MA678 Homework 2

9/20/2022

11.5

Residuals and predictions: The folder `Pyth` contains outcome y and predictors x_1, x_2 for 40 data points, with a further 20 points with the predictors but no observed outcome. Save the file to your working directory, then read it into R using `read.table()`.

(a)

Use R to fit a linear regression model predicting y from x_1, x_2, using the first 40 data points in the file. Summarize the inferences and check the fit of your model.

```
data <- read.table("Pyth.txt", header = TRUE)
data1 <- data[1:40, ]
model <- lm(y ~ x1 + x2, data = data1)
summary(model)
```

```
##
## Call:
## lm(formula = y ~ x1 + x2, data = data1)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -0.9585 -0.5865 -0.3356  0.3973  2.8548
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
## (Intercept)  1.31513    0.38769   3.392  0.00166 **
## x1           0.51481    0.04590  11.216 1.84e-13 ***
## x2           0.80692    0.02434  33.148  < 2e-16 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.9 on 37 degrees of freedom
## Multiple R-squared:  0.9724, Adjusted R-squared:  0.9709
## F-statistic: 652.4 on 2 and 37 DF,  p-value: < 2.2e-16
```

(b)

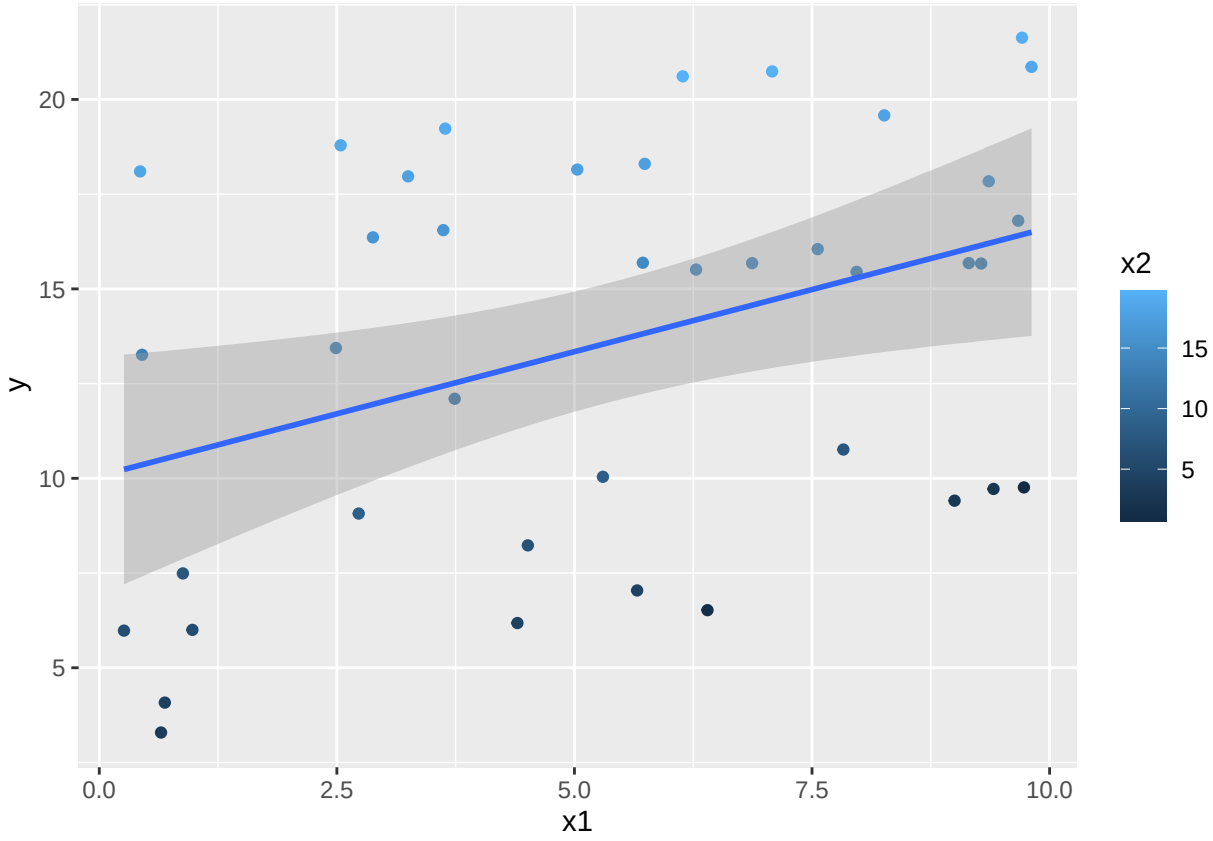
Display the estimated model graphically as in Figure 10.2

```
library(ggplot2)
ggplot(data=data1, aes(x = x1 , y = y, color = x2 )) +
  geom_point() +
  geom_smooth(method = "lm")
```

```
## `geom_smooth()` using formula = 'y ~ x'
```

```
## Warning: The following aesthetics were dropped during statistical transformation:
```

