 8314 8315 8316 8317 8318 8319
## T1_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2      1    1    0    0    0    1    0    0    0    0    0    0    0    0    0
## T1_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
##       8320 8321 8322 8323 8324 8325 8326 8327 8328 8329 8330 8331 8332 8333 8334
## T1_1    0    0    0    1    0    0    0    0    1    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## T7_1    0    0    1    0    0    0    1    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    1    0    0    0    0    0    0    1    1    0    0
## T7_3    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
##       8335 8336 8337 8338 8339 8340 8341 8342 8343 8344 8345 8346 8347 8348 8349
## T1_1    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## T1_3    0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## T7_1    0    1    0    0    1    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    2    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
##       8350 8351 8352 8353 8354 8355 8356 8357 8358 8359 8360 8361 8362 8363 8364
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    2    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    1    0    2    0    0    0    0    1    0
##       8365 8366 8367 8368 8369 8370 8371 8372 8373 8374 8375 8376 8377 8378 8379
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    1    0    0    0    1    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##       8380 8381 8382 8383 8384 8385 8386 8387 8388 8389 8390 8391 8392 8393 8394
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## T7_3    0    0    0    1    0    0    0    1    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
##       8395 8396 8397 8398 8399 8400 8401 8402 8403 8404 8405 8406 8407 8408 8409
## T1_1    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    1    0    0    0    0    0    0    0    0    0    1    0    1    0    0
##       8410 8411 8412 8413 8414 8415 8416 8417 8418 8419 8420 8421 8422 8423 8424
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    1    0    0    0    1    0    1    0    0
## T1_3    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
## T7_3      0     0     0     0     0     0     0     0     0     0     0     1     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
##        8425  8426  8427  8428  8429  8430  8431  8432  8433  8434  8435  8436  8437  8438  8439
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0     0     1     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     1     0     1     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     1
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     1     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
##        8440  8441  8442  8443  8444  8445  8446  8447  8448  8449  8450  8451  8452  8453  8454
## T1_1      0     0     0     0     0     1     0     0     0     0     1     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     2     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     1     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
##        8455  8456  8457  8458  8459  8460  8461  8462  8463  8464  8465  8466  8467  8468  8469
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     1     0     2     0     0     2
## T7_2      1     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     1     1     0     0     0     0     0     1     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
##        8470  8471  8472  8473  8474  8475  8476  8477  8478  8479  8480  8481  8482  8483  8484
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
##        8485  8486  8487  8488  8489  8490  8491  8492  8493  8494  8495  8496  8497  8498  8499
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     1     1     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0     1     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     1     0     0     0
## DF_1      0     0     0     0     0     0     0     1     0     0     0     0     0     0     0
##        8500  8501  8502  8503  8504  8505  8506  8507  8508  8509  8510  8511  8512  8513  8514
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      2     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     1     0     0     0     0     0     0     0     0     1     0     0
## T7_3      0     0     1     0     0     0     0     0     1     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
##        8515  8516  8517  8518  8519  8520  8521  8522  8523  8524  8525  8526  8527  8528  8529
## T1_1      1     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
```

```
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      8530 8531 8532 8533 8534 8535 8536 8537 8538 8539 8540 8541 8542 8543 8544
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    1    0    0    0    0    1    0    0    0    0    0
## T7_1    0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      8545 8546 8547 8548 8549 8550 8551 8552 8553 8554 8555 8556 8557 8558 8559
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    1    1    1    1    0    0    0    0    0    0    0    0    0    0    0
##      8560 8561 8562 8563 8564 8565 8566 8567 8568 8569 8570 8571 8572 8573 8574
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## T7_2    0    0    0    0    0    0    1    0    2    0    0    0    0    0    0
## T7_3    1    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## DF_1    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
##      8575 8576 8577 8578 8579 8580 8581 8582 8583 8584 8585 8586 8587 8588 8589
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      8590 8591 8592 8593 8594 8595 8596 8597 8598 8599 8600 8601 8602 8603 8604
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    1    0    0    0    0    1    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    1    1
## DF_1    0    0    0    0    0    0    1    0    0    1    1    0    0    0    0
##      8605 8606 8607 8608 8609 8610 8611 8612 8613 8614 8615 8616 8617 8618 8619
## T1_1    0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T7_3    0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      8620 8621 8622 8623 8624 8625 8626 8627 8628 8629 8630 8631 8632 8633 8634
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0     0     1     0
## T7_2      0     0     0     0     0     0     0     0     0     1     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     1     0     0     0     0     0     1     0     0     1     0     0     0
##        8635  8636  8637  8638  8639  8640  8641  8642  8643  8644  8645  8646  8647  8648  8649
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     1     0     0     0
## T1_3      0     0     0     0     0     0     1     0     1     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     1     0     0     0     1     0     0     0     0     0     0     1     0     0
##        8650  8651  8652  8653  8654  8655  8656  8657  8658  8659  8660  8661  8662  8663  8664
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     1     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      1     0     0     0     0     0     0     0     0     0     0     0     1     1     1
##        8665  8666  8667  8668  8669  8670  8671  8672  8673  8674  8675  8676  8677  8678  8679
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     1     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     1     0     1     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     1     0     0     0     0     0     0
##        8680  8681  8682  8683  8684  8685  8686  8687  8688  8689  8690  8691  8692  8693  8694
## T1_1      0     0     0     0     0     0     0     0     0     1     0     0     1     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     2
## T1_3      0     0     0     0     0     0     0     0     1     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     1     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      1     1     0     0     0     0     0     0     0     0     0     0     0     0     0
##        8695  8696  8697  8698  8699  8700  8701  8702  8703  8704  8705  8706  8707  8708  8709
## T1_1      1     0     1     1     1     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     1     0     0     0     0     0     0     0     1     0
## T1_3      0     0     0     0     0     0     1     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     1     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
##        8710  8711  8712  8713  8714  8715  8716  8717  8718  8719  8720  8721  8722  8723  8724
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0     1     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     1     0     0     1
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     1     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     2     0     1     0     0     0     0     0
## DF_1      0     0     0     0     1     0     0     0     0     0     0     0     0     0     0
```

```
##      8725 8726 8727 8728 8729 8730 8731 8732 8733 8734 8735 8736 8737 8738 8739
## T1_1    0    0    0    0    1    0    0    0    0    0    0    0    1    0    0
## T1_2    1    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    1    1    0    0    0    0    0    1    0
## T7_1    0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      8740 8741 8742 8743 8744 8745 8746 8747 8748 8749 8750 8751 8752 8753 8754
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## T1_2    0    1    0    0    0    1    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
##      8755 8756 8757 8758 8759 8760 8761 8762 8763 8764 8765 8766 8767 8768 8769
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    1    0    0    0    0    1    0    0    0
## T1_3    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    1    0    0    0    0    0    0    0    0    1    0    0    0    0
## T7_3    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    1    0    1    0    0    0    0    1    0    1
##      8770 8771 8772 8773 8774 8775 8776 8777 8778 8779 8780 8781 8782 8783 8784
## T1_1    1    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## T1_2    0    1    1    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    2    0    0    0    0    0    0    1    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## T7_2    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      8785 8786 8787 8788 8789 8790 8791 8792 8793 8794 8795 8796 8797 8798 8799
## T1_1    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    2
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      8800 8801 8802 8803 8804 8805 8806 8807 8808 8809 8810 8811 8812 8813 8814
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    2    1    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      8815 8816 8817 8818 8819 8820 8821 8822 8823 8824 8825 8826 8827 8828 8829
## T1_1    0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    1    1    0    0    0    0    0    0    0    0    0
## T1_3    1    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
```

```
## T7_3     0     0     0     1     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     1     0     0     0     0     1     0
##       8830 8831 8832 8833 8834 8835 8836 8837 8838 8839 8840 8841 8842 8843 8844
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     1
## T7_2     0     0     0     0     0     0     0     0     1     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     1     1     0     0     0     0     0     0     0     0     0
##       8845 8846 8847 8848 8849 8850 8851 8852 8853 8854 8855 8856 8857 8858 8859
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     1     0     0     0     0     0     1     0     0     0     0     0     1     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     1     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     1
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
##       8860 8861 8862 8863 8864 8865 8866 8867 8868 8869 8870 8871 8872 8873 8874
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     1     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     1     0     0     0     1     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0     0     1     1
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     1
## DF_1     0     0     0     0     0     0     0     1     0     0     1     0     0     0     0
##       8875 8876 8877 8878 8879 8880 8881 8882 8883 8884 8885 8886 8887 8888 8889
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     1     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     1     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     1     0     0     1     0     0     0     0     0
## T7_2     0     1     0     1     1     0     0     0     0     0     0     0     1     0     1
## T7_3     1     0     0     1     0     0     0     0     0     0     1     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
##       8890 8891 8892 8893 8894 8895 8896 8897 8898 8899 8900 8901 8902 8903 8904
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     1     0     0     0     1     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0     0     1     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     1     1     0     0     0     0     0     0     0     0     1     1     0     0
##       8905 8906 8907 8908 8909 8910 8911 8912 8913 8914 8915 8916 8917 8918 8919
## T1_1     0     0     0     0     0     0     0     0     0     0     1     0     0     0     0
## T1_2     0     0     0     0     1     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     1     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     1     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     1     0     0     0     0     0     0     0     0     0     0     0     0
##       8920 8921 8922 8923 8924 8925 8926 8927 8928 8929 8930 8931 8932 8933 8934
## T1_1     0     0     0     0     0     0     1     0     0     0     1     1     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     1     0     1     0     0     1     1     0     0     0     0     0
```

```
## T7_1     0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## T7_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##       8935 8936 8937 8938 8939 8940 8941 8942 8943 8944 8945 8946 8947 8948 8949
## T1_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2     0    0    0    1    1    0    0    0    0    0    0    0    0    0    0
## T1_3     0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## T7_1     0    0    0    0    0    1    0    0    0    1    0    0    0    0    0
## T7_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3     0    0    0    0    0    0    0    0    0    0    0    0    0    2    0
## DF_1     0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
##       8950 8951 8952 8953 8954 8955 8956 8957 8958 8959 8960 8961 8962 8963 8964
## T1_1     0    0    0    0    0    0    0    0    0    1    0    0    0    1    0
## T1_2     0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
## T1_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2     0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## T7_3     0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##       8965 8966 8967 8968 8969 8970 8971 8972 8973 8974 8975 8976 8977 8978 8979
## T1_1     0    0    1    0    0    0    0    0    0    0    1    1    1    0    0
## T1_2     0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## T1_3     0    0    0    0    0    0    0    0    0    1    0    0    0    1    0
## T7_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1     0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
##       8980 8981 8982 8983 8984 8985 8986 8987 8988 8989 8990 8991 8992 8993 8994
## T1_1     0    0    0    0    3    0    0    0    0    1    0    0    1    0    0
## T1_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1     0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
## T7_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1     0    1    0    0    0    0    0    0    0    0    1    0    0    0    0
##       8995 8996 8997 8998 8999 9000 9001 9002 9003 9004 9005 9006 9007 9008 9009
## T1_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1     0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2     0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## T7_3     0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## DF_1     0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
##       9010 9011 9012 9013 9014 9015 9016 9017 9018 9019 9020 9021 9022 9023 9024
## T1_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1     0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2     0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## T7_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1     0    0    0    0    0    0    1    0    0    0    0    0    0    0    1
##       9025 9026 9027 9028 9029 9030 9031 9032 9033 9034 9035 9036 9037 9038 9039
## T1_1     0    1    1    0    0    0    0    0    0    0    0    0    0    0    0
```

```
## T1_2     0     0     1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     1     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     1     0     0     0     0     0     0     0     0     0     0
##       9040 9041 9042 9043 9044 9045 9046 9047 9048 9049 9050 9051 9052 9053 9054
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     1     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     1     0     0     0
## T7_1     2     0     0     0     1     0     0     0     0     0     0     1     0     0     1
## T7_2     0     0     0     0     0     0     0     0     0     0     0     3     0     0     0
## T7_3     1     0     0     0     0     0     0     0     0     0     0     1     0     0     0
## DF_1     0     0     1     0     0     0     0     0     0     0     0     0     1     0     0
##       9055 9056 9057 9058 9059 9060 9061 9062 9063 9064 9065 9066 9067 9068 9069
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     1
## T7_1     0     0     0     0     0     0     0     0     0     0     0     1     0     0     0
## T7_2     0     0     0     0     0     0     1     1     0     1     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     1     0     2     2     0     0     1     0     0     0     0     0     0
##       9070 9071 9072 9073 9074 9075 9076 9077 9078 9079 9080 9081 9082 9083 9084
## T1_1     0     0     0     1     0     0     0     0     0     0     0     0     1     0     0
## T1_2     0     1     0     0     0     0     0     0     0     0     1     0     0     0     0
## T1_3     1     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     1     0     0     0     0     0     0     0     0     0     0     1     0     0     1
##       9085 9086 9087 9088 9089 9090 9091 9092 9093 9094 9095 9096 9097 9098 9099
## T1_1     0     0     0     0     0     0     0     0     1     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     1     0     1     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     1
## T7_1     0     0     0     1     0     0     0     0     0     0     0     0     0     0     0
## T7_2     1     0     1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
##       9100 9101 9102 9103 9104 9105 9106 9107 9108 9109 9110 9111 9112 9113 9114
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     1     0     1     0
## T7_3     1     0     0     0     0     0     0     1     0     0     0     0     0     0     0
## DF_1     1     0     0     1     0     0     0     0     0     0     1     0     0     0     1
##       9115 9116 9117 9118 9119 9120 9121 9122 9123 9124 9125 9126 9127 9128 9129
## T1_1     1     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     1     0     0     0     0     0     1     2     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     1     0     0     0     0     0     0     0     0     0     0     0
```

```
##      9130 9131 9132 9133 9134 9135 9136 9137 9138 9139 9140 9141 9142 9143 9144
## T1_1    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## T1_3    0    1    0    0    0    0    1    0    0    1    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      9145 9146 9147 9148 9149 9150 9151 9152 9153 9154 9155 9156 9157 9158 9159
## T1_1    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## T1_2    1    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    1    1    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    2    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
##      9160 9161 9162 9163 9164 9165 9166 9167 9168 9169 9170 9171 9172 9173 9174
## T1_1    0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
## T1_2    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    1    1    1    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## T7_3    0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      9175 9176 9177 9178 9179 9180 9181 9182 9183 9184 9185 9186 9187 9188 9189
## T1_1    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    1    0    0    0    1    0    1    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    1    0    0    0    0    0    0    0    0    0    1    0    0    0    0
##      9190 9191 9192 9193 9194 9195 9196 9197 9198 9199 9200 9201 9202 9203 9204
## T1_1    0    0    0    0    1    0    0    0    0    0    1    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    1    0    1    0    0    0    0    0    0    0    0    0    1    0
##      9205 9206 9207 9208 9209 9210 9211 9212 9213 9214 9215 9216 9217 9218 9219
## T1_1    0    0    0    0    1    0    0    0    0    0    0    1    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## DF_1    1    0    0    0    0    0    1    0    0    0    0    0    0    0    0
##      9220 9221 9222 9223 9224 9225 9226 9227 9228 9229 9230 9231 9232 9233 9234
## T1_1    0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    1    1    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## T7_2    0    2    0    0    0    0    0    1    0    0    0    0    0    0    0
```

```
## T7_3      0    0    1    0    0    0    0    0    0    1    0    0    0    0    0
## DF_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
##        9235 9236 9237 9238 9239 9240 9241 9242 9243 9244 9245 9246 9247 9248 9249
## T1_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2      0    0    0    0    0    0    0    0    0    0    1    0    1    0    0
## T1_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1      0    0    0    0    1    0    0    0    0    0    0    1    0    0    0
## T7_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3      0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## DF_1      0    1    0    0    0    0    1    1    0    0    0    0    0    0    0
##        9250 9251 9252 9253 9254 9255 9256 9257 9258 9259 9260 9261 9262 9263 9264
## T1_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1      0    2    0    0    1    1    0    1    1    1    0    0    0    0    0
##        9265 9266 9267 9268 9269 9270 9271 9272 9273 9274 9275 9276 9277 9278 9279
## T1_1      1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2      1    0    0    1    0    0    0    0    0    0    1    0    1    0    0
## T1_3      1    0    0    0    0    0    0    0    0    0    0    0    1    1    0
## T7_1      0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## T7_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##        9280 9281 9282 9283 9284 9285 9286 9287 9288 9289 9290 9291 9292 9293 9294
## T1_1      0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2      0    0    0    0    0    1    0    0    0    0    0    0    0    0    1
## T1_3      0    0    1    0    0    0    1    0    0    0    2    0    1    0    0
## T7_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##        9295 9296 9297 9298 9299 9300 9301 9302 9303 9304 9305 9306 9307 9308 9309
## T1_1      0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## T1_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3      0    0    0    1    0    0    0    0    0    0    0    0    0    0    1
## T7_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2      0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
## T7_3      0    0    0    0    0    0    1    0    0    0    1    0    0    0    0
## DF_1      0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
##        9310 9311 9312 9313 9314 9315 9316 9317 9318 9319 9320 9321 9322 9323 9324
## T1_1      0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2      0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## T1_3      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3      0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## DF_1      0    0    0    1    0    1    1    0    1    0    0    0    1    0    0
##        9325 9326 9327 9328 9329 9330 9331 9332 9333 9334 9335 9336 9337 9338 9339
## T1_1      0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## T1_2      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3      0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
```

```
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
##        9340  9341  9342  9343  9344  9345  9346  9347  9348  9349  9350  9351  9352  9353  9354
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      1     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     1     0     0     3     1     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     1     1     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0     0     1     1
##        9355  9356  9357  9358  9359  9360  9361  9362  9363  9364  9365  9366  9367  9368  9369
## T1_1      0     0     0     0     0     0     0     0     0     1     0     0     0     0     0
## T1_2      0     0     1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      1     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     1
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0     1     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     1     0     0     0     0     0     0     0     0     0     0
##        9370  9371  9372  9373  9374  9375  9376  9377  9378  9379  9380  9381  9382  9383  9384
## T1_1      0     0     0     0     0     0     0     1     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     1     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     1     0     0     0     0     0     0     0     0
## T7_2      0     0     0     1     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      1     0     0     0     0     0     0     0     0     0     1     0     0     0     0
##        9385  9386  9387  9388  9389  9390  9391  9392  9393  9394  9395  9396  9397  9398  9399
## T1_1      0     0     0     0     1     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     1
## T1_3      0     0     0     1     0     1     1     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0     0     1     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     1     0     0     0     0     1     1     0     1     0     0     0     2
##        9400  9401  9402  9403  9404  9405  9406  9407  9408  9409  9410  9411  9412  9413  9414
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     1     1     0     0     0     0     1     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     1     0     1     1     1     0     0     1     0
##        9415  9416  9417  9418  9419  9420  9421  9422  9423  9424  9425  9426  9427  9428  9429
## T1_1      0     1     0     0     0     0     0     0     0     0     1     0     1     0     0
## T1_2      0     0     0     0     0     0     0     1     0     0     0     0     0     1     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     1     0     0     0     1     0     0     0     0     0
##        9430  9431  9432  9433  9434  9435  9436  9437  9438  9439  9440  9441  9442  9443  9444
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
```