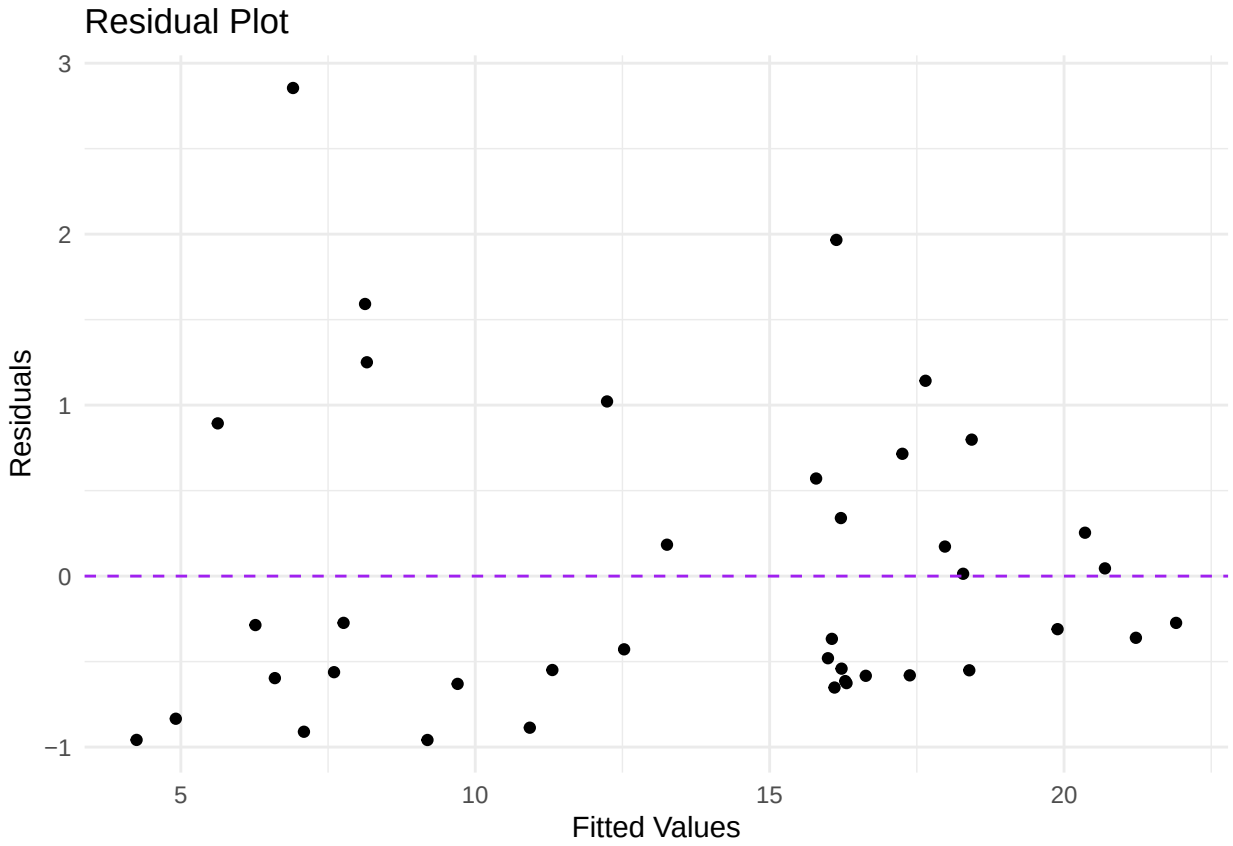
```
## colour.
## i This can happen when ggplot fails to infer the correct grouping structure in
##   the data.
## i Did you forget to specify a `group` aesthetic or to convert a numerical
##   variable into a factor?
```



(c)

Make a residual plot for this model. Do the assumptions appear to be met?

```
residuals <- resid(model)
fitted_values <- fitted(model)
ggplot(data1, aes(x = fitted_values, y = residuals)) +
  geom_point() +
  geom_hline(yintercept = 0, linetype = "dashed", color = "purple") +
  labs(x = "Fitted Values", y = "Residuals", title = "Residual Plot") +
  theme_minimal()
```




```
summary(model)
```

```
##
## Call:
## lm(formula = y ~ x1 + x2, data = data1)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -0.9585 -0.5865 -0.3356  0.3973  2.8548
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
## (Intercept)  1.31513    0.38769   3.392  0.00166 **
## x1           0.51481    0.04590  11.216 1.84e-13 ***
## x2           0.80692    0.02434  33.148  < 2e-16 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.9 on 37 degrees of freedom
## Multiple R-squared:  0.9724, Adjusted R-squared:  0.9709
## F-statistic: 652.4 on 2 and 37 DF,  p-value: < 2.2e-16
```

(d)