```
## T1_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1     0    0    0    0    0    0    0    2    0    0    0    0    0    0    0
## T7_2     0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## T7_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1     0    0    0    0    1    0    0    0    0    0    1    0    0    0    0
##       9445 9446 9447 9448 9449 9450 9451 9452 9453 9454 9455 9456 9457 9458 9459
## T1_1     0    0    0    1    1    0    0    0    0    0    0    0    0    0    0
## T1_2     0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## T1_3     0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## T7_1     0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## T7_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3     0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## DF_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##       9460 9461 9462 9463 9464 9465 9466 9467 9468 9469 9470 9471 9472 9473 9474
## T1_1     0    1    0    0    0    0    0    0    0    0    0    0    0    0    1
## T1_2     0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## T1_3     0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## T7_1     1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3     0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## DF_1     0    0    1    0    0    0    1    0    0    0    0    0    1    0    0
##       9475 9476 9477 9478 9479 9480 9481 9482 9483 9484 9485 9486 9487 9488 9489
## T1_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3     0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## DF_1     0    0    0    1    0    0    0    1    0    1    0    0    0    0    0
##       9490 9491 9492 9493 9494 9495 9496 9497 9498 9499 9500 9501 9502 9503 9504
## T1_1     0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## T1_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1     0    0    0    0    0    1    0    0    0    1    0    0    1    1    0
## T7_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3     0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
## DF_1     0    0    0    0    0    0    0    0    0    0    0    0    1    0    1
##       9505 9506 9507 9508 9509 9510 9511 9512 9513 9514 9515 9516 9517 9518 9519
## T1_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2     1    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## T1_3     0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1     0    0    0    0    1    0    0    0    0    0    1    0    0    1    0
## T7_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1     0    1    0    0    0    0    0    1    0    1    0    0    0    0    0
##       9520 9521 9522 9523 9524 9525 9526 9527 9528 9529 9530 9531 9532 9533 9534
## T1_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3     1    1    0    1    1    1    0    0    0    0    0    0    0    0    0
## T7_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2     0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
## T7_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
##      9535 9536 9537 9538 9539 9540 9541 9542 9543 9544 9545 9546 9547 9548 9549
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    1    0    0    1    0    0    0    0    0    0
##      9550 9551 9552 9553 9554 9555 9556 9557 9558 9559 9560 9561 9562 9563 9564
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## T1_3    0    0    0    0    0    0    0    0    1    0    0    0    0    0    1
## T7_1    0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## T7_2    0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## T7_3    0    0    0    2    0    0    0    0    0    0    0    0    0    0    0
## DF_1    1    0    0    0    0    1    0    0    0    0    0    0    0    0    0
##      9565 9566 9567 9568 9569 9570 9571 9572 9573 9574 9575 9576 9577 9578 9579
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    1    0    0    0    0    0    1
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## T7_2    0    0    1    0    0    0    0    0    0    0    0    0    0    0    1
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    1    0    0    0    0    0    1    0    1    0    0    0    0    0
##      9580 9581 9582 9583 9584 9585 9586 9587 9588 9589 9590 9591 9592 9593 9594
## T1_1    0    0    1    1    0    0    0    0    0    1    0    0    0    0    0
## T1_2    0    0    0    0    1    0    0    0    0    0    0    0    0    1    0
## T1_3    0    1    0    0    0    0    0    0    0    0    0    0    0    1    0
## T7_1    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
##      9595 9596 9597 9598 9599 9600 9601 9602 9603 9604 9605 9606 9607 9608 9609
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    1    1    0    1    1
## T1_3    1    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    1    0    0    1    0    0    0    0    0    0    1    0    0
## T7_3    0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
##      9610 9611 9612 9613 9614 9615 9616 9617 9618 9619 9620 9621 9622 9623 9624
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    1    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## T7_1    0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    1    0    0    0    0    0    1    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      9625 9626 9627 9628 9629 9630 9631 9632 9633 9634 9635 9636 9637 9638 9639
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    1    0    0    0    0    0    0    0    0    0    0    0    1    0
## T7_1    0    0    0    0    0    1    1    0    2    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
## T7_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1     0    0    1    1    0    0    0    0    0    0    0    0    0    0    0
##       9640 9641 9642 9643 9644 9645 9646 9647 9648 9649 9650 9651 9652 9653 9654
## T1_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2     1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3     1    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## T7_1     0    0    1    1    0    1    0    0    1    0    0    0    0    0    0
## T7_2     0    0    1    0    0    0    0    0    0    0    0    0    1    0    0
## T7_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1     0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
##       9655 9656 9657 9658 9659 9660 9661 9662 9663 9664 9665 9666 9667 9668 9669
## T1_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3     0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1     1    0    0    0    0    0    0    0    0    1    0    0    1    1    0
## T7_2     0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## T7_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##       9670 9671 9672 9673 9674 9675 9676 9677 9678 9679 9680 9681 9682 9683 9684
## T1_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3     0    1    0    0    0    0    0    0    0    0    1    0    0    0    0
## T7_1     0    0    1    0    0    0    0    1    0    0    0    0    0    0    0
## T7_2     0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## T7_3     0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## DF_1     0    0    0    0    1    0    1    0    0    0    0    0    0    0    0
##       9685 9686 9687 9688 9689 9690 9691 9692 9693 9694 9695 9696 9697 9698 9699
## T1_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2     0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2     0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
## T7_3     0    0    0    2    0    0    0    0    0    1    0    0    0    0    0
## DF_1     0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
##       9700 9701 9702 9703 9704 9705 9706 9707 9708 9709 9710 9711 9712 9713 9714
## T1_1     1    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3     0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## DF_1     0    0    1    0    0    1    0    1    0    1    0    0    1    0    0
##       9715 9716 9717 9718 9719 9720 9721 9722 9723 9724 9725 9726 9727 9728 9729
## T1_1     0    0    0    1    0    0    0    0    0    0    0    0    0    0    1
## T1_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2     0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T7_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1     0    0    0    0    0    0    0    0    0    0    1    0    1    0    0
##       9730 9731 9732 9733 9734 9735 9736 9737 9738 9739 9740 9741 9742 9743 9744
## T1_1     1    0    0    0    0    0    1    0    0    1    0    0    0    0    0
## T1_2     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

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```
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## T7_2    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## DF_1    0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
##      9745 9746 9747 9748 9749 9750 9751 9752 9753 9754 9755 9756 9757 9758 9759
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    1    0    0    1    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    1    0    0    0    0    1    0
##      9760 9761 9762 9763 9764 9765 9766 9767 9768 9769 9770 9771 9772 9773 9774
## T1_1    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    1    1    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    1    1    0    0    0    0    0    0    1    0
##      9775 9776 9777 9778 9779 9780 9781 9782 9783 9784 9785 9786 9787 9788 9789
## T1_1    0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    1    0    0    0    1    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
##      9790 9791 9792 9793 9794 9795 9796 9797 9798 9799 9800 9801 9802 9803 9804
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    1    0    1    1    0    0    0    1    1
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    1    1    0    0    0    0    0    0    0    0    0    0    0    0
##      9805 9806 9807 9808 9809 9810 9811 9812 9813 9814 9815 9816 9817 9818 9819
## T1_1    0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    1    0    0    1    0    0    0    0    0    1    0    0    0    0    0
##      9820 9821 9822 9823 9824 9825 9826 9827 9828 9829 9830 9831 9832 9833 9834
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    1
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    1    1    0    0    0    0    0    0    0    0    0
##      9835 9836 9837 9838 9839 9840 9841 9842 9843 9844 9845 9846 9847 9848 9849
## T1_1    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
```

```
## T1_2    0    1    0    0    0    0    0    1    0    0    0    0    0    0    0
## T1_3    0    0    1    0    0    0    1    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    1    0    0    0    0    0    1    0    0    0
##      9850 9851 9852 9853 9854 9855 9856 9857 9858 9859 9860 9861 9862 9863 9864
## T1_1    0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    1    0    0    0    0    0    0    0    0    0    0    1    0
## T7_1    0    0    1    0    0    0    0    2    0    1    0    0    0    0    1
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      9865 9866 9867 9868 9869 9870 9871 9872 9873 9874 9875 9876 9877 9878 9879
## T1_1    0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      9880 9881 9882 9883 9884 9885 9886 9887 9888 9889 9890 9891 9892 9893 9894
## T1_1    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## T1_2    0    0    1    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    1    0    0    0    0    0    0    0    0    0    0    0    1    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      9895 9896 9897 9898 9899 9900 9901 9902 9903 9904 9905 9906 9907 9908 9909
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## DF_1    1    1    0    1    0    0    0    0    0    0    1    0    0    0    0
##      9910 9911 9912 9913 9914 9915 9916 9917 9918 9919 9920 9921 9922 9923 9924
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    1    0    1    0    0    0    0    1    0    1    1    1    0
##      9925 9926 9927 9928 9929 9930 9931 9932 9933 9934 9935 9936 9937 9938 9939
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    1    1    0    0    0    0    0    0    0    0
## T7_1    1    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
## T7_3    0    0    2    0    0    0    0    0    0    0    0    1    0    0    0
## DF_1    0    0    0    0    1    0    0    1    0    0    0    0    0    0    0
```

```
##      9940 9941 9942 9943 9944 9945 9946 9947 9948 9949 9950 9951 9952 9953 9954
## T1_1    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## T1_2    0    0    0    1    0    0    0    0    0    0    0    0    0    0    0
## T1_3    2    0    0    0    0    0    1    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
## T7_2    0    0    0    0    1    0    0    0    0    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    1    0
##      9955 9956 9957 9958 9959 9960 9961 9962 9963 9964 9965 9966 9967 9968 9969
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    1    0    0    0    0    0    0    0    0    1    0    0    1    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    1    0    0    0    0    0    0    0    0    0    0    1
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    1    1    1    0    0    0    1    0    0    0    0
##      9970 9971 9972 9973 9974 9975 9976 9977 9978 9979 9980 9981 9982 9983 9984
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    1    0    0    0    0    0    0    0    0    0    1    0    0    0    0
## T7_3    0    1    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    1    1    0    0    0    0    0    0    0    0
##      9985 9986 9987 9988 9989 9990 9991 9992 9993 9994 9995 9996 9997 9998 9999
## T1_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T1_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_1    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## T7_2    0    0    0    0    0    0    0    0    1    0    0    0    0    0    0
## T7_3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
## DF_1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
##      10000 10001 10002 10003 10004 10005 10006 10007 10008 10009 10010 10011
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     1     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     1     0
## T7_1     0     0     0     0     0     0     0     0     0     1     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     1
## DF_1     0     0     1     0     0     0     0     0     0     0     0     0
##      10012 10013 10014 10015 10016 10017 10018 10019 10020 10021 10022 10023
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     1     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     1     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0
##      10024 10025 10026 10027 10028 10029 10030 10031 10032 10033 10034 10035
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     1     0     0     1     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0
```

```
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     1     0     0     1     0     0     0     0     1     0
##       10036 10037 10038 10039 10040 10041 10042 10043 10044 10045 10046 10047
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     1     0     0     1     0     0
## T1_3     0     1     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     1     0     0     0     0     0     0
## T7_2     0     0     0     0     1     0     0     0     0     0     0     0
## T7_3     3     0     0     0     0     0     0     0     0     0     1     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0
##       10048 10049 10050 10051 10052 10053 10054 10055 10056 10057 10058 10059
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     1     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     1     0     0     0     1     0     0     0     0     0     0     0
## T7_3     0     1     0     0     0     0     1     0     0     0     0     1
## DF_1     0     0     0     0     0     0     0     1     0     0     0     0
##       10060 10061 10062 10063 10064 10065 10066 10067 10068 10069 10070 10071
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     1     0     0     0     0     0     0     0     0
## T7_2     0     0     1     0     1     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     1
##       10072 10073 10074 10075 10076 10077 10078 10079 10080 10081 10082 10083
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     1     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     1     1     0
## T7_2     0     0     0     0     0     0     1     1     0     0     0     0
## T7_3     0     0     0     0     0     2     0     0     0     0     0     0
## DF_1     1     0     0     0     0     0     0     0     0     0     0     0
##       10084 10085 10086 10087 10088 10089 10090 10091 10092 10093 10094 10095
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     1     0     0     0
## T7_2     0     0     1     0     0     0     0     1     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0
##       10096 10097 10098 10099 10100 10101 10102 10103 10104 10105 10106 10107
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     1     0     0     0     0     0     0     0
## T7_1     0     0     0     1     0     0     1     0     0     0     0     0
## T7_2     0     1     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     1     0     0     0     1     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0
##       10108 10109 10110 10111 10112 10113 10114 10115 10116 10117 10118 10119
## T1_1     0     0     0     0     0     0     0     0     0     1     0     0
## T1_2     0     0     0     0     0     0     0     0     1     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
```

```
## T7_1       0     0     0     0     0     0     0     0     0     0     0     0
## T7_2       1     0     1     0     0     0     0     0     0     0     0     0
## T7_3       0     0     0     1     0     0     0     0     0     0     0     0
## DF_1       0     0     0     0     0     0     0     0     0     0     0     0
##        10120 10121 10122 10123 10124 10125 10126 10127 10128 10129 10130 10131
## T1_1       0     0     0     0     0     0     0     0     0     0     0     0
## T1_2       0     0     0     0     0     0     0     0     0     0     0     0
## T1_3       0     0     0     0     1     0     0     0     0     0     0     0
## T7_1       0     0     0     0     0     0     0     0     0     0     0     0
## T7_2       1     0     0     1     0     1     0     0     0     0     0     0
## T7_3       1     0     0     0     0     0     0     0     0     0     0     0
## DF_1       1     0     0     0     0     0     0     0     0     0     0     0
##        10132 10133 10134 10135 10136 10137 10138 10139 10140 10141 10142 10143
## T1_1       0     0     0     0     0     0     0     0     0     0     1     0
## T1_2       0     0     0     0     0     0     0     0     0     0     0     0
## T1_3       0     0     0     0     0     0     0     0     0     0     0     0
## T7_1       0     0     0     0     0     0     0     0     0     0     0     0
## T7_2       0     0     1     0     0     0     0     0     0     0     0     0
## T7_3       0     0     0     0     0     0     0     0     0     0     0     0
## DF_1       0     0     0     0     0     0     0     0     1     0     0     0
##        10144 10145 10146 10147 10148 10149 10150 10151 10152 10153 10154 10155
## T1_1       0     0     0     0     0     0     0     0     0     0     0     0
## T1_2       0     0     0     0     0     1     0     0     0     0     0     0
## T1_3       0     0     0     0     0     0     1     0     0     0     0     0
## T7_1       0     0     0     0     0     0     0     0     0     0     0     1
## T7_2       0     0     0     0     0     0     0     0     0     0     0     0
## T7_3       0     0     0     0     0     0     0     1     0     0     0     0
## DF_1       0     0     0     0     0     0     0     0     0     1     1     0
##        10156 10157 10158 10159 10160 10161 10162 10163 10164 10165 10166 10167
## T1_1       0     0     0     1     1     0     0     0     0     0     0     0
## T1_2       0     0     0     0     0     0     0     0     0     0     0     0
## T1_3       0     0     0     0     0     0     0     0     0     0     0     0
## T7_1       0     0     0     0     0     0     0     0     0     0     0     0
## T7_2       0     0     0     0     0     0     0     0     0     0     1     0
## T7_3       0     0     0     0     0     0     0     0     0     0     0     0
## DF_1       0     0     1     0     0     1     0     0     0     1     0     0
##        10168 10169 10170 10171 10172 10173 10174 10175 10176 10177 10178 10179
## T1_1       0     0     0     0     0     0     0     0     0     0     0     0
## T1_2       0     0     0     0     0     0     0     0     0     0     0     0
## T1_3       0     0     0     0     0     0     0     0     0     0     1     0
## T7_1       0     0     0     0     0     1     0     0     0     0     0     0
## T7_2       0     0     0     0     0     0     0     0     0     0     0     0
## T7_3       0     0     0     0     0     0     0     0     0     0     0     0
## DF_1       0     0     0     0     0     0     0     0     0     1     0     1
##        10180 10181 10182 10183 10184 10185 10186 10187 10188 10189 10190 10191
## T1_1       0     0     0     0     0     0     0     0     0     0     0     0
## T1_2       0     0     0     0     0     0     0     0     0     0     0     0
## T1_3       0     0     0     0     0     0     0     0     0     1     0     0
## T7_1       0     0     0     0     0     0     0     0     1     0     0     0
## T7_2       0     0     1     1     0     0     0     0     0     0     0     0
## T7_3       0     0     0     0     0     0     0     0     0     0     0     0
## DF_1       1     1     0     0     0     0     0     0     0     0     0     0
##        10192 10193 10194 10195 10196 10197 10198 10199 10200 10201 10202 10203
## T1_1       0     0     0     0     0     0     0     0     0     0     0     0
```

```
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     1     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     1     0
## T7_2      0     0     1     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     1     0     0
## DF_1      0     0     0     1     0     0     0     0     0     0     0     0
##       10204 10205 10206 10207 10208 10209 10210 10211 10212 10213 10214 10215
## T1_1      0     0     0     0     0     0     0     1     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     1     0     0     0
## T7_1      0     0     0     1     0     0     0     0     0     0     1     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     1
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0
##       10216 10217 10218 10219 10220 10221 10222 10223 10224 10225 10226 10227
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     1     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     1     0     0     0
## T7_2      1     0     0     0     1     0     1     1     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     1     0     0
##       10228 10229 10230 10231 10232 10233 10234 10235 10236 10237 10238 10239
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     1     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      1     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     2     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     1     1     0     0     0     0     0     0     0
##       10240 10241 10242 10243 10244 10245 10246 10247 10248 10249 10250 10251
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     1     0     0     0     0     1
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0
##       10252 10253 10254 10255 10256 10257 10258 10259 10260 10261 10262 10263
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     1     0
## T7_3      0     0     0     0     0     0     0     0     0     2     0     1
## DF_1      0     0     0     0     0     1     0     0     1     0     0     0
##       10264 10265 10266 10267 10268 10269 10270 10271 10272 10273 10274 10275
## T1_1      1     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      1     0     0     0     0     0     0     0     1     0     0     0
## T7_2      0     0     1     1     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      1     1     0     0     0     0     0     0     0     0     0     0
```

```
##       10276 10277 10278 10279 10280 10281 10282 10283 10284 10285 10286 10287
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0
##       10288 10289 10290 10291 10292 10293 10294 10295 10296 10297 10298 10299
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     1     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      2     0     0     0     0     0     0     0     0     0     0     0
##       10300 10301 10302 10303 10304 10305 10306 10307 10308 10309 10310 10311
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     1     1     0     0     1     0     0     1     0     0
## T7_3      0     0     0     0     1     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     1     0     0     0     0     0
##       10312 10313 10314 10315 10316 10317 10318 10319 10320 10321 10322 10323
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      1     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     1     0     0     0     0     0     1     0     0     0
## T7_3      0     0     0     0     1     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0
##       10324 10325 10326 10327 10328 10329 10330 10331 10332 10333 10334 10335
## T1_1      1     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     1     0     0     0     1     0     1     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     1     0
##       10336 10337 10338 10339 10340 10341 10342 10343 10344 10345 10346 10347
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0
##       10348 10349 10350 10351 10352 10353 10354 10355 10356 10357 10358 10359
## T1_1      0     0     0     0     0     1     0     0     0     0     2     0
## T1_2      0     0     0     0     0     0     0     0     0     0     1     1
## T1_3      0     0     0     1     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0
```

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```
## T7_3     0     0     1     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     1     0     0     0
##      10360 10361 10362 10363 10364 10365 10366 10367 10368 10369 10370 10371
## T1_1     0     0     0     1     0     1     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     2     0     0
## T7_2     0     0     0     0     0     0     1     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0
##      10372 10373 10374 10375 10376 10377 10378 10379 10380 10381 10382 10383
## T1_1     0     2     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     1     1     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     1     0     1     0     0
## T7_2     0     0     0     1     0     0     0     0     0     0     1     0
## T7_3     0     0     0     0     0     1     0     0     0     0     0     0
## DF_1     0     0     0     0     1     0     0     0     0     0     0     0
##      10384 10385 10386 10387 10388 10389 10390 10391 10392 10393 10394 10395
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     1     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     1     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     1     0     0     0     1
##      10396 10397 10398 10399 10400 10401 10402 10403 10404 10405 10406 10407
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     1     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     1     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     1     0     0     0
## DF_1     0     1     0     0     0     0     0     0     0     0     0     0
##      10408 10409 10410 10411 10412 10413 10414 10415 10416 10417 10418 10419
## T1_1     0     0     0     0     0     0     3     0     0     0     0     0
## T1_2     0     0     0     0     0     0     1     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     1     0     0     0
## T7_2     0     0     0     0     1     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0
##      10420 10421 10422 10423 10424 10425 10426 10427 10428 10429 10430 10431
## T1_1     0     1     0     0     1     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     1     0     0     1     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0
##      10432 10433 10434 10435 10436 10437 10438 10439 10440 10441 10442 10443
## T1_1     0     0     0     0     1     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
```

```
## T7_1      0      0      0      0      0      0      0      0      0      0      0      0
## T7_2      0      0      0      0      0      0      1      1      0      0      0      0
## T7_3      0      0      0      0      0      0      0      0      0      0      0      0
## DF_1      0      0      0      0      0      0      0      0      0      0      0      0
##        10444  10445  10446  10447  10448  10449  10450  10451  10452  10453  10454  10455
## T1_1      0      0      0      0      0      0      0      0      0      0      0      0
## T1_2      0      0      0      0      0      1      0      0      0      1      0      0
## T1_3      0      0      0      0      0      0      1      0      0      0      0      0
## T7_1      0      1      0      0      0      0      0      1      0      0      0      0
## T7_2      0      0      0      0      0      0      0      0      1      0      0      0
## T7_3      0      0      0      0      0      0      0      0      0      0      0      0
## DF_1      0      0      0      0      1      0      0      0      0      0      0      0
##        10456  10457  10458  10459  10460  10461  10462  10463  10464  10465  10466  10467
## T1_1      0      0      0      1      0      1      0      0      0      0      0      0
## T1_2      0      0      0      0      0      0      0      0      0      0      0      0
## T1_3      0      0      2      0      0      0      2      0      0      0      0      0
## T7_1      0      0      0      0      0      0      0      0      0      0      0      0
## T7_2      0      0      0      0      0      0      0      0      0      0      0      0
## T7_3      0      0      0      0      0      0      0      0      0      0      0      0
## DF_1      0      0      0      0      0      0      0      0      0      1      1      0
##        10468  10469  10470  10471  10472  10473  10474  10475  10476  10477  10478  10479
## T1_1      0      0      0      0      0      0      0      0      0      0      0      0
## T1_2      0      0      0      0      0      0      0      0      0      0      0      0
## T1_3      0      0      0      0      0      0      0      0      0      0      0      0
## T7_1      0      0      0      0      0      0      0      0      0      0      2      0
## T7_2      0      0      0      0      1      0      0      0      0      0      0      0
## T7_3      0      0      0      0      0      0      0      0      0      0      0      0
## DF_1      0      0      0      0      0      0      0      0      0      0      0      0
##        10480  10481  10482  10483  10484  10485  10486  10487  10488  10489  10490  10491
## T1_1      0      0      0      0      0      0      0      0      1      0      0      0
## T1_2      0      0      0      0      0      0      0      0      0      0      0      0
## T1_3      0      0      0      0      0      1      1      0      0      0      0      0
## T7_1      0      0      0      1      0      0      0      0      0      0      0      0
## T7_2      0      0      0      0      1      0      0      0      0      1      0      0
## T7_3      0      0      0      0      0      0      0      0      0      0      0      0
## DF_1      0      0      0      0      0      0      0      0      0      0      0      0
##        10492  10493  10494  10495  10496  10497  10498  10499  10500  10501  10502  10503
## T1_1      0      0      0      0      0      0      0      0      0      0      1      0
## T1_2      0      0      0      0      0      0      0      0      0      0      0      0
## T1_3      0      0      0      0      0      0      0      0      0      0      0      0
## T7_1      0      1      1      0      0      0      0      0      0      0      0      0
## T7_2      0      0      0      0      0      0      0      0      0      1      0      0
## T7_3      0      0      0      0      1      0      0      0      0      0      0      0
## DF_1      0      0      0      0      0      0      0      0      0      0      0      0
##        10504  10505  10506  10507  10508  10509  10510  10511  10512  10513  10514  10515
## T1_1      0      0      0      0      0      0      0      0      0      0      0      0
## T1_2      0      0      0      0      0      0      0      0      0      0      0      0
## T1_3      0      0      0      0      0      0      1      0      0      0      0      0
## T7_1      0      0      0      0      0      0      0      0      0      0      0      0
## T7_2      0      0      0      0      0      0      0      0      0      0      0      0
## T7_3      0      0      0      0      0      0      0      0      0      0      0      0
## DF_1      0      0      0      0      0      0      0      1      1      0      0      0
##        10516  10517  10518  10519  10520  10521  10522  10523  10524  10525  10526  10527
## T1_1      0      0      0      0      0      0      0      0      0      0      0      0
```

```
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     1     0     0     0     0     1     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     1
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     1     0     1     0     0     0     0     0     0
##       10528 10529 10530 10531 10532 10533 10534 10535 10536 10537 10538 10539
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      1     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     1     0     0     0
## T7_2      0     0     0     0     0     0     0     1     0     0     0     0
## T7_3      0     0     0     1     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     1     0     0     0     0     0     0
##       10540 10541 10542 10543 10544 10545 10546 10547 10548 10549 10550 10551
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     1     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     1     0     0     0     0     0
##       10552 10553 10554 10555 10556 10557 10558 10559 10560 10561 10562 10563
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     1     0     0     0     0
## T1_3      1     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     1     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     1     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0
##       10564 10565 10566 10567 10568 10569 10570 10571 10572 10573 10574 10575
## T1_1      0     0     1     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     1     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     1     0     0     0     0     0
## T7_2      0     0     0     1     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0
##       10576 10577 10578 10579 10580 10581 10582 10583 10584 10585 10586 10587
## T1_1      0     0     0     0     0     0     0     0     0     1     1     1
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      1     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     1     0     0     0     1     0     0     0     0     0
##       10588 10589 10590 10591 10592 10593 10594 10595 10596 10597 10598 10599
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     1     0     0     0     0     1     0     0     0     0     0
## T1_3      0     0     0     0     0     0     1     0     0     0     1     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     1     0     0     0     0     1     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0
```

```
##      10600 10601 10602 10603 10604 10605 10606 10607 10608 10609 10610 10611
## T1_1     1     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     1     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     1     0     1     0     0     0     0     0     0
##      10612 10613 10614 10615 10616 10617 10618 10619 10620 10621 10622 10623
## T1_1     0     0     0     0     0     0     0     0     2     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     1     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     1     0     1     0     0     0     0     0     0     1     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     1     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     1     0     0     0     0     0     0
##      10624 10625 10626 10627 10628 10629 10630 10631 10632 10633 10634 10635
## T1_1     0     0     1     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     1     0     0     0     0     0     0     0     1     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     1     0     0
## DF_1     0     0     0     0     0     0     0     1     0     0     0     0
##      10636 10637 10638 10639 10640 10641 10642 10643 10644 10645 10646 10647
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     1     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     1
## T7_3     0     0     0     0     0     0     1     0     0     0     0     0
## DF_1     0     0     0     0     1     0     0     1     1     0     0     0
##      10648 10649 10650 10651 10652 10653 10654 10655 10656 10657 10658 10659
## T1_1     1     0     0     0     0     0     0     0     1     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     1     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     2     0     0     0     0     1
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0
##      10660 10661 10662 10663 10664 10665 10666 10667 10668 10669 10670 10671
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     1     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     1     0     0     0
## DF_1     0     1     0     0     0     1     0     0     0     0     0     0
##      10672 10673 10674 10675 10676 10677 10678 10679 10680 10681 10682 10683
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     1     0     0     0     1     0     0
## T7_2     0     0     0     0     0     0     0     1     0     0     0     0
```

```
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     1     0     0     0     0     1
##      10684 10685 10686 10687 10688 10689 10690 10691 10692 10693 10694 10695
## T1_1     0     1     0     0     0     0     1     0     0     0     0     0
## T1_2     0     0     1     0     0     0     0     0     0     0     0     0
## T1_3     1     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     1     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0
##      10696 10697 10698 10699 10700 10701 10702 10703 10704 10705 10706 10707
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     1     0     0     0     0     0     0     0     1     0     0     0
## T1_3     0     0     0     0     0     0     1     0     0     1     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     2     0     0     0     1     0     0     0     0     0     0
## DF_1     0     0     1     0     1     0     0     0     0     0     0     0
##      10708 10709 10710 10711 10712 10713 10714 10715 10716 10717 10718 10719
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     1     0     0     0     0     0     0     0     1
## T1_3     0     0     0     0     0     0     0     0     0     0     0     1
## T7_1     0     0     1     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     1     0     0     0
##      10720 10721 10722 10723 10724 10725 10726 10727 10728 10729 10730 10731
## T1_1     0     0     0     0     0     0     0     0     0     1     1     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     1     0     0     0     1     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     1     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     1     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0
##      10732 10733 10734 10735 10736 10737 10738 10739 10740 10741 10742 10743
## T1_1     0     0     0     0     0     0     0     1     0     0     0     0
## T1_2     0     1     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     1     0
## T7_1     0     0     0     0     0     0     0     0     0     1     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     1     0     0     0     0     0     0     1     0     0
##      10744 10745 10746 10747 10748 10749 10750 10751 10752 10753 10754 10755
## T1_1     0     0     0     0     2     1     0     0     0     1     0     0
## T1_2     0     0     0     0     0     1     0     0     0     0     0     0
## T1_3     0     0     0     0     1     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     1     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     1     0     0     0     0     0     2     0     0     0
##      10756 10757 10758 10759 10760 10761 10762 10763 10764 10765 10766 10767
## T1_1     0     1     1     1     0     0     0     1     0     0     0     0
## T1_2     1     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     1     0     0     0     0     0     0     0
```

```
## T7_1       0     0     0     0     0     0     0     0     0     0     0     0
## T7_2       0     0     0     0     0     1     0     0     1     1     0     0
## T7_3       0     0     0     0     0     0     0     0     0     0     0     0
## DF_1       0     0     0     0     0     0     1     0     0     0     0     0
##        10768 10769 10770 10771 10772 10773 10774 10775 10776 10777 10778 10779
## T1_1       0     0     0     0     0     0     0     0     0     0     0     1
## T1_2       0     0     0     0     1     0     0     0     0     0     0     0
## T1_3       0     0     0     0     0     0     0     0     0     0     0     0
## T7_1       0     0     0     0     0     1     0     0     0     0     0     0
## T7_2       0     0     0     1     0     0     0     0     1     0     0     0
## T7_3       0     0     0     0     0     0     0     0     0     0     0     0
## DF_1       0     0     1     0     0     0     0     1     0     0     0     0
##        10780 10781 10782 10783 10784 10785 10786 10787 10788 10789 10790 10791
## T1_1       0     1     0     0     0     0     0     0     0     0     0     0
## T1_2       0     0     0     0     0     0     0     0     0     0     0     0
## T1_3       1     0     0     1     0     0     0     0     0     0     0     0
## T7_1       0     0     0     0     0     0     0     0     0     0     0     0
## T7_2       0     0     1     0     0     0     0     0     0     0     0     0
## T7_3       0     0     0     0     0     0     0     0     0     0     0     0
## DF_1       0     0     0     0     0     0     0     1     0     1     1     0
##        10792 10793 10794 10795 10796 10797 10798 10799 10800 10801 10802 10803
## T1_1       0     0     0     0     0     0     0     0     0     0     0     0
## T1_2       0     0     0     0     1     0     0     0     0     0     0     0
## T1_3       0     0     0     0     0     0     0     0     0     0     0     0
## T7_1       0     0     0     0     0     0     0     0     0     0     0     0
## T7_2       1     0     0     0     0     0     0     0     0     0     0     0
## T7_3       0     0     0     0     0     2     0     0     0     0     0     0
## DF_1       0     0     0     0     0     0     0     1     0     0     0     0
##        10804 10805 10806 10807 10808 10809 10810 10811 10812 10813 10814 10815
## T1_1       0     0     0     0     0     0     1     0     0     0     0     0
## T1_2       0     0     0     0     0     0     0     0     0     0     0     0
## T1_3       0     0     0     0     1     1     0     0     0     0     0     0
## T7_1       0     0     0     0     0     0     0     0     0     0     0     0
## T7_2       0     0     0     0     0     0     0     1     0     0     1     0
## T7_3       0     0     0     0     0     0     0     0     0     0     0     1
## DF_1       0     0     0     0     0     0     0     0     0     1     0     0
##        10816 10817 10818 10819 10820 10821 10822 10823 10824 10825 10826 10827
## T1_1       0     0     0     0     0     1     0     0     1     0     0     0
## T1_2       0     0     0     0     0     0     0     0     0     0     0     0
## T1_3       0     0     0     1     0     0     0     0     0     0     0     1
## T7_1       0     0     1     0     0     0     0     0     0     0     0     0
## T7_2       0     0     0     0     0     0     0     0     0     0     0     0
## T7_3       0     0     0     0     0     0     0     0     0     0     0     0
## DF_1       0     0     0     0     0     0     0     0     0     0     0     0
##        10828 10829 10830 10831 10832 10833 10834 10835 10836 10837 10838 10839
## T1_1       1     0     0     0     0     0     0     0     0     0     0     0
## T1_2       0     0     1     0     0     0     0     0     0     0     0     0
## T1_3       0     0     0     0     0     0     0     0     0     0     0     1
## T7_1       0     0     0     0     0     1     1     1     0     0     0     0
## T7_2       0     0     0     0     0     0     0     0     0     1     0     0
## T7_3       0     0     0     0     0     0     0     0     0     0     0     0
## DF_1       0     0     0     0     0     0     0     0     1     1     1     0
##        10840 10841 10842 10843 10844 10845 10846 10847 10848 10849 10850 10851
## T1_1       0     0     0     0     0     0     0     0     0     0     0     0
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```
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     1     0
## T7_1      0     0     1     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0
##       10852 10853 10854 10855 10856 10857 10858 10859 10860 10861 10862 10863
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     1     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     1     0     0     0     0     2     0
## T7_2      0     0     0     0     0     1     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0
##       10864 10865 10866 10867 10868 10869 10870 10871 10872 10873 10874 10875
## T1_1      0     0     0     0     0     0     0     0     0     0     1     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     1     0     0     0     0     0     0     0
## T7_2      1     0     0     0     0     0     1     0     0     1     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     1     0     0     0     0     0     0
##       10876 10877 10878 10879 10880 10881 10882 10883 10884 10885 10886 10887
## T1_1      0     1     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     1     0     0     1     0     0     0     0     0
## T1_3      2     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     1     0     1     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     1     1
##       10888 10889 10890 10891 10892 10893 10894 10895 10896 10897 10898 10899
## T1_1      0     1     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     1     1     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     1     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     1     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     1     0     0     0     0     0
##       10900 10901 10902 10903 10904 10905 10906 10907 10908 10909 10910 10911
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     1     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0
##       10912 10913 10914 10915 10916 10917 10918 10919 10920 10921 10922 10923
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     1     0     0     0     0     1     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     1     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     1     0     0     1     0     0     0     0     0     0
```

```
##       10924 10925 10926 10927 10928 10929 10930 10931 10932 10933 10934 10935
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     1     0     0     0     0     0     0     0
##       10936 10937 10938 10939 10940 10941 10942 10943 10944 10945 10946 10947
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     1     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     1     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0
##       10948 10949 10950 10951 10952 10953 10954 10955 10956 10957 10958 10959
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     1
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     1     0     0     0     0     0     1     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     1     0     1     0     0     0     0     0     0     0     0
##       10960 10961 10962 10963 10964 10965 10966 10967 10968 10969 10970 10971
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     1     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     1     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     1     0     0     0     0     0     0     0     1
##       10972 10973 10974 10975 10976 10977 10978 10979 10980 10981 10982 10983
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     1     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     1     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     1     1     0     1     0     1     0     0     0     0     1
##       10984 10985 10986 10987 10988 10989 10990 10991 10992 10993 10994 10995
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     1     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     1     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     1     0     0     0     0     0     0     1     0     0     0
##       10996 10997 10998 10999 11000 11001 11002 11003 11004 11005 11006 11007
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     1     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     1     0     0     0     0     0     0     0     0
```

```
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     1     0     0     1     0     1     0     0     0     1
##      11008 11009 11010 11011 11012 11013 11014 11015 11016 11017 11018 11019
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     1     0     0     0     1     0     0     1     0
## T1_3     0     1     1     0     1     0     1     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     1     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     1     0     0
##      11020 11021 11022 11023 11024 11025 11026 11027 11028 11029 11030 11031
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     1     0     0     0     1     0
## T1_3     0     0     0     0     0     1     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     1     0     0     0     0     0     0     0
## T7_3     0     0     0     0     1     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     1     0     0     1     0
##      11032 11033 11034 11035 11036 11037 11038 11039 11040 11041 11042 11043
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     1     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0
##      11044 11045 11046 11047 11048 11049 11050 11051 11052 11053 11054 11055
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     1     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     1     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     1     0     0     0     0     0
##      11056 11057 11058 11059 11060 11061 11062 11063 11064 11065 11066 11067
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     2     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     1     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     1     0     0
## DF_1     0     0     0     0     1     0     0     0     0     0     0     0
##      11068 11069 11070 11071 11072 11073 11074 11075 11076 11077 11078 11079
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     1     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     1     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     1
## DF_1     0     0     0     0     0     0     0     1     0     0     0     0
##      11080 11081 11082 11083 11084 11085 11086 11087 11088 11089 11090 11091
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     1     0     0     0     0     0     0     0     0
```

```
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     1     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     1     0     0     0     0     0     0     0     0     0
##       11092 11093 11094 11095 11096 11097 11098 11099 11100 11101 11102 11103
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     1
## T7_1      0     3     0     0     0     0     0     1     0     1     0     0
## T7_2      0     0     0     0     0     0     1     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     1     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0
##       11104 11105 11106 11107 11108 11109 11110 11111 11112 11113 11114 11115
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     1     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     1     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     1     0     0     1
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     1     0
##       11116 11117 11118 11119 11120 11121 11122 11123 11124 11125 11126 11127
## T1_1      0     0     0     0     1     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     1     1     0     0     1     0     0     1     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     1     2
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      1     1     0     0     0     1     0     0     0     0     0     1
##       11128 11129 11130 11131 11132 11133 11134 11135 11136 11137 11138 11139
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     1
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     1     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     1     0     1     0     0     0     0     0     0     0
##       11140 11141 11142 11143 11144 11145 11146 11147 11148 11149 11150 11151
## T1_1      0     0     0     0     0     0     1     0     1     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     1     0
## T1_3      0     0     0     0     0     0     0     0     0     1     0     0
## T7_1      1     0     1     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     1     0     0     0     0     0     1
## T7_3      0     1     0     1     0     0     0     0     0     0     0     0
## DF_1      0     0     1     0     1     0     0     0     0     0     0     0
##       11152 11153 11154 11155 11156 11157 11158 11159 11160 11161 11162 11163
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     1     1     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     1
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     1     0     0     0     0     0     0     0     0     0     0
##       11164 11165 11166 11167 11168 11169 11170 11171 11172 11173 11174 11175
## T1_1      0     0     0     0     0     1     0     0     0     0     0     1
```

```
## T1_2      0     0     0     0     0     0     0     1     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     1     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     1     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     1     0     0     0
##       11176 11177 11178 11179 11180 11181 11182 11183 11184 11185 11186 11187
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     1     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     1     0     1
## T7_2      0     0     1     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     1     0     0     0     0     0
## DF_1      0     0     0     0     0     1     0     1     0     0     0     0
##       11188 11189 11190 11191 11192 11193 11194 11195 11196 11197 11198 11199
## T1_1      0     0     0     0     0     0     0     1     0     0     0     1
## T1_2      0     0     0     1     0     0     0     0     1     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     1     0     0     0     0     0     0     0     0
## T7_3      0     0     2     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     1     0     0     0     0     0     0     0
##       11200 11201 11202 11203 11204 11205 11206 11207 11208 11209 11210 11211
## T1_1      0     0     0     0     0     0     0     1     0     1     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     1
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     2     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     1     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0
##       11212 11213 11214 11215 11216 11217 11218 11219 11220 11221 11222 11223
## T1_1      0     0     0     0     0     0     0     0     0     0     0     1
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      1     1     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     1     0     0     0     0     0     0     1     0     0
## T7_3      0     0     0     0     0     0     1     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0
##       11224 11225 11226 11227 11228 11229 11230 11231 11232 11233 11234 11235
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     1     0     0     1     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     1     0     0     0     0     0
## T7_2      1     0     1     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     3
## DF_1      0     0     0     1     0     1     0     0     0     0     1     0
##       11236 11237 11238 11239 11240 11241 11242 11243 11244 11245 11246 11247
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     1     1     0     0     1     0     0     0     0     0
## T7_2      0     0     0     1     0     0     0     1     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     1     0     0     0     0     0     0     0     0     0     0
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##       11248 11249 11250 11251 11252 11253 11254 11255 11256 11257 11258 11259
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     1     0     0     0     0     1     0     0     0
## T7_2     0     1     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     1     0     1     0     0     0     0     1     0     1
##       11260 11261 11262 11263 11264 11265 11266 11267 11268 11269 11270 11271
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     1     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     1     0     1
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     1     1     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11272 11273 11274 11275 11276 11277 11278 11279 11280 11281 11282 11283
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     1     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     1     0     1     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     1     0
##       11284 11285 11286 11287 11288 11289 11290 11291 11292 11293 11294 11295
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     1     0     0     1     0
## T7_2     0     0     0     1     0     0     0     0     0     2     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     1
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11296 11297 11298 11299 11300 11301 11302 11303 11304 11305 11306 11307
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     1     0
## T7_1     0     1     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     1     1
##       11308 11309 11310 11311 11312 11313 11314 11315 11316 11317 11318 11319
## T1_1     0     0     0     0     0     1     0     0     0     0     0     0
## T1_2     1     0     0     0     0     0     0     0     0     1     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     1
## T7_2     0     0     0     0     0     1     0     0     1     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     1     1     0     0     0     0
##       11320 11321 11322 11323 11324 11325 11326 11327 11328 11329 11330 11331
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     1
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0
```

```
## T7_3      0     0     0     0     0     0     0     0     0     1     0     0
## DF_1      0     0     1     0     0     0     0     0     0     0     1     0
##       11332 11333 11334 11335 11336 11337 11338 11339 11340 11341 11342 11343
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      1     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     1     0     0     0     0     0     0
## T7_1      0     0     0     0     0     1     0     0     0     0     0     1
## T7_2      0     0     1     0     0     0     0     0     1     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     1     0     0     0     1     1     0     0
##       11344 11345 11346 11347 11348 11349 11350 11351 11352 11353 11354 11355
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     1     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     1     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     1     0     0     2
##       11356 11357 11358 11359 11360 11361 11362 11363 11364 11365 11366 11367
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     1     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     1     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     1     0     0     0     0     0     0     0     0     0     0
##       11368 11369 11370 11371 11372 11373 11374 11375 11376 11377 11378 11379
## T1_1      0     0     0     0     0     0     1     1     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     1     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     1     1     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      1     0     1     0     0     0     0     0     0     0     0     1
##       11380 11381 11382 11383 11384 11385 11386 11387 11388 11389 11390 11391
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     2     0     0     1     1     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     1     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     1     0     0     0
## DF_1      0     0     1     0     0     0     0     0     0     0     0     0
##       11392 11393 11394 11395 11396 11397 11398 11399 11400 11401 11402 11403
## T1_1      0     0     0     0     1     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     1     0     1     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     1     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      1     0     0     0     0     0     0     0     0     0     0     0
##       11404 11405 11406 11407 11408 11409 11410 11411 11412 11413 11414 11415
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     1     0     1     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
```

```
## T7_1      0     0     0     1     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     1     0     1     0     1     0     0
## T7_3      0     0     0     0     0     0     1     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0
##       11416 11417 11418 11419 11420 11421 11422 11423 11424 11425 11426 11427
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     1     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     1     0     0     0     0     0     0
## DF_1      1     0     0     0     0     0     0     0     0     0     0     0
##       11428 11429 11430 11431 11432 11433 11434 11435 11436 11437 11438 11439
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     1
## T1_3      0     0     0     0     0     0     1     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      1     0     0     1     0     0     0     0     0     0     0     0
##       11440 11441 11442 11443 11444 11445 11446 11447 11448 11449 11450 11451
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      1     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     1     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     1     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0
##       11452 11453 11454 11455 11456 11457 11458 11459 11460 11461 11462 11463
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      4     0     0     0     0     0     0     0     0     1     0     0
## T1_3      0     1     1     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     1     1     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     1     0     0     0     1     0
##       11464 11465 11466 11467 11468 11469 11470 11471 11472 11473 11474 11475
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     1     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     1     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     1     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     1
## DF_1      0     1     1     0     0     0     0     1     0     0     0     0
##       11476 11477 11478 11479 11480 11481 11482 11483 11484 11485 11486 11487
## T1_1      0     0     0     0     0     0     0     0     0     0     1     1
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     1     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      1     0     0     0     0     0     0     0     0     0     0     0
##       11488 11489 11490 11491 11492 11493 11494 11495 11496 11497 11498 11499
## T1_1      0     0     0     0     0     0     0     0     1     0     0     0
```

```
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     1     0     0     0     0     1     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      1     0     1     0     0     0     0     0     0     0     0     1
##       11500 11501 11502 11503 11504 11505 11506 11507 11508 11509 11510 11511
## T1_1      0     0     0     0     0     0     0     1     0     1     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     1     0     0     0     0     0     0
## DF_1      0     0     1     0     0     0     0     0     0     0     0     0
##       11512 11513 11514 11515 11516 11517 11518 11519 11520 11521 11522 11523
## T1_1      1     0     0     1     0     0     0     0     1     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     1     0
## T7_1      0     0     0     0     0     0     0     0     0     0     1     0
## T7_2      0     0     0     0     0     0     0     0     0     2     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0
##       11524 11525 11526 11527 11528 11529 11530 11531 11532 11533 11534 11535
## T1_1      0     0     0     0     0     1     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     1
## T1_3      0     0     0     0     0     0     0     0     0     0     1     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      1     0     0     0     0     0     0     0     1     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0
##       11536 11537 11538 11539 11540 11541 11542 11543 11544 11545 11546 11547
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     1     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     1     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0
##       11548 11549 11550 11551 11552 11553 11554 11555 11556 11557 11558 11559
## T1_1      0     0     0     0     0     0     1     0     0     0     0     0
## T1_2      1     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     1     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     1
## T7_2      0     0     0     0     0     0     0     0     0     0     1     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     1     0     0
##       11560 11561 11562 11563 11564 11565 11566 11567 11568 11569 11570 11571
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     1     0     0     0
## T1_3      1     1     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     1     0     0
## T7_2      0     0     0     0     0     0     0     1     0     0     0     0
## T7_3      0     0     0     0     0     1     2     0     0     0     0     0
## DF_1      0     0     0     0     1     0     0     0     0     0     1     0
```