Make predictions for the remaining 20 data points in the file. How confident do you feel about these predictions?

```
predictions <- predict(model, newdata = data1)
predictions
```

```
##         1         2         3         4         5         6         7         8
## 16.221378  7.090400 16.133677  9.700421 17.254606 10.926653 20.694923  6.905222
##         9        10        11        12        13        14        15        16
##  9.188536  5.626640 16.057014 15.990263 20.356247 19.890290  8.128384 15.789193
##        17        18        19        20        21        22        23        24
## 18.286339 12.238483 12.528169 17.977308 17.380425 16.210499 17.647595 16.305805
##        25        26        27        28        29        30        31        32
##  4.914170 16.101788 13.256420 21.220813 16.633082  6.596613  4.248042  8.159388
##        33        34        35        36        37        38        39        40
## 11.309235  6.266295 18.431754 16.283969  7.601885 21.903629 18.390868  7.763580
```

12.5

Logarithmic transformation and regression: Consider the following regression:

$$\log(\text{weight}) = -3.8 + 2.1 \log(\text{height}) + \text{error},$$

with errors that have standard deviation 0.25. Weights are in pounds and heights are in inches.

(a)

Fill in the blanks: Approximately 68% of the people will have weights within a factor of *e^(-0.25)* and *e^0.25* of their predicted values from the regression.

(b)

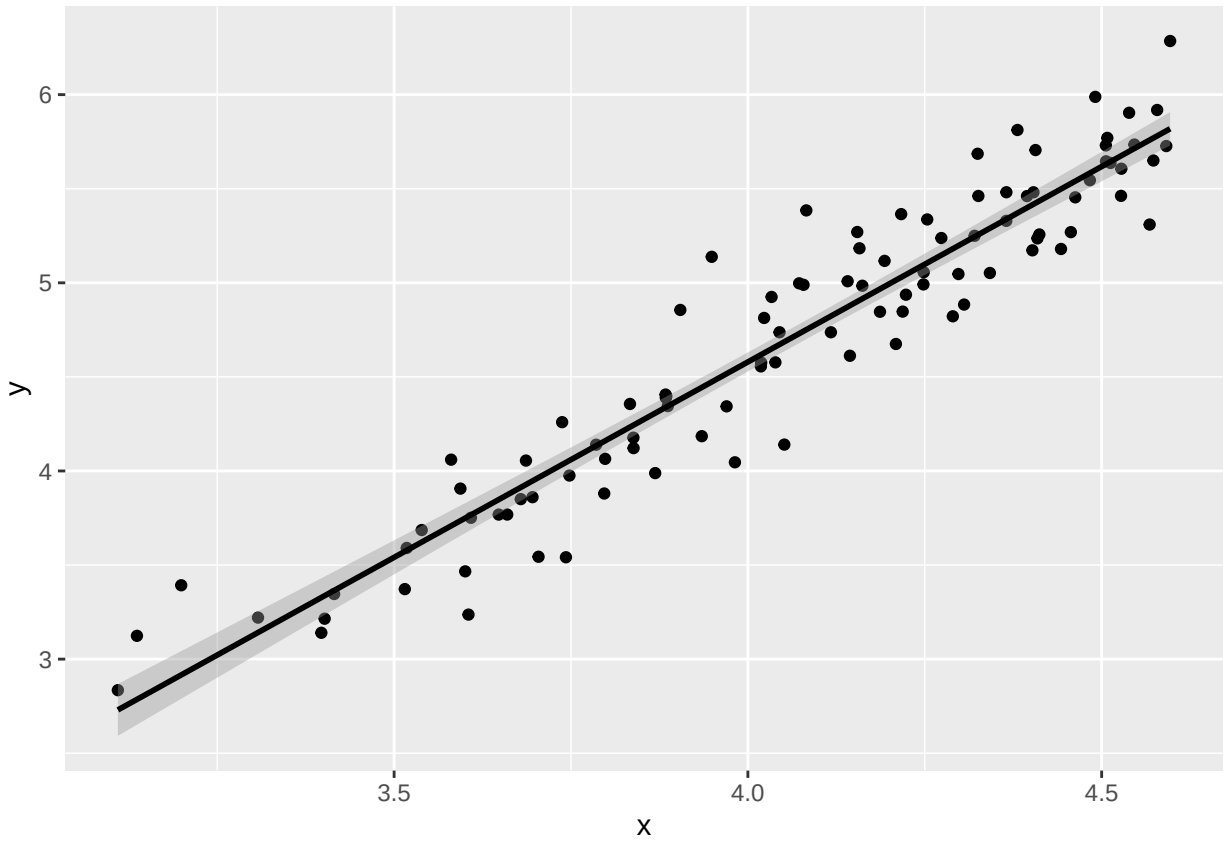
Using pen and paper, sketch the regression line and scatterplot of log(weight) versus log(height) that make sense and are consistent with the fitted model. Be sure to label the axes of your graph.

```
set.seed(100)
height <- runif(100, min = 20,max = 100)
error <- rnorm(100, mean = 0,sd=0.25)
log_weight <- -3.8+2.1*log(height)+error
data2 <- data.frame(x=log(height), y=log_weight)
model2 <- lm(y~x, data2)
print(model2)
```

```
##
## Call:
## lm(formula = y ~ x, data = data2)
##
## Coefficients:
## (Intercept)            x
##      -3.729        2.077
```

```
ggplot(data2, aes(x=x,y=y))+
  geom_point()+
  geom_smooth(method = "lm", color = "black")+
  labs(x="x", y="y")
```

```
## `geom_smooth()` using formula = 'y ~ x'
```



12.6

Logarithmic transformations: The folder `Pollution` contains mortality rates and various environmental factors from 60 US metropolitan areas. For this exercise we shall model mortality rate given nitric oxides, sulfur dioxide, and hydrocarbons as inputs. this model is an extreme oversimplication, as it combines all sources of mortality and does not adjust for crucial factors such as age and smoking. We use it to illustrate log transformation in regression.

(a)

Create a scatterplot of mortality rate versus level of nitric oxides. Do you think linear regression will fit these data well? Fit the regression and evaluate a residual plot from the regression.

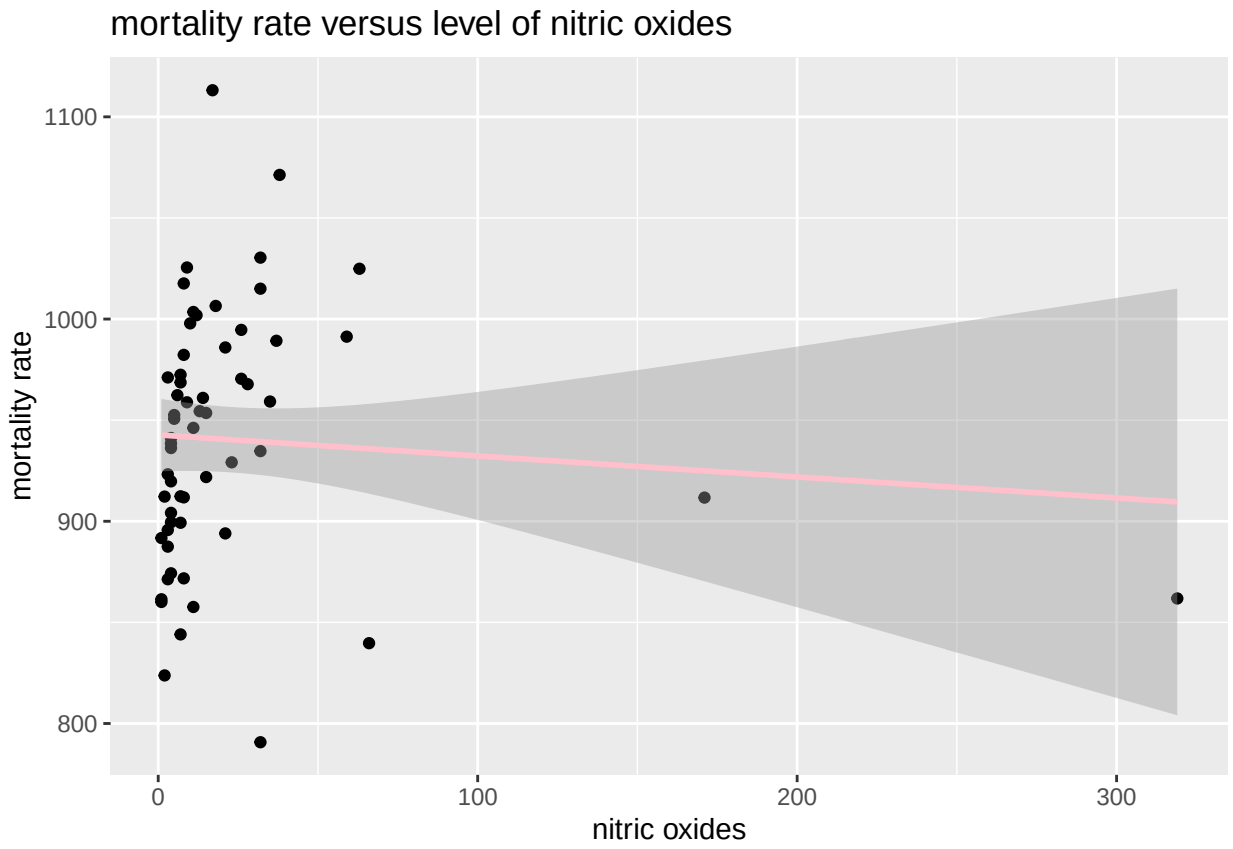
```
data<-read.csv("pollution.csv",header = TRUE)
model<-lm(mort~nox, data)
print(model)
```

```
##
## Call:
## lm(formula = mort ~ nox, data = data)
##
## Coefficients:
## (Intercept)          nox
##    942.7115      -0.1039
```