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```
##       11572 11573 11574 11575 11576 11577 11578 11579 11580 11581 11582 11583
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     1     1     0     0     0     0     0
## T1_3     0     0     0     1     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     1     0     0     0     0     1     0     0
##       11584 11585 11586 11587 11588 11589 11590 11591 11592 11593 11594 11595
## T1_1     1     0     1     0     1     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     1     1     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     1
## T7_2     0     0     0     0     0     0     0     1     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     1     0
##       11596 11597 11598 11599 11600 11601 11602 11603 11604 11605 11606 11607
## T1_1     0     0     0     0     0     0     1     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     1
## T1_3     0     0     0     0     0     0     1     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     1     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11608 11609 11610 11611 11612 11613 11614 11615 11616 11617 11618 11619
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     1     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     1
##       11620 11621 11622 11623 11624 11625 11626 11627 11628 11629 11630 11631
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     1     0     0     0     1     0     1     0     1     0     0
## T1_3     0     0     0     0     1     0     0     0     0     1     1     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     1     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     1     0     0     0     0     0     0     0     1     0     0     2
##       11632 11633 11634 11635 11636 11637 11638 11639 11640 11641 11642 11643
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     1     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     1
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     2     0     0     1     1     0     0     0     0     1     0     0
##       11644 11645 11646 11647 11648 11649 11650 11651 11652 11653 11654 11655
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     1     0     0     0     1     0     0     0     0     1     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0
```

```
## T7_3       0     0     0     0     0     0     0     0     0     0     0     0
## DF_1       0     0     0     1     0     0     1     0     0     0     1     1
##        11656 11657 11658 11659 11660 11661 11662 11663 11664 11665 11666 11667
## T1_1       0     0     0     0     0     0     0     0     0     0     0     0
## T1_2       0     0     0     0     1     1     0     0     0     0     0     1
## T1_3       0     0     0     0     0     0     0     0     0     0     0     0
## T7_1       0     0     0     0     0     0     0     0     0     0     0     0
## T7_2       0     0     0     0     0     0     0     0     1     0     1     0
## T7_3       0     0     0     0     0     0     0     0     0     0     0     0
## DF_1       0     0     1     0     0     0     0     0     0     0     0     0
##        11668 11669 11670 11671 11672 11673 11674 11675 11676 11677 11678 11679
## T1_1       0     0     0     0     0     0     0     0     0     0     0     0
## T1_2       0     0     0     0     0     0     0     0     0     0     0     0
## T1_3       0     0     0     0     0     0     0     1     0     0     0     0
## T7_1       0     0     0     0     0     0     0     0     0     0     0     0
## T7_2       0     0     0     0     0     0     0     0     0     0     0     0
## T7_3       0     0     0     0     0     1     0     0     0     0     0     0
## DF_1       1     0     1     0     0     0     0     0     0     0     1     1
##        11680 11681 11682 11683 11684 11685 11686 11687 11688 11689 11690 11691
## T1_1       1     1     0     0     0     0     0     0     0     0     0     1
## T1_2       0     0     0     0     0     0     0     0     0     0     0     0
## T1_3       0     0     0     0     0     0     0     0     0     0     0     0
## T7_1       0     0     0     0     0     0     0     0     0     0     0     0
## T7_2       0     0     0     0     0     0     0     0     0     0     0     0
## T7_3       0     0     0     0     0     0     0     0     0     0     0     0
## DF_1       0     0     0     0     0     0     0     0     0     0     0     0
##        11692 11693 11694 11695 11696 11697 11698 11699 11700 11701 11702 11703
## T1_1       0     0     0     0     0     0     0     0     0     0     0     0
## T1_2       1     0     0     0     0     0     0     0     0     0     0     0
## T1_3       0     0     0     0     0     0     0     0     0     0     0     0
## T7_1       0     0     0     0     0     0     0     0     0     0     0     0
## T7_2       0     0     0     0     0     0     0     0     0     0     0     0
## T7_3       0     0     0     0     0     0     0     1     0     1     0     0
## DF_1       0     0     0     0     0     0     0     0     0     0     0     0
##        11704 11705 11706 11707 11708 11709 11710 11711 11712 11713 11714 11715
## T1_1       0     0     0     0     0     0     0     0     0     0     0     0
## T1_2       0     0     0     0     0     0     0     0     0     0     0     0
## T1_3       0     0     0     0     0     0     0     0     0     0     0     0
## T7_1       0     0     0     0     0     0     0     0     0     0     0     0
## T7_2       0     0     0     0     1     0     0     0     0     0     0     0
## T7_3       0     0     0     0     0     0     0     0     0     0     0     0
## DF_1       0     0     0     0     0     1     0     0     1     0     0     0
##        11716 11717 11718 11719 11720 11721 11722 11723 11724 11725 11726 11727
## T1_1       0     0     0     0     0     0     0     0     0     0     0     0
## T1_2       0     0     0     0     0     0     0     1     0     0     0     0
## T1_3       0     0     0     0     0     0     0     1     0     0     0     0
## T7_1       0     0     0     0     0     0     0     0     0     1     0     0
## T7_2       0     0     0     0     0     0     0     0     0     0     0     0
## T7_3       0     0     0     0     0     0     0     0     0     0     0     0
## DF_1       0     0     0     0     1     0     0     0     1     1     0     1
##        11728 11729 11730 11731 11732 11733 11734 11735 11736 11737 11738 11739
## T1_1       0     0     0     0     0     0     0     0     0     0     0     0
## T1_2       1     0     0     0     1     1     1     0     0     0     0     0
## T1_3       0     0     0     0     0     0     0     0     0     0     0     0
```

```
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     1     0     0     0     0     0     1     0     0     0     1
##       11740 11741 11742 11743 11744 11745 11746 11747 11748 11749 11750 11751
## T1_1      0     0     1     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     1     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     1     0     0     0     0     0     0
## T7_1      0     1     0     0     0     0     0     0     1     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      1     0     0     0     0     0     0     0     0     0     0     1
##       11752 11753 11754 11755 11756 11757 11758 11759 11760 11761 11762 11763
## T1_1      1     0     0     0     0     0     0     0     0     0     1     0
## T1_2      0     0     0     0     1     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     1     0     0     0     0     0     0
## T7_2      0     1     0     0     0     0     1     2     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0
##       11764 11765 11766 11767 11768 11769 11770 11771 11772 11773 11774 11775
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0
##       11776 11777 11778 11779 11780 11781 11782 11783 11784 11785 11786 11787
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     1     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     1     0     0     0     0
##       11788 11789 11790 11791 11792 11793 11794 11795 11796 11797 11798 11799
## T1_1      0     0     0     0     0     0     0     1     0     1     0     1
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     1     0
## T7_2      0     1     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     1     0     0     0     0     0     0     0
##       11800 11801 11802 11803 11804 11805 11806 11807 11808 11809 11810 11811
## T1_1      0     0     0     0     0     0     0     0     0     0     0     2
## T1_2      0     0     0     0     0     1     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      1     1     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     1     0     1     0     1     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0
##       11812 11813 11814 11815 11816 11817 11818 11819 11820 11821 11822 11823
## T1_1      0     0     0     0     0     0     0     0     0     0     0     1
```

```
## T1_2      0     0     0     0     0     0     0     1     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      1     0     0     1     0     0     1     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0
##       11824 11825 11826 11827 11828 11829 11830 11831 11832 11833 11834 11835
## T1_1      0     0     0     0     1     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     1     0     0     0     0     0     0
## T1_3      0     0     1     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     1     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      1     0     0     0     0     0     0     0     0     0     0     0
##       11836 11837 11838 11839 11840 11841 11842 11843 11844 11845 11846 11847
## T1_1      0     0     0     1     0     0     0     0     0     0     0     0
## T1_2      1     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      1     0     0     0     0     1     0     0     0     0     1     0
## T7_2      0     0     0     0     0     0     0     0     0     1     0     1
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0
##       11848 11849 11850 11851 11852 11853 11854 11855 11856 11857 11858 11859
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     1
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      1     0     1     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     1     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     1     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     1     1     0     0
##       11860 11861 11862 11863 11864 11865 11866 11867 11868 11869 11870 11871
## T1_1      0     0     1     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     1     0     0     1     1     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     1     0     0     1     0     1
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0
##       11872 11873 11874 11875 11876 11877 11878 11879 11880 11881 11882 11883
## T1_1      0     0     0     0     1     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     1     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     1     0     1     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     1     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     1     0     0     1
##       11884 11885 11886 11887 11888 11889 11890 11891 11892 11893 11894 11895
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     1     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     1     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     1     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     1     0     0
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##       11896 11897 11898 11899 11900 11901 11902 11903 11904 11905 11906 11907
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     1     0     0     0     0     0     0     1     0     0     0
## T1_3     0     0     0     0     0     0     1     0     1     0     1     1
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     1     1     0     0     0     0     0     0
##       11908 11909 11910 11911 11912 11913 11914 11915 11916 11917 11918 11919
## T1_1     0     1     0     0     0     0     0     0     0     0     0     0
## T1_2     1     0     0     1     1     1     0     1     0     1     0     0
## T1_3     0     0     1     0     0     0     0     0     1     1     0     0
## T7_1     0     0     0     0     0     0     1     0     0     0     0     0
## T7_2     0     0     0     1     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0
##       11920 11921 11922 11923 11924 11925 11926 11927 11928 11929 11930 11931
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     1     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     1     0     0     0     1     0     0
## DF_1     0     1     0     0     0     0     0     0     0     0     0     0
##       11932 11933 11934 11935 11936 11937 11938 11939 11940 11941 11942 11943
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     1     0     0     1     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     1     0     0     0     0
## DF_1     0     1     0     0     0     0     0     0     0     0     0     0
##       11944 11945 11946 11947 11948 11949 11950 11951 11952 11953 11954 11955
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     1     1     1     0     0     0     0     0     0     0     0
## DF_1     1     0     0     0     0     0     0     0     0     1     0     0
##       11956 11957 11958 11959 11960 11961 11962 11963 11964 11965 11966 11967
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     1     0     0     0     0     0     1     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     1     0     0     0     0     0     0     0     0     0     0     1
##       11968 11969 11970 11971 11972 11973 11974 11975 11976 11977 11978 11979
## T1_1     0     0     0     0     0     0     1     0     0     0     0     0
## T1_2     0     1     0     0     1     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     1     0     0     0     0     0     0     0     0
```

```
## T7_3      0     0     0     0     0     0     0     0     1     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0
##       11980 11981 11982 11983 11984 11985 11986 11987 11988 11989 11990 11991
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     1     0     0     0     0     0     0     0     0     0     0
## T7_1      1     0     0     0     1     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     1     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     1     1     1
## DF_1      0     0     1     0     0     0     0     0     0     0     0     0
##       11992 11993 11994 11995 11996 11997 11998 11999 12000 12001 12002 12003
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     1     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     1     0     0     0     0     0     0     0     0     0
## T7_2      1     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     1     0     0     0     0     0     0     0
## DF_1      0     1     0     0     0     0     0     0     0     0     1     1
##       12004 12005 12006 12007 12008 12009 12010 12011 12012 12013 12014 12015
## T1_1      0     0     1     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     1     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     1     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     1     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0
##       12016 12017 12018 12019 12020 12021 12022 12023 12024 12025 12026 12027
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     1     0     0     0     0     1     0     0     0     0
## T7_1      0     0     0     0     0     1     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     1
## DF_1      0     0     0     0     0     0     1     0     0     1     0     0
##       12028 12029 12030 12031 12032 12033 12034 12035 12036 12037 12038 12039
## T1_1      0     0     0     0     1     0     0     0     0     0     0     1
## T1_2      0     0     0     0     0     0     0     1     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     1     0     0     1     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     1     0     0
##       12040 12041 12042 12043 12044 12045 12046 12047 12048 12049 12050 12051
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     1     0     0     0     0     0     0     0
## T7_1      0     1     0     0     0     0     0     0     1     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0
##       12052 12053 12054 12055 12056 12057 12058 12059 12060 12061 12062 12063
## T1_1      0     0     0     0     1     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     1     0     0     0     0     0     0     0     0     0
```