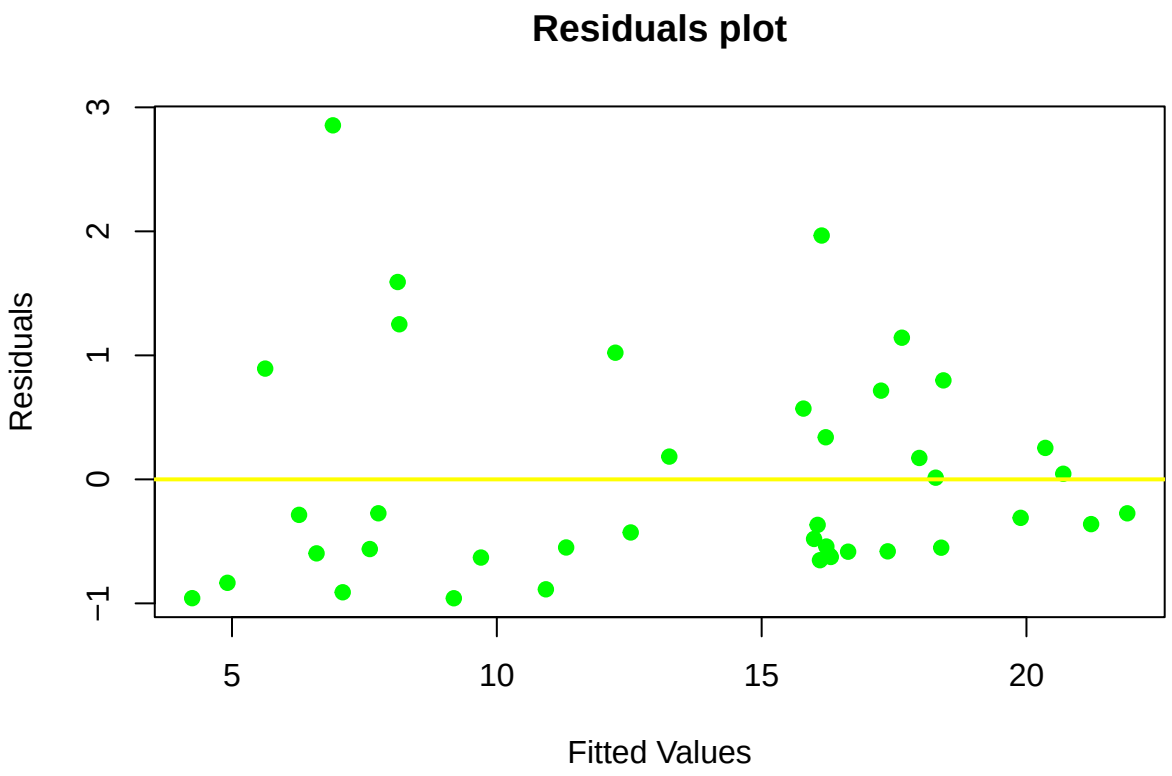
```
ggplot(data, aes(x=nox, y=mort))+
  geom_point()+
  geom_smooth(method = "lm", color="pink")+
```

```
  labs(title = "mortality rate versus level of nitric oxides", x="nitric oxides", y="mortality rate")
```

```
## `geom_smooth()` using formula = 'y ~ x'
```




```
predicted <- predict(model)
resid <- data$final - predicted
plot(fitted_values, residuals,
     main = "Residuals plot",
     xlab = "Fitted Values",
     ylab = "Residuals",
     pch = 19,
     col = "green")
abline(h = 0, col = "yellow", lwd = 2)
```