```
## T7_1     0     1     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     1     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0
##      12064 12065 12066 12067 12068 12069 12070 12071 12072 12073 12074 12075
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     1     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     1     0     0     0     0
##      12076 12077 12078 12079 12080 12081 12082 12083 12084 12085 12086 12087
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     1     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0
##      12088 12089 12090 12091 12092 12093 12094 12095 12096 12097 12098 12099
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     1     0     0     0     0     0     0     0     0     0     1     0
##      12100 12101 12102 12103 12104 12105 12106 12107 12108 12109 12110 12111
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     1     0     0     0     0     0     0
## T1_3     0     0     1     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     1     0     0     0     0     0
## T7_2     0     0     0     1     0     0     0     0     0     0     1     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     1
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0
##      12112 12113 12114 12115 12116 12117 12118 12119 12120 12121 12122 12123
## T1_1     0     0     1     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     1     0     0     0     1
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     1     0     0     0     0     0     0     0     0     0     0
##      12124 12125 12126 12127 12128 12129 12130 12131 12132 12133 12134 12135
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     1     0     1
## T1_3     0     0     0     0     0     0     0     0     0     0     1     0
## T7_1     0     0     0     0     0     0     0     0     1     0     0     0
## T7_2     0     0     0     0     0     0     0     1     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     1     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0
##      12136 12137 12138 12139 12140 12141 12142 12143 12144 12145 12146 12147
## T1_1     0     0     0     0     0     1     1     0     0     0     0     0
```

```
## T1_2      0     1     1     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     1     0     0     0     0     0     0     0     0
##       12148 12149 12150 12151 12152 12153 12154 12155 12156 12157 12158 12159
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     1     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     1
## DF_1      0     0     1     1     0     0     0     0     1     0     0     0
##       12160 12161 12162 12163 12164 12165 12166 12167 12168 12169 12170 12171
## T1_1      0     0     0     0     0     0     0     0     0     0     0     1
## T1_2      0     0     0     0     0     0     0     0     0     0     1     0
## T1_3      0     0     0     1     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     1     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0
##       12172 12173 12174 12175 12176 12177 12178 12179 12180 12181 12182 12183
## T1_1      0     0     0     0     0     0     0     1     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     1
## T1_3      0     0     0     0     1     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     1     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     1     0     0     0     0     0     0     0     0     0
##       12184 12185 12186 12187 12188 12189 12190 12191 12192 12193 12194 12195
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      3     0     0     0     1     1     0     0     0     0     0     0
## T1_3      0     0     0     1     1     0     0     0     0     0     0     1
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     1     0     0     0     0     0     0     0     1     0     0
##       12196 12197 12198 12199 12200 12201 12202 12203 12204 12205 12206 12207
## T1_1      0     0     0     1     0     0     0     0     0     0     0     0
## T1_2      0     1     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     2     0     0     0     0     0     0
## T7_2      0     0     0     0     1     0     0     1     0     0     0     1
## T7_3      0     0     0     0     0     0     2     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0
##       12208 12209 12210 12211 12212 12213 12214 12215 12216 12217 12218 12219
## T1_1      0     0     0     1     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     1     0     0     0
## T7_3      1     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     1     0     0     0     0     0     0     0
```

```
##       12220 12221 12222 12223 12224 12225 12226 12227 12228 12229 12230 12231
## T1_1     0     0     1     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     1     0     0     0     0     0     0     0     0     0     1
## T7_2     0     0     0     0     0     0     0     1     0     0     1     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     1     0     0     1     0     0     0
##       12232 12233 12234 12235 12236 12237 12238 12239 12240 12241 12242 12243
## T1_1     0     0     0     1     0     0     0     0     0     0     0     0
## T1_2     0     1     0     0     1     0     0     0     0     0     0     0
## T1_3     0     0     1     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     1     0     0     0     0     0     0
##       12244 12245 12246 12247 12248 12249 12250 12251 12252 12253 12254 12255
## T1_1     0     0     0     0     0     0     0     0     0     0     1     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     1     0     0     0     0     0     1     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     1     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     1
## DF_1     0     0     0     0     1     0     0     0     0     0     0     0
##       12256 12257 12258 12259 12260 12261 12262 12263 12264 12265 12266 12267
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     1     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     1     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     1     0     0     0     0     0     1     0     0     1
##       12268 12269 12270 12271 12272 12273 12274 12275 12276 12277 12278 12279
## T1_1     0     0     0     0     0     0     0     1     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     1     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     1     0     0     0
## DF_1     0     0     0     0     1     0     0     0     0     0     0     1
##       12280 12281 12282 12283 12284 12285 12286 12287 12288 12289 12290 12291
## T1_1     0     0     1     1     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     1     1
## T7_3     0     0     0     0     0     0     1     0     0     0     0     0
## DF_1     0     1     0     0     2     0     0     0     0     0     0     0
##       12292 12293 12294 12295 12296 12297 12298 12299 12300 12301 12302 12303
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     1     0     0     0     0     0     0     0     0
```

```
## T7_3     1     0     0     0     1     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0
##       12304 12305 12306 12307 12308 12309 12310 12311 12312 12313 12314 12315
## T1_1     0     0     1     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     1     0     0     0     1     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     1     0     2
## T7_3     0     0     0     0     0     0     0     0     0     0     0     1
## DF_1     0     1     0     0     0     0     0     0     0     0     0     0
##       12316 12317 12318 12319 12320 12321 12322 12323 12324 12325 12326 12327
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     1     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     2     1     0     0     0     0     0
## DF_1     1     0     0     0     0     0     0     0     0     0     0     0
##       12328 12329 12330 12331 12332 12333 12334 12335 12336 12337 12338 12339
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     1     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     1     0     0     0     0     0     0     0     0     0     0     0
##       12340 12341 12342 12343 12344 12345 12346 12347 12348 12349 12350 12351
## T1_1     0     0     0     0     0     0     1     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     1     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     1     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0
##       12352 12353 12354 12355 12356 12357 12358 12359 12360 12361 12362 12363
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     1     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     1     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     1     0     0     0     0     0     0     1     0     0     0     0
##       12364 12365 12366 12367 12368 12369 12370 12371 12372 12373 12374 12375
## T1_1     0     0     1     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     1     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     1     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     1     0     0     0     0
##       12376 12377 12378 12379 12380 12381 12382 12383 12384 12385 12386 12387
## T1_1     0     1     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
```

```
## T7_1     0     0     0     0     0     0     0     0     1     1     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     2
## T7_3     0     0     1     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     1     0     0     0     0     0     0
##      12388 12389 12390 12391 12392 12393 12394 12395 12396 12397 12398 12399
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     1     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     1
## DF_1     0     0     0     1     0     0     0     0     0     0     0     0
##      12400 12401 12402 12403 12404 12405 12406 12407 12408 12409 12410 12411
## T1_1     0     1     0     0     0     0     0     0     0     0     0     0
## T1_2     0     1     0     0     1     0     0     0     0     0     0     0
## T1_3     0     1     1     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     1     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     1     0     0
## DF_1     0     0     0     0     0     0     2     1     0     0     0     0
##      12412 12413 12414 12415 12416 12417 12418 12419 12420 12421 12422 12423
## T1_1     0     0     0     0     0     0     0     0     0     0     1     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     1     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     1     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     1     0     0     0     0
##      12424 12425 12426 12427 12428 12429 12430 12431 12432 12433 12434 12435
## T1_1     0     0     0     1     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     1     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     1     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0
##      12436 12437 12438 12439 12440 12441 12442 12443 12444 12445 12446 12447
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     1     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     1     0     0     0     0     0
## T7_1     0     0     0     1     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     1     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0
##      12448 12449 12450 12451 12452 12453 12454 12455 12456 12457 12458 12459
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     1     0     0     0
## T1_3     0     0     0     0     0     0     1     0     0     0     0     0
## T7_1     0     0     1     0     1     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     1     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     1     0     0     0     0
##      12460 12461 12462 12463 12464 12465 12466 12467 12468 12469 12470 12471
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
```

```
## T1_2       1     0     0     0     0     0     0     0     0     0     0     0
## T1_3       0     0     0     0     1     0     1     0     0     0     0     0
## T7_1       0     0     0     0     0     0     0     0     0     1     0     0
## T7_2       0     0     1     0     0     1     0     0     0     0     0     0
## T7_3       0     0     0     0     0     0     0     0     0     0     0     0
## DF_1       0     0     0     1     0     0     0     0     0     0     0     0
##        12472 12473 12474 12475 12476 12477 12478 12479 12480 12481 12482 12483
## T1_1       0     0     0     0     0     0     0     0     0     0     0     0
## T1_2       0     0     0     0     0     0     0     0     0     0     0     0
## T1_3       0     0     0     0     0     0     0     0     0     0     0     0
## T7_1       0     0     0     0     0     0     0     0     0     0     0     0
## T7_2       1     0     0     0     1     0     1     1     0     0     0     0
## T7_3       0     0     0     0     0     0     0     0     0     0     0     0
## DF_1       1     0     0     0     0     0     0     0     1     0     0     0
##        12484 12485 12486 12487 12488 12489 12490 12491 12492 12493 12494 12495
## T1_1       0     0     0     0     0     0     0     0     0     0     0     0
## T1_2       0     0     0     0     0     0     0     0     0     0     0     0
## T1_3       0     0     0     0     0     0     0     0     0     0     0     0
## T7_1       0     0     1     0     0     0     0     0     0     0     0     0
## T7_2       1     0     0     0     0     0     0     0     0     0     0     0
## T7_3       0     0     0     0     0     0     0     0     0     0     0     0
## DF_1       0     1     0     0     0     0     0     0     0     0     1     0
##        12496 12497 12498 12499 12500 12501 12502 12503 12504 12505 12506 12507
## T1_1       0     0     0     0     0     0     0     0     0     0     0     0
## T1_2       0     0     0     0     0     0     0     0     0     0     0     0
## T1_3       0     0     0     1     0     0     0     0     0     0     0     0
## T7_1       0     0     0     0     0     0     0     0     0     0     0     0
## T7_2       0     0     0     0     0     0     0     0     0     0     0     0
## T7_3       0     0     0     0     0     0     0     0     0     1     0     0
## DF_1       0     0     0     0     0     0     0     0     0     0     0     0
##        12508 12509 12510 12511 12512 12513 12514 12515 12516 12517 12518 12519
## T1_1       0     1     0     0     0     0     1     1     0     0     0     0
## T1_2       0     0     0     0     0     0     0     0     1     0     0     0
## T1_3       0     0     0     0     0     0     0     0     0     0     0     0
## T7_1       0     0     0     0     0     0     0     0     1     0     0     0
## T7_2       0     0     0     1     0     0     0     0     0     0     0     0
## T7_3       0     0     0     0     0     0     0     0     0     0     0     1
## DF_1       0     0     0     0     1     0     0     0     0     0     1     0
##        12520 12521 12522 12523 12524 12525 12526 12527 12528 12529 12530 12531
## T1_1       0     0     0     0     0     0     0     0     0     0     0     0
## T1_2       0     0     0     0     0     0     0     0     0     0     0     0
## T1_3       0     0     0     0     0     0     0     0     0     0     1     0
## T7_1       1     0     0     0     0     0     0     0     0     1     0     0
## T7_2       0     0     0     1     0     0     0     0     0     0     0     1
## T7_3       0     0     0     0     0     0     0     0     0     0     0     0
## DF_1       0     0     0     0     0     0     0     0     0     0     0     0
##        12532 12533 12534 12535 12536 12537 12538 12539 12540 12541 12542 12543
## T1_1       0     0     0     0     0     0     0     0     0     0     0     0
## T1_2       0     0     0     0     0     0     0     0     0     0     0     0
## T1_3       0     0     0     0     0     0     0     0     0     0     0     1
## T7_1       1     0     0     0     0     0     0     0     0     0     0     0
## T7_2       0     0     0     1     0     0     0     0     0     0     0     0
## T7_3       0     0     0     0     0     0     0     0     0     0     1     0
## DF_1       0     0     0     0     1     0     0     1     1     0     0     0
```

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##       12544 12545 12546 12547 12548 12549 12550 12551 12552 12553 12554 12555
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     1     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     1     0     0     0     0
## T7_2     0     0     0     0     1     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     1     0     0     0     0     0
## DF_1     0     0     0     0     0     0     1     0     0     0     0     1
##       12556 12557 12558 12559 12560 12561 12562 12563 12564 12565 12566 12567
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     1     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     1
## DF_1     0     1     0     0     0     0     0     1     0     1     0     0
##       12568 12569 12570 12571 12572 12573 12574 12575 12576 12577 12578 12579
## T1_1     0     0     0     0     0     0     0     1     0     0     0     0
## T1_2     0     0     0     0     1     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     1     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     1
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     1     0     0     1     1     0
##       12580 12581 12582 12583 12584 12585 12586 12587 12588 12589 12590 12591
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     1     0     0     1     0     0     0
## T1_3     0     0     0     0     1     0     0     0     0     0     1     0
## T7_1     0     0     0     1     0     0     0     0     0     0     0     1
## T7_2     1     0     0     0     0     0     0     0     0     1     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0
##       12592 12593 12594 12595 12596 12597 12598 12599 12600 12601 12602 12603
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     1     0
## T1_3     1     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     1     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0
##       12604 12605 12606 12607 12608 12609 12610 12611 12612 12613 12614 12615
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     1     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     1     0     0     0     0
## T7_3     0     1     0     0     1     0     0     0     0     0     0     0
## DF_1     1     0     0     0     0     0     0     0     0     0     1     1
##       12616 12617 12618 12619 12620 12621 12622 12623 12624 12625 12626 12627
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     1     0
## T7_2     0     0     0     1     0     0     0     0     0     0     0     0
```

```
## T7_3     1     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     1     0     0     0     0     0     0     1     0     0     0
##      12628 12629 12630 12631 12632 12633 12634 12635 12636 12637 12638 12639
## T1_1     0     0     0     0     0     0     1     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     1     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     1     1     1     1     0     1     0     0     0     0     0     1
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     1     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0
##      12640 12641 12642 12643 12644 12645 12646 12647 12648 12649 12650 12651
## T1_1     0     0     0     0     0     0     0     1     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     1     0     0     0     0     0     0     1
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0
##      12652 12653 12654 12655 12656 12657 12658 12659 12660 12661 12662 12663
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     1     0     0
## T1_3     0     0     0     0     1     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     1     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     1
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     1     0     0     0     0     0     0     0     0
##      12664 12665 12666 12667 12668 12669 12670 12671 12672 12673 12674 12675
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     1     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     1     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0
##      12676 12677 12678 12679 12680 12681 12682 12683 12684 12685 12686 12687
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     1     0     0     0     0     0     0     0     0
## T1_3     0     1     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     1     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     1
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     1     0     0     0
##      12688 12689 12690 12691 12692 12693 12694 12695 12696 12697 12698 12699
## T1_1     0     0     0     1     0     1     0     0     0     0     0     0
## T1_2     1     0     0     0     1     0     0     1     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     1     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     1     0     0     0     0     0     0     0     0     0     1
##      12700 12701 12702 12703 12704 12705 12706 12707 12708 12709 12710 12711
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     1     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     1
```

```
## T7_1      0     0     0     0     0     1     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     2     0
## DF_1      1     0     0     0     1     0     0     0     0     0     0     0
##       12712 12713 12714 12715 12716 12717 12718 12719 12720 12721 12722 12723
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     1     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     1     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      1     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0
##       12724 12725 12726 12727 12728 12729 12730 12731 12732 12733 12734 12735
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     1     0     1     1     0     0     0
## T1_3      1     1     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     1     0     0     0     0     0     0     1
##       12736 12737 12738 12739 12740 12741 12742 12743 12744 12745 12746 12747
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     1     0     0     0     1     1     0     0     0     1
## T1_3      0     0     0     0     0     0     0     0     0     0     1     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     1     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      1     0     0     0     0     1     0     0     0     1     0     0
##       12748 12749 12750 12751 12752 12753 12754 12755 12756 12757 12758 12759
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     1     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     1
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     1     0     0     0     1     0     0     0     0
##       12760 12761 12762 12763 12764 12765 12766 12767 12768 12769 12770 12771
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     1     0     0     0     1     1     0     0     0     0
## T1_3      1     0     0     1     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     1     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0
##       12772 12773 12774 12775 12776 12777 12778 12779 12780 12781 12782 12783
## T1_1      0     0     0     0     0     0     0     1     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     1     0     0     0     0     0     0     0
## T7_3      0     1     0     0     0     0     0     0     0     0     0     0
## DF_1      1     0     0     0     0     0     0     0     1     1     0     0
##       12784 12785 12786 12787 12788 12789 12790 12791 12792 12793 12794 12795
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
```

```
## T1_2      0     0     0     1     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     1     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     1     0     0     0
## DF_1      1     0     0     0     0     0     0     0     0     0     0     0
##       12796 12797 12798 12799 12800 12801 12802 12803 12804 12805 12806 12807
## T1_1      0     0     0     1     0     0     0     0     0     0     0     0
## T1_2      0     1     0     0     1     0     0     0     0     0     0     0
## T1_3      0     0     1     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     2     3     1     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0
##       12808 12809 12810 12811 12812 12813 12814 12815 12816 12817 12818 12819
## T1_1      0     1     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     2     0     0     0     0     0     0
## T1_3      1     0     0     0     0     0     1     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     1     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     1     0
## DF_1      0     1     0     0     0     0     0     0     2     0     0     0
##       12820 12821 12822 12823 12824 12825 12826 12827 12828 12829 12830 12831
## T1_1      0     0     0     0     0     0     0     0     0     0     1     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     1     0     0     1     1     0     0     0     0     0
## T7_1      0     0     0     1     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     1     0     0     1
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0
##       12832 12833 12834 12835 12836 12837 12838 12839 12840 12841 12842 12843
## T1_1      0     0     0     0     0     0     1     1     0     0     0     0
## T1_2      0     0     1     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     1     0     0     1
## T7_2      1     1     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0
##       12844 12845 12846 12847 12848 12849 12850 12851 12852 12853 12854 12855
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     1
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     1     0     0     1     1     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0
##       12856 12857 12858 12859 12860 12861 12862 12863 12864 12865 12866 12867
## T1_1      1     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      1     0     0     0     0     0     1     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      2     0     1     1     1     0     0     0     0     1     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     1     0     0     0     1
```