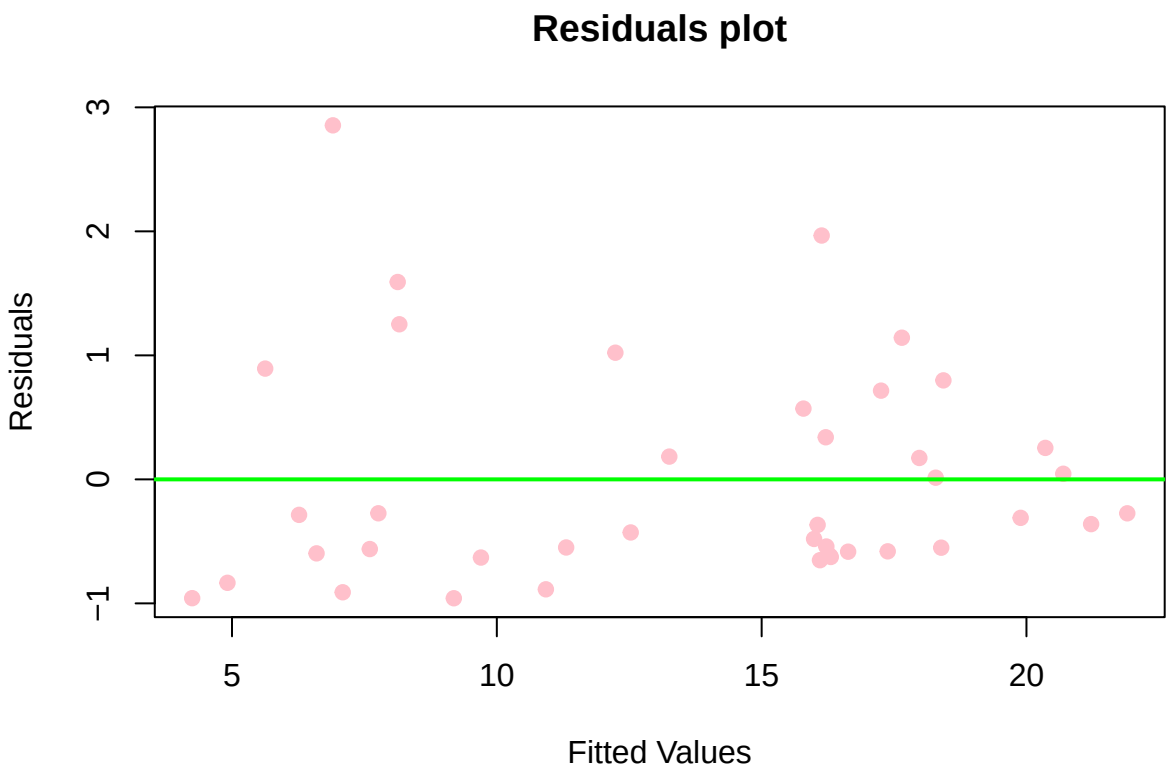
(b)

Find an appropriate reansformation that will result in data more appropriate for linear regression. Fit a regression to the transformed data and evaluate the new residual plot.

```
model2<-lm(mort~log(nox), data)
ggplot(data, aes(x=log(nox), y=mort))+
  geom_point()+
  geom_smooth(method = "lm", color="purple")+
  labs(title = "NEW mortality rate versus level of nitric oxides", x="nitric oxides", y="mortality rate
```

```
## `geom_smooth()` using formula = 'y ~ x'
```


```
predicted <- predict(model2)
resid <- data$final - predicted
plot(fitted_values, residuals,
     main = "Residuals plot",
     xlab = "Fitted Values",
     ylab = "Residuals",
     pch = 19,
     col = "pink")
abline(h = 0, col = "green", lwd = 2)
```



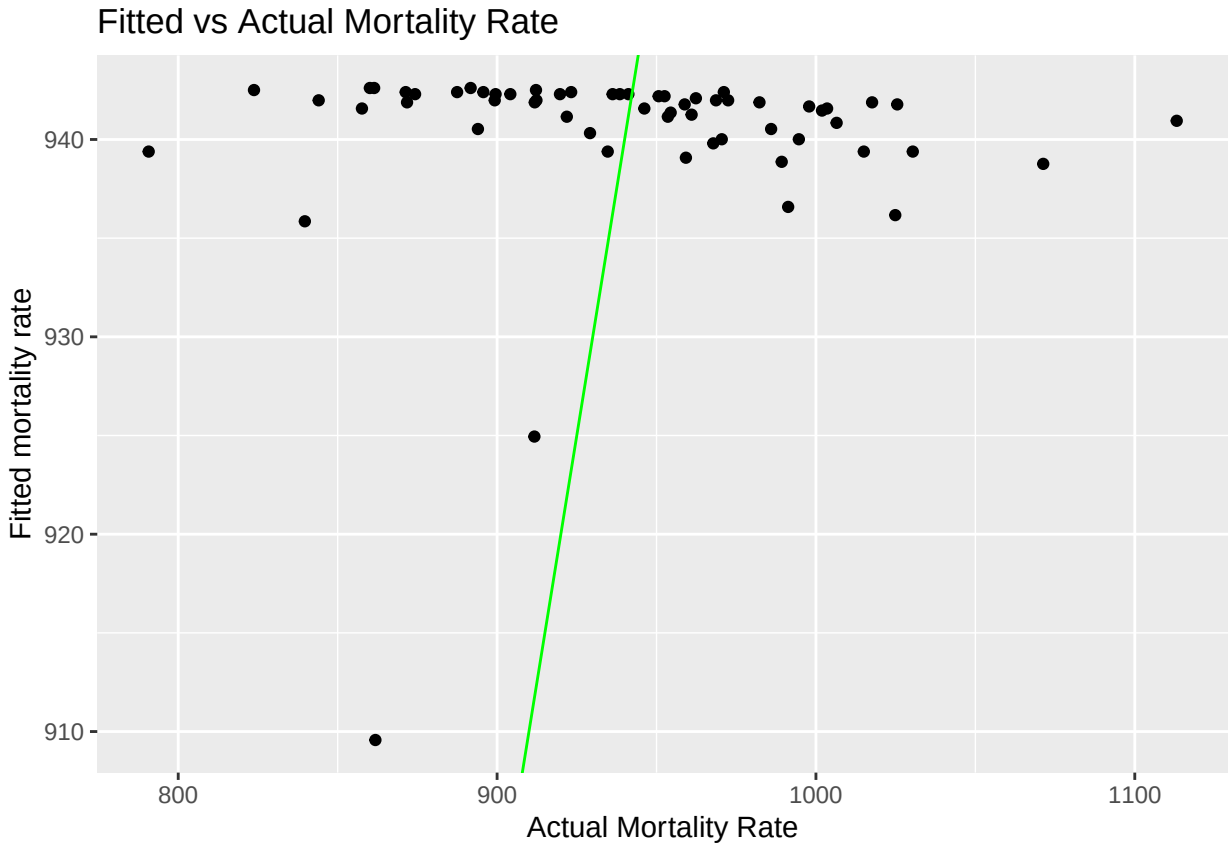
(c)