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```
##       12868 12869 12870 12871 12872 12873 12874 12875 12876 12877 12878 12879
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     1     0     0     0     0     0     0
## T1_3     0     0     0     0     0     1     0     0     0     0     0     0
## T7_1     1     0     0     0     0     0     0     0     0     0     0     0
## T7_2     1     1     1     0     0     0     1     0     0     0     0     0
## T7_3     0     0     0     0     0     1     0     0     0     0     1     0
## DF_1     0     0     0     0     0     0     0     0     0     1     0     0
##       12880 12881 12882 12883 12884 12885 12886 12887 12888 12889 12890 12891
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     1     1     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     2     0     0     0     0     0     0     0     0     0     0     1
## T7_3     0     0     0     0     0     0     0     1     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0
##       12892 12893 12894 12895 12896 12897 12898 12899 12900 12901 12902 12903
## T1_1     0     0     0     0     0     0     1     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     1     0     0
## T1_3     1     1     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     1     0     0     0     1     0     0     0
## T7_2     0     0     1     0     0     1     0     0     0     0     0     0
## T7_3     1     0     0     0     0     0     0     0     0     0     1     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0
##       12904 12905 12906 12907 12908 12909 12910 12911 12912 12913 12914 12915
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     1
## T7_1     0     0     0     0     0     0     1     0     0     0     0     0
## T7_2     0     1     0     0     0     0     0     0     1     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     1     0
## DF_1     1     0     0     0     0     1     0     0     0     0     0     0
##       12916 12917 12918 12919 12920 12921 12922 12923 12924 12925 12926 12927
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     1     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     1     0     0     0     0     0     0     0     0     0
## T7_2     1     0     0     0     0     0     0     0     1     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     2     0     1     0     0     0     0     0     0     0     0
##       12928 12929 12930 12931 12932 12933 12934 12935 12936 12937 12938 12939
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     1     0     0     0     0     0     0     0
## T1_3     0     0     1     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     1     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0
##       12940 12941 12942 12943 12944 12945 12946 12947 12948 12949 12950 12951
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     1     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     1     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     2     0     0     0     0     1     0
```

```
## T7_3     0     0     0     0     0     0     1     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     1     0     0     0
##      12952 12953 12954 12955 12956 12957 12958 12959 12960 12961 12962 12963
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     1     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     1     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     1     0     0     0     0     0     0     0     0     0     0
##      12964 12965 12966 12967 12968 12969 12970 12971 12972 12973 12974 12975
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     1
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0
##      12976 12977 12978 12979 12980 12981 12982 12983 12984 12985 12986 12987
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     1     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     1     0     0     0     0     0     0     1     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     1     0     0     0     0     0     0     0     0     0     0     0
##      12988 12989 12990 12991 12992 12993 12994 12995 12996 12997 12998 12999
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     1     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     1     0     0
## T7_3     0     0     0     0     0     0     0     0     0     1     0     0
## DF_1     0     0     0     0     0     1     0     0     1     1     0     0
##      13000 13001 13002 13003 13004 13005 13006 13007 13008 13009 13010 13011
## T1_1     0     0     0     0     0     1     0     0     0     0     0     0
## T1_2     0     0     0     0     1     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     1     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     1     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0
##      13012 13013 13014 13015 13016 13017 13018 13019 13020 13021 13022 13023
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     1     0     0
## T1_3     0     1     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     1     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     1     0     0     0     0     0     0     0     0
##      13024 13025 13026 13027 13028 13029 13030 13031 13032 13033 13034 13035
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
```

```
## T7_1       0     0     0     0     0     0     0     0     0     0     0     0
## T7_2       0     0     0     0     1     0     0     0     0     0     0     0
## T7_3       0     0     0     0     0     0     0     0     0     0     0     0
## DF_1       0     0     0     0     0     1     0     0     1     0     1     1
##        13036 13037 13038 13039 13040 13041 13042 13043 13044 13045 13046 13047
## T1_1       0     0     0     0     0     0     0     0     0     0     0     0
## T1_2       0     0     0     0     0     0     0     0     0     0     0     0
## T1_3       0     0     0     0     0     0     0     0     0     0     0     0
## T7_1       0     0     0     0     0     0     0     0     0     0     0     0
## T7_2       0     0     0     0     0     0     2     1     0     0     1     0
## T7_3       0     0     0     0     0     0     0     0     0     0     0     0
## DF_1       0     1     0     0     0     0     0     0     0     1     1     0
##        13048 13049 13050 13051 13052 13053 13054 13055 13056 13057 13058 13059
## T1_1       0     0     0     0     0     0     1     0     0     0     0     0
## T1_2       0     0     0     0     0     0     0     0     0     0     0     0
## T1_3       1     0     0     0     0     0     0     1     0     0     0     0
## T7_1       0     0     0     0     0     0     0     0     0     0     0     1
## T7_2       0     0     0     0     0     0     0     0     0     0     0     0
## T7_3       0     0     0     0     1     1     0     0     0     0     0     0
## DF_1       0     0     0     0     0     0     0     0     0     0     1     0
##        13060 13061 13062 13063 13064 13065 13066 13067 13068 13069 13070 13071
## T1_1       0     0     0     0     0     0     0     0     0     0     0     0
## T1_2       0     0     0     0     0     0     0     0     0     0     0     0
## T1_3       0     0     0     0     0     0     0     1     1     0     1     0
## T7_1       0     0     1     0     0     0     0     0     0     0     0     0
## T7_2       0     0     0     2     0     0     1     0     0     1     0     0
## T7_3       0     1     0     2     0     0     0     0     0     0     0     0
## DF_1       0     0     0     0     0     1     1     0     0     0     0     0
##        13072 13073 13074 13075 13076 13077 13078 13079 13080 13081 13082 13083
## T1_1       0     0     0     0     0     0     0     0     0     0     0     0
## T1_2       0     0     0     0     0     0     0     0     0     0     0     0
## T1_3       0     0     0     0     0     0     0     0     0     0     0     0
## T7_1       0     0     0     0     0     0     0     0     0     0     0     0
## T7_2       0     1     1     1     0     0     0     0     0     0     0     0
## T7_3       0     0     0     0     0     0     0     0     0     0     0     0
## DF_1       0     0     0     0     0     0     0     0     0     0     0     1
##        13084 13085 13086 13087 13088 13089 13090 13091 13092 13093 13094 13095
## T1_1       0     0     0     0     0     0     0     1     1     1     0     0
## T1_2       0     0     0     0     0     0     0     0     1     0     0     0
## T1_3       0     0     0     0     0     1     0     1     0     0     0     0
## T7_1       0     0     0     0     0     0     0     0     0     0     0     0
## T7_2       0     0     0     0     0     0     0     0     0     0     0     0
## T7_3       0     1     0     0     2     0     0     0     0     0     0     0
## DF_1       0     0     0     0     0     0     0     0     0     0     0     0
##        13096 13097 13098 13099 13100 13101 13102 13103 13104 13105 13106 13107
## T1_1       0     0     0     0     0     0     1     1     2     0     0     0
## T1_2       0     0     0     0     0     0     0     0     0     0     0     0
## T1_3       1     0     0     0     0     1     0     0     0     0     0     0
## T7_1       0     0     0     0     0     0     0     0     0     0     0     0
## T7_2       0     0     0     0     0     0     0     0     0     0     0     0
## T7_3       0     0     0     0     0     0     0     0     0     0     0     0
## DF_1       0     0     0     0     0     0     0     0     0     0     0     0
##        13108 13109 13110 13111 13112 13113 13114 13115 13116 13117 13118 13119
## T1_1       0     0     0     0     0     0     0     0     0     0     0     0
```

```
## T1_2       0     0     0     0     0     0     0     0     0     0     0     0
## T1_3       0     0     0     0     0     0     0     0     0     0     0     0
## T7_1       0     0     0     0     0     0     0     0     0     0     0     0
## T7_2       0     0     0     0     0     0     0     0     0     0     0     0
## T7_3       0     0     0     0     0     0     0     0     0     0     0     0
## DF_1       0     0     0     0     0     0     0     0     0     0     0     0
##        13120 13121 13122 13123 13124 13125 13126 13127 13128 13129 13130 13131
## T1_1       0     0     0     0     0     0     0     0     0     0     0     0
## T1_2       0     0     0     0     0     0     0     0     0     0     0     0
## T1_3       0     0     0     0     0     0     0     0     0     0     0     0
## T7_1       0     0     0     0     0     0     0     0     0     0     0     0
## T7_2       0     0     0     0     0     0     0     0     0     0     1     0     1
## T7_3       0     0     0     0     0     0     0     0     0     0     0     0
## DF_1       0     0     0     0     0     0     0     0     0     0     0     0
##        13132 13133 13134 13135 13136 13137 13138 13139 13140 13141 13142 13143
## T1_1       0     0     0     0     0     0     0     0     0     0     0     0
## T1_2       0     0     0     0     0     0     0     1     0     0     0     0
## T1_3       0     0     0     0     0     0     0     0     0     0     0     0
## T7_1       0     0     0     0     0     0     0     0     0     0     0     0
## T7_2       0     1     1     0     0     2     0     0     0     1     1     1
## T7_3       0     0     0     0     0     1     0     0     1     0     0     0
## DF_1       0     0     0     0     0     0     0     0     0     0     0     0
##        13144 13145 13146 13147 13148 13149 13150 13151 13152 13153 13154 13155
## T1_1       0     0     0     0     0     0     0     0     0     0     0     0
## T1_2       0     0     0     0     0     1     0     0     0     0     0     0
## T1_3       0     0     0     0     0     0     0     0     0     0     0     0
## T7_1       0     0     0     0     0     0     0     0     0     0     0     0
## T7_2       0     0     0     0     0     0     0     0     0     1     0     2
## T7_3       0     0     0     0     1     0     0     0     0     0     0     0
## DF_1       0     0     0     0     0     0     0     1     1     0     0     0
##        13156 13157 13158 13159 13160 13161 13162 13163 13164 13165 13166 13167
## T1_1       0     0     0     0     0     0     0     0     0     0     0     0
## T1_2       0     0     0     0     0     0     1     0     0     0     0     1
## T1_3       0     0     1     0     0     0     0     0     0     0     0     0
## T7_1       0     0     0     0     0     0     0     0     0     0     0     0
## T7_2       0     0     0     0     0     0     0     0     0     0     0     0
## T7_3       0     0     0     0     0     0     0     0     0     0     0     0
## DF_1       0     0     0     0     0     0     0     0     0     0     0     0
##        13168 13169 13170 13171 13172 13173 13174 13175 13176 13177 13178 13179
## T1_1       0     0     0     0     0     1     0     0     0     1     0     0
## T1_2       0     0     0     0     0     0     0     0     0     0     0     0
## T1_3       1     1     0     1     0     0     0     0     0     0     0     0
## T7_1       0     0     1     0     0     0     0     0     0     0     0     0
## T7_2       0     1     0     0     0     0     0     0     0     0     0     0
## T7_3       0     0     0     0     1     0     0     0     0     0     0     1
## DF_1       0     0     0     0     0     0     0     1     0     0     0     0
##        13180 13181 13182 13183 13184 13185 13186 13187 13188 13189 13190 13191
## T1_1       0     1     0     0     0     0     0     0     0     0     0     0
## T1_2       0     0     0     0     0     0     0     0     0     0     0     0
## T1_3       0     0     2     0     0     0     0     0     0     0     0     0
## T7_1       0     0     0     0     0     0     0     0     0     0     0     0
## T7_2       0     0     0     0     0     0     0     0     0     0     0     0
## T7_3       0     0     0     0     0     0     0     0     0     0     0     0
## DF_1       0     0     0     0     0     1     0     0     0     0     0     0
```

```
##       13192 13193 13194 13195 13196 13197 13198 13199 13200 13201 13202 13203
## T1_1     0     0     0     0     1     0     1     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     1     0     0
## T1_3     1     0     1     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     1     0     1     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     1     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     1     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0
##       13204 13205 13206 13207 13208 13209 13210 13211 13212 13213 13214 13215
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     1     0     0     0     0
## T1_3     1     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     1     0     0     0     0     0     0     1     1
## T7_3     0     1     0     0     0     0     0     0     0     2     0     0
## DF_1     0     0     1     0     0     1     0     0     0     0     0     0
##       13216 13217 13218 13219 13220 13221 13222 13223 13224 13225 13226 13227
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     1     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     1     0     1     1     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     1     0     0
## T7_2     1     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     1     0     0     1
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0
##       13228 13229 13230 13231 13232 13233 13234 13235 13236 13237 13238 13239
## T1_1     0     0     0     1     0     0     0     0     0     0     0     0
## T1_2     0     1     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     1
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     1     0     0     0     0     0     0
##       13240 13241 13242 13243 13244 13245 13246 13247 13248 13249 13250 13251
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     1     0     1     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     0     0     0     0     0     0     0     0     0     0     0
## T7_3     0     0     0     0     1     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     1     0     0     0     0     1
##       13252 13253 13254 13255 13256 13257 13258 13259 13260 13261 13262 13263
## T1_1     0     0     0     0     0     0     0     0     0     0     0     0
## T1_2     0     0     0     0     0     0     0     0     0     0     0     0
## T1_3     0     0     0     0     0     0     0     1     0     1     0     0
## T7_1     0     0     0     0     1     0     0     0     0     0     0     0
## T7_2     1     1     0     0     0     1     0     0     0     0     0     0
## T7_3     0     0     0     0     0     0     0     0     0     0     0     0
## DF_1     0     0     0     0     0     0     0     0     0     0     0     0
##       13264 13265 13266 13267 13268 13269 13270 13271 13272 13273 13274 13275
## T1_1     0     0     0     0     0     0     0     0     0     0     1     0
## T1_2     0     0     0     0     1     1     0     0     0     0     0     0
## T1_3     0     0     1     0     0     0     0     0     0     0     0     0
## T7_1     0     0     0     0     0     0     0     0     0     0     0     0
## T7_2     0     1     0     1     0     0     0     0     0     0     0     0
```

```
## T7_3      0     0     0     0     0     0     0     0     0     1     0     1
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0
##        13276 13277 13278 13279 13280 13281 13282 13283 13284 13285 13286 13287
## T1_1      0     0     0     0     0     0     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     0     0     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     1     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0
##        13288 13289 13290 13291 13292 13293 13294 13295 13296 13297 13298 13299
## T1_1      0     0     0     0     0     0     0     0     0     0     0     1
## T1_2      0     0     0     0     0     1     0     0     0     0     0     0
## T1_3      0     0     1     0     0     0     0     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0     0
## T7_2      1     1     0     1     0     0     0     1     1     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0     0
##        13300 13301 13302 13303 13304 13305 13306 13307 13308 13309 13310
## T1_1      0     0     0     0     1     0     0     0     0     0     0
## T1_2      0     0     0     0     0     0     0     0     0     0     0
## T1_3      0     1     0     0     0     1     0     0     0     0     0
## T7_1      0     0     0     0     0     0     0     0     0     0     0
## T7_2      0     0     0     0     0     0     0     0     0     0     0
## T7_3      0     0     0     0     0     0     0     0     0     0     0
## DF_1      0     0     0     0     0     0     0     0     0     0     0
##  [ reached 'max' / getOption("max.print") -- omitted 4 rows ]
```

```r
soilbact.obsrich <- S.obs(soil.bac.t)
#smallest sample
min.N <- min(rowSums(soil.bac.t))
print(min.N)
```

```
## [1] 2119
```

```r
#rarefy
S.rarefy <-rarefy(x = soil.bac.t, sample = min.N, se = TRUE)
rarecurve(x = soil.bac.t, step = 20, col = "deepskyblue", cex = .6, las =1)
abline (0,1, col = "darkgreen")
text(1500, 1500, "1:1", pos =2, col = "darkgreen")
```
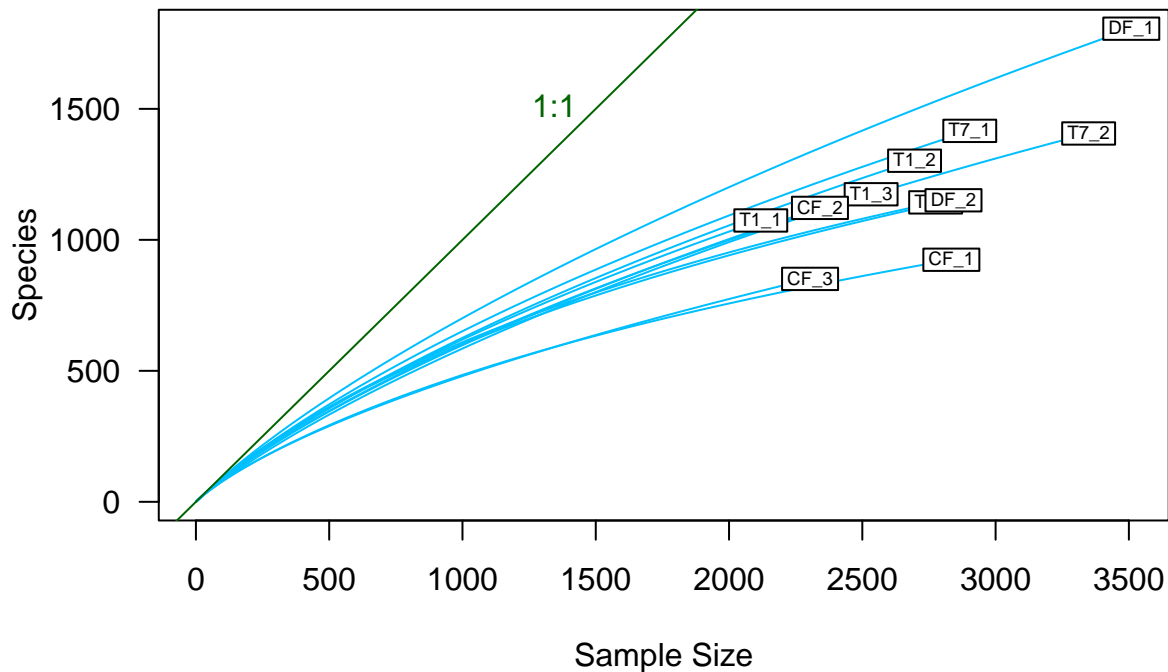
4) SPECIES EVNENNESS

Here, we consider how abundance varies among species, that is, **species evenness**.

Visualizing evenness: the rank abundance curve (RAC)

One of the most common ways to visualize evenness is in a **rank-abundance curve** (sometime referred to as a rank-abundance distribution or Whittaker plot). An RAC can be constructed by ranking species from the most abundant to the least abundant without respect to species labels (and hence no worries about 'ties' in abundance).

In the R code chunk below, do the following:

1. Write a function to construct a RAC,

2. Be sure your function removes species that have zero abundances,

3. Order the vector (RAC) from greatest (most abundant) to least (least abundant), and

4. Return the ranked vector

```r
RAC <-function (x = "") {
  x.ab = x[x>0] #removes zero abundances
  x.ab.ranked = x.ab[order(x.ab, decreasing = TRUE)] #order vector
  as.data.frame(lapply(x.ab.ranked, unlist))
  return(x.ab.ranked) #return ranked vector
}
```

Now, let us examine the RAC for `site1` of the BCI data set.

In the R code chunk below, do the following:

1. Create a sequence of ranks and plot the RAC with natural-log-transformed abundances,

2. Label the x-axis "Rank in abundance" and the y-axis "log(abundance)"

```
plot.new()
site1.BCI <-BCI[1,]

rac <- RAC(x =site1.BCI)
ranks <-as.vector(seq(1, length(rac)))
opar <- par(no.readonly = TRUE)
par(mar = c(5.1, 5.1, 4.1, 2.1))
plot(ranks, log(rac), type = "p", axes =F,
     xlab = "Rank in abundance",
     ylab = "log(abundance)",
     las =1, cex.lab = 1.4, cex.axis =1.25)
box()
axis(side = 1, labels = T, cex.axis =1.25)
axis(side = 2, las = 1, cex.axis =1.25,
     labces = c(1,2,5,10,20), at = log(c(1,2,5,10,20)))
```

```
## Warning in axis(side = 2, las = 1, cex.axis = 1.25, labces = c(1, 2, 5, :
## "labces" is not a graphical parameter
```
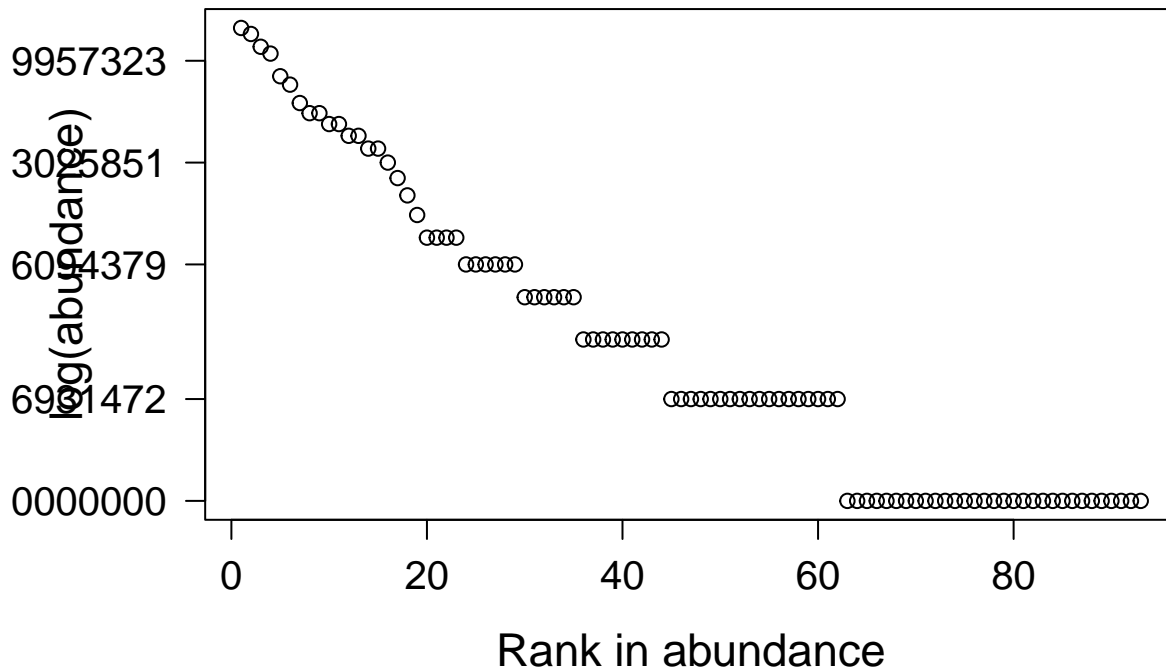


```
par <-opar
```

Question 5: What effect does visualizing species abundance data on a log-scaled axis have on how we interpret evenness in the RAC?

> ***Answer 5***: By utilizing a log-scaled axis, eveness is more easily observed than in a simple linear regression. With a long-scaled axis, distict clusters form creating a stark contrast between evenly distributed data, such as the clusters formed around 80 as compared to the being dominated by a few species, such as the data between 0-20 on "Rank in abundance".

Now that we have visualized unevennes, it is time to quantify it using Simpson's evenness ($E_{1/D}$) and Smith and Wilson's evenness index (E_{var}).

Simpson's evenness ($E_{1/D}$)

In the R code chunk below, do the following:

1. Write the function to calculate $E_{1/D}$, and

2. Calculate $E_{1/D}$ for `site1`.

```
#Simpson's Evenness- rank-abundance curve
simpE <- function (x = ""){
  S <-S.obs(x)
  x = as.data.frame(x)
  D <- diversity(x,"inv")
  E = (D)/S
  return(E)
}
site1.BCI <-BCI[1,]
simpe.site1 <- simpE(site1.BCI)
```

Smith and Wilson's evenness index (E_{var})

In the R code chunk below, please do the following:

1. Write the function to calculate E_{var},

2. Calculate E_{var} for `site1`, and

3. Compare $E_{1/D}$ and E_{var}.

```
Evar <- function(x){
  x <-as.vector(x[x >0])
  1-(2/pi)*atan(var(log(x)))
}
site1.evar <-Evar(site1.BCI)
print(site1.evar)
```

```
## [1] 0.5067211
```

```
print(simpe.site1)
```

```
##         1
## 0.4238232
```

Question 6: Compare estimates of evenness for `site1` of BCI using $E_{1/D}$ and E_{var}. Do they agree? If so, why? If not, why? What can you infer from the results.

> ***Answer 6***:The Smith and Wilson's Evenness index is .5067 compared to the Simpson's evenness index which is .4238. While roughly (within .1 of one another) similar, Simpson's evennness is extremely sensitive to abundant species compared to Smith and Wilson's index. Therefore, the evenness at Site 1 is only about 50% even, whcih means that there is still half of the population with great variety in abundance.

5) INTEGRATING RICHNESS AND EVENNESS: DIVERSITY METRICS

So far, we have introduced two primary aspects of diversity, i.e., richness and evenness. Here, we will use popular indices to estimate diversity, which explicitly incorporate richness and evenness. We will write our own diversity functions and compare them against the functions in `vegan`.

Shannon's diversity (a.k.a., Shannon's entropy)

In the R code chunk below, please do the following:

1. Provide the code for calculating H' (Shannon's diversity),

2. Compare this estimate with the output of **vegan**'s diversity function using method = "shannon".

```r
shanH <-function (x = ""){
  H =0
  for (n_i in x){
    if (n_i > 0) {
      p = n_i/sum(x)
      H = H-p*log(p)
    }
  }
  return(H)
}

shanH(site1.BCI)
```

```
## [1] 4.018412
```

```r
diversity(site1.BCI, index = "shannon")
```

```
## [1] 4.018412
```

Simpson's diversity (or dominance)

In the R code chunk below, please do the following:

1. Provide the code for calculating D (Simpson's diversity),

2. Calculate both the inverse (1/D) and 1 - D,

3. Compare this estimate with the output of **vegan's** diversity function using method = "simp".

```r
SimpD = function(x = ""){
  D=0
  N=sum(x)
  for (n_i in x){
    D =D +(n_i^2)/(N^2)
  }
  return(D)
}

D.inv <-1/SimpD(site1.BCI)
D.sub <-1-SimpD(site1.BCI)
print(D.inv)
```

```
## [1] 39.41555
```

```r
print(D.sub)
```

```
## [1] 0.9746293
```

```r
#vegan
diversity(site1.BCI, "inv")
```

```
## [1] 39.41555
```

```r
diversity(site1.BCI, "simp")
```

```
## [1] 0.9746293
```

Fisher's α

In the R code chunk below, please do the following:

1. Provide the code for calculating Fisher's α,

2. Calculate Fisher's α for `site1` of BCI.

```
rac <-as.vector(site1.BCI[site1.BCI>0])
invD <- diversity(rac, "inv")
invD
```

```
## [1] 39.41555
```

```
Fisher <-fisher.alpha(rac)
Fisher
```

```
## [1] 35.67297
```

Question 7: How is Fisher's α different from $E_{H'}$ and E_{var}? What does Fisher's α take into account that $E_{H'}$ and E_{var} do not?

> ***Answer 7***: Fisher's alpha is 39.416 (or 35.672 from vegan package) comapred to H which is 4.018 and Smith and Wilson's evenness index which is .5067. Unlike the other metrics, Fisher's alpha estimates diversity, which includes sampling error. The other metrics aim to calculate diversity and do not take any error into account.

6) HILL NUMBERS

Remember that we have learned about the advantages of Hill Numbers to measure and compare diversity among samples. We also learned to explore the effects of rare species in a community by examining diversity for a series of exponents q.

Question 8: Using `site1` of BCI and `vegan` package, a) calculate Hill numbers for q exponent 0, 1 and 2 (richness, exponential Shannon's entropy, and inverse Simpson's diversity). b) Interpret the effect of rare species in your community based on the response of diversity to increasing exponent q.

```
#site1.BCI
library(vegan)
tsallis(site1.BCI, scales = seq(0,2,1), hill=TRUE)
```

```
##        0        1        2
## 93.00000 55.61270 39.41555
## attr(,"class")
## [1] "tsallis" "renyi"   "numeric"
```

```
q_0 = S.obs(site1.BCI)
q_1 = exp(diversity(site1.BCI, index="shannon"))
q_2 = diversity(site1.BCI, index="invsimpson")

hill.df <- data.frame(
  Order = c("q0 (Species Richness)", "q1 (Shannon Diversity)", "q2 (Inverse Simpson)"),
  Hill_number = c(q_0, q_1, q_2)
)
print(hill.df)
```

```
##                     Order Hill_number
## 1   q0 (Species Richness)    93.00000
## 2 q1 (Shannon Diversity)    55.61270
## 3   q2 (Inverse Simpson)    39.41555
```

Answer 8a: For the Hill numbers of Site 1 in the BCI data base is when q = 0, the richness is 93.00, the Shannon Diversity when q =1 is 55.613 and the Inverse Simpson at q =2 is 39.416.

Answer 8b: As q increases, the species diversity drops going from 93.00 (q=0) to 39.42 (q =2). Therefore, rare species signficantly impact overall species richness (q=0) and that the community is composed of many rare species.

7) MOVING BEYOND UNIVARIATE METRICS OF α DIVERSITY

The diversity metrics that we just learned about attempt to integrate richness and evenness into a single, univariate metric. Although useful, information is invariably lost in this process. If we go back to the rank-abundance curve, we can retrieve additional information – and in some cases – make inferences about the processes influencing the structure of an ecological system.

Species abundance models

The RAC is a simple data structure that is both a vector of abundances. It is also a row in the site-by-species matrix (minus the zeros, i.e., absences).

Predicting the form of the RAC is the first test that any biodiversity theory must pass and there are no less than 20 models that have attempted to explain the uneven form of the RAC across ecological systems.

In the R code chunk below, please do the following:

1. Use the **radfit()** function in the **vegan** package to fit the predictions of various species abundance models to the RAC of **site1** in BCI,

2. Display the results of the **radfit()** function, and

3. Plot the results of the **radfit()** function using the code provided in the handout.

```
RAC.site1.BCI <- radfit(site1.BCI)
print(RAC.site1.BCI)
```

```
##
## RAD models, family poisson
## No. of species 93, total abundance 448
##
##            par1      par2     par3   Deviance AIC      BIC
## Null                                 39.5261 315.4362 315.4362
## Preemption  0.042797                 21.8939 299.8041 302.3367
## Lognormal   1.0687    1.0186         25.1528 305.0629 310.1281
## Zipf        0.11033  -0.74705        61.0465 340.9567 346.0219
## Mandelbrot  100.52   -2.312   24.084  4.2271 286.1372 293.7350
```

```
plot.new()
plot(RAC.site1.BCI, las = 1, cex.lab = 1.4, cex.axis = 1.25)
```
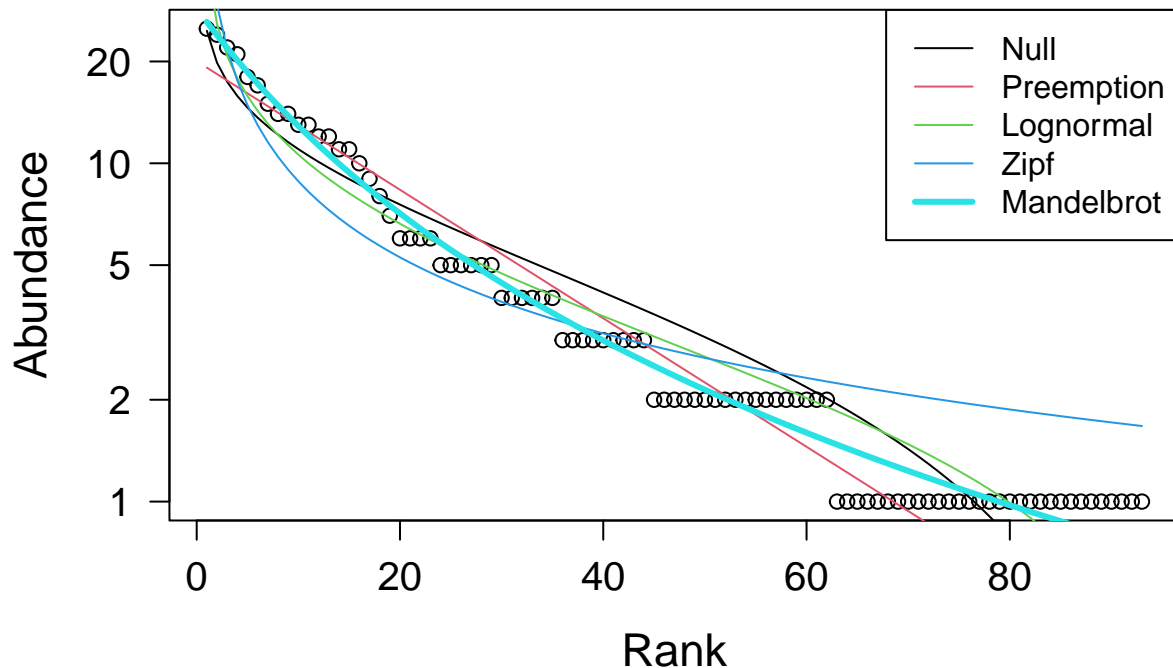
Question 9: Answer the following questions about the rank abundance curves: a) Based on the output of `radfit()` and plotting above, discuss which model best fits our rank-abundance curve for `site1`? b) Can we make any inferences about the forces, processes, and/or mechanisms influencing the structure of our system, e.g., an ecological community?

> **Answer 9a**: Based on the output, Mandelbrot would be the most appropriate and has the best fit for site 1 in the BCI database. With a deviance of 4.227, it has the lowest amount of variance not explained by the model compared to the other models, such as Zipf (D= 61.04). Graphically, Mandelbrot also visually fits the best following a subtle curve. **Answer 9b**: Given that Mandelbrot is the most appropriate model, there are a few inferences that can be made regarding the community. Communities taht fit under the Mandelbrot model follow the power-law pattern or having high richness of a few abundant species and many less abundant species potentially resulting in niche paritioning. Niche partioning allows species with similar niches to cohabitate in the same ecosystem especially as it concerns the less rare species. Additionally, abundance could be a result of newer species having particular niche requirements allowing them to survive and thrive in a rare niche. Citation: https://myweb.ttu.edu/nmcintyr/Community%20Ecology/abundance.docx

Question 10: Answer the following questions about the preemption model: a. What does the preemption model assume about the relationship between total abundance (N) and total resources that can be preempted? b. Why does the niche preemption model look like a straight line in the RAD plot?

> **Answer 10a**: The preemption model assumes that earlier species limit resources for late arrivers and limits diversity. Therefore, total abundance (N) is dependent on the total available resources. The early arrivers utilize resources and limits the amount available for later species limiting the overall total abundance. N will be heavily represented by these earlier species and limits diversity. Citation: https://myweb.ttu.edu/nmcintyr/Community%20Ecology/abundance.docx **Answer 10b**: The niche preemption model looks extremely linear as it represents the limited diversity of a community due to the fact earlier species limit the available resources for later species. Therefore, there is a negative linear relationship between species arrival and resource occupancy. In the BCI plot, species that are more abundant species have a higher rank as they are classified as the early arrivals. As rank continues to decrease, species become less abundant. For the BCI site 1 data, preemption deviates by 21.8939. Citation: https://myweb.ttu.edu/nmcintyr/Community%20Ecology/abundance.docx

Question 11: Why is it important to account for the number of parameters a model uses when judging how well it explains a given set of data?

> **Answer 11**: Parameters help ensure that the model fits the data accurately and with more parameters, the model should fit better. However, too many parameters may result in an overly specific model that is not reproducible for other studies and may capture noise leading to the actual patterns not being captured. With too few parameters, the model will be underfit and does not capture the patterns or complexity of the data. It is important to account for the number of parameters used as too few or too many can result in poor fitting.

SYNTHESIS

1. As stated by Magurran (2004) the $D = \sum p_i^2$ derivation of Simpson's Diversity only applies to communities of infinite size. For anything but an infinitely large community, Simpson's Diversity index is calculated as $D = \sum \frac{n_i(n_i-1)}{N(N-1)}$. Assuming a finite community, calculate Simpson's D, 1 - D, and Simpson's inverse (i.e. 1/D) for `site 1` of the BCI site-by-species matrix.

```
#print(site1.BCI)
SimpD = function(x = ""){
  D=0
  N=sum(x)
  for (n_i in x){
    D =D +(n_i^2)/(N^2)
  }
  return(D)
}
D <-(site1.BCI)
D.inv <-1/SimpD(site1.BCI)
D.sub <-1-SimpD(site1.BCI)


simpD <-  data.frame(Diversity_Index = c("Simpson's D", "Inverse Simpson's D", "Complement of Simpson's
  Species = c(D, D.inv, D.sub)
)
print(simpD)
```

```
##                 Diversity_Index Species.Abarema.macradenia
## 1                   Simpson's D                          0
## 2           Inverse Simpson's D                          0
## 3 Complement of Simpson's D                              0
##   Species.Vachellia.melanoceras Species.Acalypha.diversifolia
## 1                             0                             0
## 2                             0                             0
## 3                             0                             0
##   Species.Acalypha.macrostachya Species.Adelia.triloba
## 1                             0                      0
## 2                             0                      0
## 3                             0                      0
##   Species.Aegiphila.panamensis Species.Alchornea.costaricensis
## 1                            0                               2
## 2                            0                               2
## 3                            0                               2
##   Species.Alchornea.latifolia Species.Alibertia.edulis
## 1                           0                        0
## 2                           0                        0
```

```
## 3                              0                     0
##   Species.Allophylus.psilospermus Species.Alseis.blackiana
## 1                               0                       25
## 2                               0                       25
## 3                               0                       25
##   Species.Amaioua.corymbosa Species.Anacardium.excelsum Species.Andira.inermis
## 1                         0                           0                      0
## 2                         0                           0                      0
## 3                         0                           0                      0
##   Species.Annona.spraguei Species.Apeiba.glabra Species.Apeiba.tibourbou
## 1                       1                    13                        2
## 2                       1                    13                        2
## 3                       1                    13                        2
##   Species.Aspidosperma.desmanthum Species.Astrocaryum.standleyanum
## 1                               0                                0
## 2                               0                                0
## 3                               0                                0
##   Species.Astronium.graveolens Species.Attalea.butyracea
## 1                            6                         0
## 2                            6                         0
## 3                            6                         0
##   Species.Banara.guianensis Species.Beilschmiedia.pendula
## 1                         0                             4
## 2                         0                             4
## 3                         0                             4
##   Species.Brosimum.alicastrum Species.Brosimum.guianense
## 1                           5                          0
## 2                           5                          0
## 3                           5                          0
##   Species.Calophyllum.longifolium Species.Casearia.aculeata
## 1                               0                         0
## 2                               0                         0
## 3                               0                         0
##   Species.Casearia.arborea Species.Casearia.commersoniana
## 1                        1                              0
## 2                        1                              0
## 3                        1                              0
##   Species.Casearia.guianensis Species.Casearia.sylvestris
## 1                           0                           2
## 2                           0                           2
## 3                           0                           2
##   Species.Cassipourea.guianensis Species.Cavanillesia.platanifolia
## 1                              2                                 0
## 2                              2                                 0
## 3                              2                                 0
##   Species.Cecropia.insignis Species.Cecropia.obtusifolia
## 1                        12                            0
## 2                        12                            0
## 3                        12                            0
##   Species.Cedrela.odorata Species.Ceiba.pentandra Species.Celtis.schippii
## 1                       0                       0                       0
## 2                       0                       0                       0
## 3                       0                       0                       0
##   Species.Cespedesia.spathulata Species.Chamguava.schippii
```