Interpret the slope coefficient from the model you chose in (b) #The coefficient of log(nox) shows the elastic relationship between nitric oxide levels and mortality rates.

(d)

Now fit a model predicting mortality rate using levels of nitric oxides, sulfur dioxide, and hydrocarbons as inputs. Use appropriate transformation when helpful. Plot the fitted regression model and interpret the coefficients.

```
data$fitted_values <- predict(model)
ggplot(data, aes(x = mort, y = fitted_values)) +
  geom_point() +
  geom_abline(slope = 1, intercept = 0, color = "green") +
  labs(x = "Actual Mortality Rate", y = "Fitted mortality rate",
       title = "Fitted vs Actual Mortality Rate")
```




```
#The slope coefficient gives the elasticity of mortality rates with respect to nitric oxide levels, ind
```

(e)

Cross validate: fit the model you chose above to the first half of the data and then predict for the second half. You used all the data to construct the model in (d), so this is not really cross validation, but it gives a sense of how the steps of cross validation can be implemented.

```
subdata1 <- data[1:30, ]
model_train <- lm(mort ~ log(nox) + log(so2) + log(hc), data = data)
subdata2 <- data1[31:60, ]
predicted <- predict(model_train, data=subdata2)
print(predicted)
```

```
##        1        2        3        4        5        6        7        8
##  956.4509  983.2276  967.9473  918.0334  984.3172  982.5561 1001.2349  919.4739
##        9       10       11       12       13       14       15       16
##  946.7780  931.3324  919.4187  976.2999  986.9578  954.7198  905.3308  924.9652
##       17       18       19       20       21       22       23       24
##  935.7793  923.1217  962.6599  896.6405  924.9652  923.9159  888.8319  904.6360
##       25       26       27       28       29       30       31       32
##  916.1860  932.6360  910.6411  941.8463  947.5820  989.0778  979.8839  862.0146
##       33       34       35       36       37       38       39       40
##  964.3181  931.5151  967.8177  934.0775  918.5888  957.3131  993.9639 1010.2505
##       41       42       43       44       45       46       47       48
##  916.4275  937.1646  980.2446  956.2903  928.3318  935.8043  919.8389  948.4117
##       49       50       51       52       53       54       55       56
##  873.3929  902.0620  948.8509  937.5616  938.9427  901.3836  934.5592  885.9661
```

```
##        57        58        59        60
##  957.5933  902.0114  972.8950  966.4670
```

12.7

Cross validation comparison of models with different transformations of outcomes: when we compare models with transformed continuous outcomes, we must take into account how the nonlinear transformation warps the continuous outcomes. Follow the procedure used to compare models for the mesquite bushes example on page 202.

(a)