```
## 1                              0                        0
## 2                              0                        0
## 3                              0                        0
##   Species.Chimarrhis.parviflora Species.Maclura.tinctoria
## 1                             0                        0
## 2                             0                        0
## 3                             0                        0
##   Species.Chrysochlamys.eclipes Species.Chrysophyllum.argenteum
## 1                             0                               4
## 2                             0                               4
## 3                             0                               4
##   Species.Chrysophyllum.cainito Species.Coccoloba.coronata
## 1                             0                          0
## 2                             0                          0
## 3                             0                          0
##   Species.Coccoloba.manzinellensis Species.Colubrina.glandulosa
## 1                                0                            0
## 2                                0                            0
## 3                                0                            0
##   Species.Cordia.alliodora Species.Cordia.bicolor Species.Cordia.lasiocalyx
## 1                        2                     12                         8
## 2                        2                     12                         8
## 3                        2                     12                         8
##   Species.Coussarea.curvigemma Species.Croton.billbergianus
## 1                            0                            2
## 2                            0                            2
## 3                            0                            2
##   Species.Cupania.cinerea Species.Cupania.latifolia Species.Cupania.rufescens
## 1                       0                         0                         0
## 2                       0                         0                         0
## 3                       0                         0                         0
##   Species.Cupania.seemannii Species.Dendropanax.arboreus
## 1                         2                            0
## 2                         2                            0
## 3                         2                            0
##   Species.Desmopsis.panamensis Species.Diospyros.artanthifolia
## 1                            0                               1
## 2                            0                               1
## 3                            0                               1
##   Species.Dipteryx.oleifera Species.Drypetes.standleyi Species.Elaeis.oleifera
## 1                         1                          2                       0
## 2                         1                          2                       0
## 3                         1                          2                       0
##   Species.Enterolobium.schomburgkii Species.Erythrina.costaricensis
## 1                                 0                               0
## 2                                 0                               0
## 3                                 0                               0
##   Species.Erythroxylum.macrophyllum Species.Eugenia.florida
## 1                                 0                       0
## 2                                 0                       0
## 3                                 0                       0
##   Species.Eugenia.galalonensis Species.Eugenia.nesiotica
## 1                            0                         0
## 2                            0                         0
```

```
## 3                             0                     0
##   Species.Eugenia.oerstediana Species.Faramea.occidentalis
## 1                           3                           14
## 2                           3                           14
## 3                           3                           14
##   Species.Ficus.colubrinae Species.Ficus.costaricana Species.Ficus.insipida
## 1                        0                         0                      0
## 2                        0                         0                      0
## 3                        0                         0                      0
##   Species.Ficus.maxima Species.Ficus.obtusifolia Species.Ficus.popenoei
## 1                    1                         0                      0
## 2                    1                         0                      0
## 3                    1                         0                      0
##   Species.Ficus.tonduzii Species.Ficus.trigonata Species.Ficus.yoponensis
## 1                      0                       0                        1
## 2                      0                       0                        1
## 3                      0                       0                        1
##   Species.Garcinia.intermedia Species.Garcinia.madruno Species.Genipa.americana
## 1                           0                        4                        0
## 2                           0                        4                        0
## 3                           0                        4                        0
##   Species.Guapira.myrtiflora Species.Guarea.fuzzy Species.Guarea.grandifolia
## 1                          3                    1                          0
## 2                          3                    1                          0
## 3                          3                    1                          0
##   Species.Guarea.guidonia Species.Guatteria.dumetorum Species.Guazuma.ulmifolia
## 1                       2                           6                         0
## 2                       2                           6                         0
## 3                       2                           6                         0
##   Species.Guettarda.foliacea Species.Gustavia.superba
## 1                          1                       10
## 2                          1                       10
## 3                          1                       10
##   Species.Hampea.appendiculata Species.Hasseltia.floribunda
## 1                            0                            5
## 2                            0                            5
## 3                            0                            5
##   Species.Heisteria.acuminata Species.Heisteria.concinna
## 1                           0                          4
## 2                           0                          4
## 3                           0                          4
##   Species.Hirtella.americana Species.Hirtella.triandra Species.Hura.crepitans
## 1                          0                        21                      0
## 2                          0                        21                      0
## 3                          0                        21                      0
##   Species.Hieronyma.alchorneoides Species.Inga.acuminata
## 1                               0                       0
## 2                               0                       0
## 3                               0                       0
##   Species.Inga.cocleensis Species.Inga.goldmanii Species.Inga.laurina
## 1                       2                      0                    0
## 2                       2                      0                    0
## 3                       2                      0                    0
##   Species.Inga.semialata Species.Inga.nobilis Species.Inga.oerstediana
```

```
## 1                    0                 0                 0
## 2                    0                 0                 0
## 3                    0                 0                 0
##   Species.Inga.pezizifera Species.Inga.punctata Species.Inga.ruiziana
## 1                       0                     3                     0
## 2                       0                     3                     0
## 3                       0                     3                     0
##   Species.Inga.sapindoides Species.Inga.spectabilis Species.Inga.umbellifera
## 1                        2                        0                        0
## 2                        2                        0                        0
## 3                        2                        0                        0
##   Species.Jacaranda.copaia Species.Lacistema.aggregatum
## 1                        6                            1
## 2                        6                            1
## 3                        6                            1
##   Species.Lacmellea.panamensis Species.Laetia.procera Species.Laetia.thamnia
## 1                            1                      0                      0
## 2                            1                      0                      0
## 3                            1                      0                      0
##   Species.Lafoensia.punicifolia Species.Licania.hypoleuca
## 1                             0                         0
## 2                             0                         0
## 3                             0                         0
##   Species.Licania.platypus Species.Lindackeria.laurina
## 1                        0                           0
## 2                        0                           0
## 3                        0                           0
##   Species.Lonchocarpus.heptaphyllus Species.Luehea.seemannii
## 1                                 7                        1
## 2                                 7                        1
## 3                                 7                        1
##   Species.Macrocnemum.roseum Species.Maquira.guianensis.costaricana
## 1                          0                                      4
## 2                          0                                      4
## 3                          0                                      4
##   Species.Margaritaria.nobilis Species.Marila.laxiflora
## 1                            0                        1
## 2                            0                        1
## 3                            0                        1
##   Species.Maytenus.schippii Species.Miconia.affinis Species.Miconia.argentea
## 1                         2                       0                        2
## 2                         2                       0                        2
## 3                         2                       0                        2
##   Species.Miconia.elata Species.Miconia.hondurensis Species.Mosannona.garwoodii
## 1                     0                           0                           1
## 2                     0                           0                           1
## 3                     0                           0                           1
##   Species.Myrcia.gatunensis Species.Myrospermum.frutescens
## 1                         1                              0
## 2                         1                              0
## 3                         1                              0
##   Species.Nectandra.cissiflora Species.Nectandra.lineata
## 1                            0                         0
## 2                            0                         0
```

```
## 3                              0                      0
##   Species.Nectandra.purpurea Species.Ochroma.pyramidale Species.Ocotea.cernua
## 1                          1                          1                     0
## 2                          1                          1                     0
## 3                          1                          1                     0
##   Species.Ocotea.oblonga Species.Ocotea.puberula Species.Ocotea.whitei
## 1                      0                       0                     1
## 2                      0                       0                     1
## 3                      0                       0                     1
##   Species.Oenocarpus.mapora Species.Ormosia.amazonica Species.Ormosia.coccinea
## 1                        22                         0                        0
## 2                        22                         0                        0
## 3                        22                         0                        0
##   Species.Ormosia.macrocalyx Species.Pachira.quinata Species.Pachira.sessilis
## 1                          0                       0                        0
## 2                          0                       0                        0
## 3                          0                       0                        0
##   Species.Perebea.xanthochyma Species.Cinnamomum.triplinerve
## 1                           0                              0
## 2                           0                              0
## 3                           0                              0
##   Species.Picramnia.latifolia Species.Piper.reticulatum
## 1                           0                         0
## 2                           0                         0
## 3                           0                         0
##   Species.Platymiscium.pinnatum Species.Platypodium.elegans
## 1                             3                           2
## 2                             3                           2
## 3                             3                           2
##   Species.Posoqueria.latifolia Species.Poulsenia.armata
## 1                            0                       24
## 2                            0                       24
## 3                            0                       24
##   Species.Pourouma.bicolor Species.Pouteria.fossicola
## 1                        5                          0
## 2                        5                          0
## 3                        5                          0
##   Species.Pouteria.reticulata Species.Pouteria.stipitata
## 1                           5                          0
## 2                           5                          0
## 3                           5                          0
##   Species.Prioria.copaifera Species.Protium.costaricense
## 1                        13                            5
## 2                        13                            5
## 3                        13                            5
##   Species.Protium.panamense Species.Protium.tenuifolium
## 1                         2                          11
## 2                         2                          11
## 3                         2                          11
##   Species.Pseudobombax.septenatum Species.Psidium.friedrichsthalianum
## 1                               0                                   0
## 2                               0                                   0
## 3                               0                                   0
##   Species.Psychotria.grandis Species.Pterocarpus.rohrii
```

```
## 1                            0                    1
## 2                            0                    1
## 3                            0                    1
##   Species.Quararibea.asterolepis Species.Quassia.amara Species.Randia.armata
## 1                           11                     0                     3
## 2                           11                     0                     3
## 3                           11                     0                     3
##   Species.Sapium.broadleaf Species.Sapium.glandulosum
## 1                        0                          0
## 2                        0                          0
## 3                        0                          0
##   Species.Schizolobium.parahyba Species.Senna.dariensis Species.Simarouba.amara
## 1                             0                       0                      14
## 2                             0                       0                      14
## 3                             0                       0                      14
##   Species.Siparuna.guianensis Species.Siparuna.pauciflora
## 1                           3                           0
## 2                           3                           0
## 3                           3                           0
##   Species.Sloanea.terniflora Species.Socratea.exorrhiza Species.Solanum.hayesii
## 1                          1                         15                       0
## 2                          1                         15                       0
## 3                          1                         15                       0
##   Species.Sorocea.affinis Species.Spachea.membranacea Species.Spondias.mombin
## 1                       1                           0                       1
## 2                       1                           0                       1
## 3                       1                           0                       1
##   Species.Spondias.radlkoferi Species.Sterculia.apetala
## 1                           2                         1
## 2                           2                         1
## 3                           2                         1
##   Species.Swartzia.simplex.var.grandiflora
## 1                                         3
## 2                                         3
## 3                                         3
##   Species.Swartzia.simplex.continentalis Species.Symphonia.globulifera
## 1                                      1                             0
## 2                                      1                             0
## 3                                      1                             0
##   Species.Handroanthus.guayacan Species.Tabebuia.rosea
## 1                             1                      1
## 2                             1                      1
## 3                             1                      1
##   Species.Tabernaemontana.arborea Species.Tachigali.versicolor
## 1                               9                            6
## 2                               9                            6
## 3                               9                            6
##   Species.Talisia.nervosa Species.Talisia.princeps Species.Terminalia.amazonia
## 1                       0                        1                           1
## 2                       0                        1                           1
## 3                       0                        1                           1
##   Species.Terminalia.oblonga Species.Tetragastris.panamensis
## 1                          0                               5
## 2                          0                               5
```

```
## 3                            0                                   5
##    Species.Tetrathylacium.johansenii Species.Theobroma.cacao
## 1                                  0                          1
## 2                                  0                          1
## 3                                  0                          1
##    Species.Thevetia.ahouai Species.Tocoyena.pittieri
## 1                        0                          0
## 2                        0                          0
## 3                        0                          0
##    Species.Trattinnickia.aspera Species.Trema.micrantha
## 1                             3                        0
## 2                             3                        0
## 3                             3                        0
##    Species.Trichanthera.gigantea Species.Trichilia.pallida
## 1                              0                          0
## 2                              0                          0
## 3                              0                          0
##    Species.Trichilia.tuberculata Species.Trichospermum.galeottii
## 1                             18                               0
## 2                             18                               0
## 3                             18                               0
##    Species.Triplaris.cumingiana Species.Trophis.caucana Species.Trophis.racemosa
## 1                             0                       2                        1
## 2                             0                       2                        1
## 3                             0                       2                        1
##    Species.Turpinia.occidentalis Species.Unonopsis.pittieri
## 1                              0                          1
## 2                              0                          1
## 3                              0                          1
##    Species.Virola.multiflora Species.Virola.sebifera Species.Virola.surinamensis
## 1                          0                      17                           4
## 2                          0                      17                           4
## 3                          0                      17                           4
##    Species.Vismia.baccifera Species.Vochysia.ferruginea
## 1                         0                           0
## 2                         0                           0
## 3                         0                           0
##    Species.Xylopia.macrantha Species.Zanthoxylum.ekmanii
## 1                          1                           3
## 2                          1                           3
## 3                          1                           3
##    Species.Zanthoxylum.juniperinum Species.Zanthoxylum.panamense
## 1                                0                             2
## 2                                0                             2
## 3                                0                             2
##    Species.Zanthoxylum.setulosum Species.Zuelania.guidonia
## 1                              0                          0
## 2                              0                          0
## 3                              0                          0
##    Species.39.4155538098979 Species.0.974629304846939
## 1                  39.41555                 0.9746293
## 2                  39.41555                 0.9746293
## 3                  39.41555                 0.9746293
```

2. Along with the rank-abundance curve (RAC), another way to visualize the distribution of abundance among species is with a histogram (a.k.a., frequency distribution) that shows the frequency of different abundance classes. For example, in a given sample, there may be 10 species represented by a single individual, 8 species with two individuals, 4 species with three individuals, and so on. In fact, the rank-abundance curve and the frequency distribution are the two most common ways to visualize the species-abundance distribution (SAD) and to test species abundance models and biodiversity theories. To address this homework question, use the R function **hist()** to plot the frequency distribution for `site 1` of the BCI site-by-species matrix, and describe the general pattern you see.

```
site1.BCI.abundances <-BCI[,1]
print(site1.BCI.abundances)
```

```
##  [1] 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
## [39] 0 0 0 0 0 0 0 0 0 0 0 0
```

```
hist(site1.BCI.abundances,
     breaks = "Sturges",
     main = "Species Abundance Distribution at Site 1",
     xlab = "Number of Individuals per Species",
     ylab = "Frequency (Number of Species)",
     col ="cornflowerblue",
     border ="black")
```

Species Abundance Distribution at Site 1
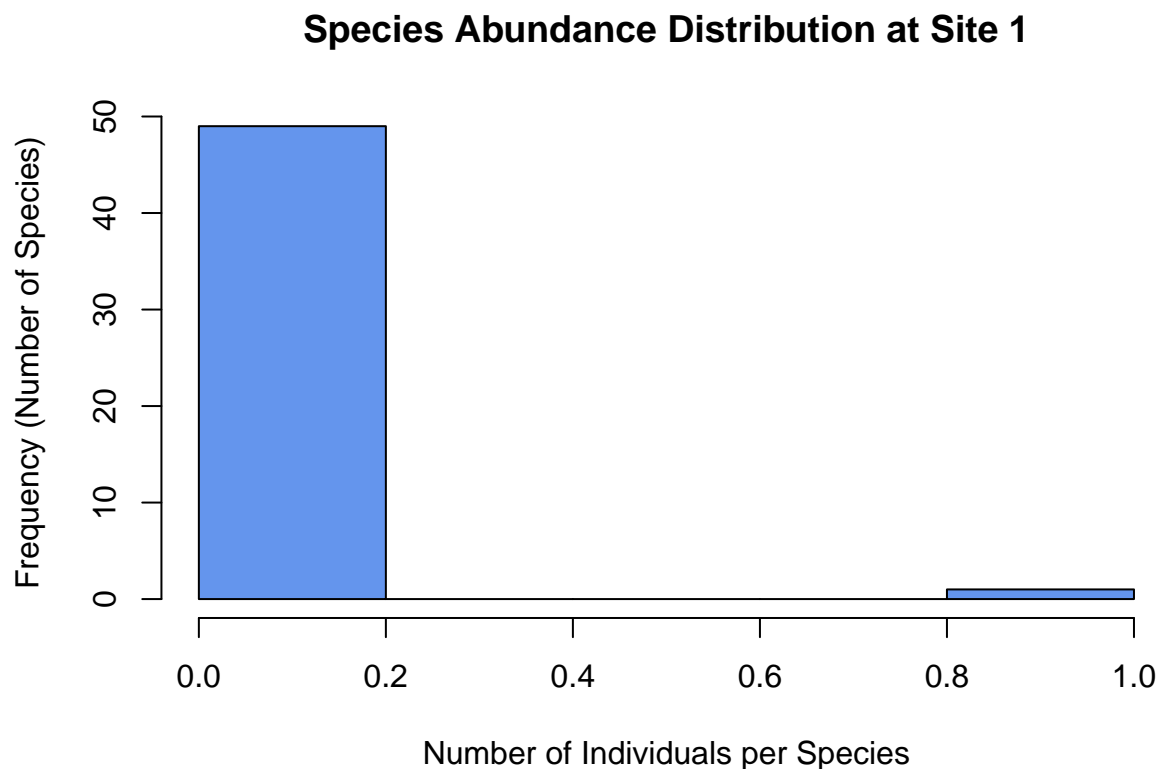
>For Species Abundance Distribution at Site 1, there is a signficant right skew with a majority of the samples having zero indviduals. There is one species with an abundance of 1. Therefore, there is very low abundance at Site 1 n the BCI database.

3. We asked you to find a biodiversity dataset with your partner. This data could be one of your own or it could be something that you obtained from the literature. Load that dataset. How many sites are there? How many species are there in the entire site-by-species matrix? Any other interesting observations based on what you learned this week?

#This was having trouble knitting- I was switching between the console and r-chunk due to issues setting the

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working directory. I transformed print(tree) tree.df <-as.data.frame(tree) print(tree.df)

tree.species.df <-data.frame(Plot_ID = c(tree$PLOT), $Species_ID$ = c(tree$SPCD)) print(tree.species.df)

print(tree.species.df$Plot_ID)

#Site by Species df library(dplyr) library(tidyr) library(tibble)

tree.species.df <- tree.species.df %>% mutate(Plot_ID = as.character(Plot_ID), Species_ID = as.character(Species_ID)) tree.ss.df <- as.data.frame.matrix(table(tree.species.df$Plot_ID, tree.species.df$Species_ID)) tree.ss.df <- rownames_to_column(tree.ss.df, var = "Plot_ID") print(tree.ss.df) tree.species.df <- tree.ss.df[, 2:ncol(tree.ss.df)] #Overview length(tree.species.df$Species_ID) 43528 species in the Tree dataset − species delimited by species ID ranging from 110−999 translation of the codes can be found in the repository range(tree.species.df$ length(tree.species.df$Plot_ID) 43528 plots in the Tree dataset ranging from 1−999 translation of the codes can be found in the reposit str(tree.species.df) #This dataset is so large much of the diversity metrics will only printed a limited number of outputs. I will have the code for all the sites commented out with comparison at only one site (Site 1) tree.site1.df <- as.data.frame(tree.ss.df[1,]) tree.site1.df$Plot_ID <- NULL print(tree.site1.df)

#Observed Richness S.obs(tree.site1.df) #Observed richenss = 2 obsRich.all <- S.obs(tree.ss.df) #Observed richness ranges from [2,12] for the enture dataset

#Good's Coverage GC(tree.site1.df) #.889 GC GC.tree.all <-GC(tree.species.df) #mean = .6391

chao1.tree.all <- chao1(tree.species.df) #range [17048.72, 17058.72] mean 17051.15

#as of 10:41 on 1/29/2025 I am pushing but will keep working- there is so much data I need some time to think on how I want to filter it so I can do appropriate analysis

SUBMITTING YOUR ASSIGNMENT

Use Knitr to create a PDF of your completed 5.AlphaDiversity_Worksheet.Rmd document, push it to GitHub, and create a pull request. Please make sure your updated repo include both the pdf and RMarkdown files.

Unless otherwise noted, this assignment is due on **Wednesday, January 29th, 2025 at 12:00 PM (noon)**.