Compare models for earnings and for log(earnings) given height and sex as shown in page 84 and 192. Use `earnk` and `log(earnk)` as outcomes.

```
library(rstanarm)
```

```
## Loading required package: Rcpp
```

```
## This is rstanarm version 2.32.1
```

```
## - See https://mc-stan.org/rstanarm/articles/priors for changes to default priors!
```

```
## - Default priors may change, so it's safest to specify priors, even if equivalent to the defaults.
```

```
## - For execution on a local, multicore CPU with excess RAM we recommend calling
```

```
##   options(mc.cores = parallel::detectCores())
```

```
earnings<-read.csv("earnings.csv")
earnings
```

```
##      height weight male   earn   earnk ethnicity education mother_education
## 1        74    210    1  50000  50.000     White        16               16
## 2        66    125    0  60000  60.000     White        16               16
## 3        64    126    0  30000  30.000     White        16               16
## 4        65    200    0  25000  25.000     White        17               17
## 5        63    110    0  50000  50.000     Other        16               16
## 6        68    165    0  62000  62.000     Black        18               18
## 7        63    190    0  51000  51.000     White        17               17
## 8        64    125    0   9000   9.000     White        15               15
## 9        62    200    0  29000  29.000     White        12               12
## 10       73    230    1  32000  32.000     White        17               17
## 11       72    176    1   2000   2.000  Hispanic        15               15
## 12       72    265    1  35000  35.000     White        NA               99
## 13       72    160    1  27000  27.000     White        12               12
## 14       70    225    1   6530   6.530     White        16               16
## 15       63    107    0      0   0.000     White        14               14
## 16       68    170    1  30000  30.000     White        11               NA
## 17       68    144    1  12000  12.000     White        12               12
## 18       71    193    1  15000  15.000     White        18               18
## 19       65    250    0  12000  12.000     White        12               12
## 20       66    130    0  20000  20.000     White        11               11
## 21       60    100    0      0   0.000     White        12               12
## 22       65    123    0  25000  25.000     White        12               12
## 23       66    130    0  22000  22.000     White        16               16
## 24       65    120    0  25000  25.000     White        16               16
## 25       71    160    1  20000  20.000     White        14               14
```

```
## 26       68    172    1  17000  17.000     White        12                12
## 27       68    135    0  40000  40.000     White        14                14
## 28       70    180    1  44000  44.000     White        13                13
## 29       67    112    0      0   0.000     White         9                 9
## 30       64    240    0   7000   7.000     Black        12                12
## 31       73    190    1  53000  53.000     Black        13                13
## 32       64    145    0   5000   5.000     Black        12                NA
## 33       62    120    0   5000   5.000     White        13                13
## 34       63    114    0  14000  14.000     White        14                14
## 35       69    170    1  45000  45.000     White        14                14
## 36       67    166    1   5500   5.500     White        14                14
## 37       66    124    0  40000  40.000     White        12                12
## 38       72    175    1  34000  34.000     White        12                12
## 39       63    120    0   5000   5.000     Black        12                12
## 40       63    184    0  10000  10.000     Black        12                12
## 41       68    150    1      0   0.000     White        11                11
## 42       64    150    0  27000  27.000     White        16                16
## 43       73    220    1  62000  62.000     White        14                14
## 44       67    220    0  15000  15.000     White        12                12
## 45       60     NA    0      0   0.000     White        12                12
## 46       72    180    1  50000  50.000     White        16                16
## 47       68    158    0      0   0.000     White        12                NA
## 48       77    255    1  41000  41.000     White        16                16
## 49       64    150    0      0   0.000     White        10                10
## 50       64    130    0  15000  15.000     White        14                14
## 51       64     NA    0  25000  25.000     White        12                12
## 52       63    146    0  25000  25.000     White        16                16
## 53       72    185    1  75000  75.000     White        17                17
## 54       68    180    1  27000  27.000     White        17                17
## 55       64    135    0  12000  12.000     White        12                12
## 56       70    168    1  40000  40.000     White        12                12
## 57       61    138    0   7500   7.500     White        14                14
## 58       65    115    0  25000  25.000     White        12                12
## 59       67    135    0  30000  30.000     Black        14                14
## 60       65    150    0  21000  21.000     White        12                12
## 61       64    120    0  27000  27.000     White        14                14
## 62       73    165    1  45000  45.000     White        16                16
## 63       67    130    0   3000   3.000     White        15                15
## 64       65    170    0  25000  25.000     White        12                12
## 65       65    140    0  24000  24.000     White        12                12
## 66       67    145    0  32000  32.000     White        18                18
## 67       68    145    0  10000  10.000     White        17                17
## 68       70    150    0      0   0.000     White        12                12
## 69       60    100    0  11000  11.000  Hispanic        12                12
## 70       65    105    0  18700  18.700     White        13                13
## 71       62    120    0  20000  20.000     White        12                12
## 72       72    160    1   3500   3.500     White        10                10
## 73       67    206    1  13000  13.000     Black         8                 8
## 74       70    170    1  25000  25.000     White        12                12
## 75       70    183    1  21000  21.000     White        17                17
## 76       68    150    0  34000  34.000     White        17                17
## 77       66    115    0   5000   5.000     Black        12                12
## 78       60    120    0   6000   6.000     White        12                12
## 79       71    195    1  17000  17.000     White        12                12
```

```
## 80       71    140    1  35000  35.000     White        12              NA
## 81       73    180    1   4000   4.000     White        13              13
## 82       64    115    0   5000   5.000     White        16              16
## 83       68    150    0  14000  14.000     White        14              14
## 84       66    118    0  10000  10.000     White        12              12
## 85       69    155    1  25000  25.000     White        16              16
## 86       63    126    0      0   0.000     White         8              NA
## 87       70    130    1  87000  87.000     White        18              18
## 88       63    130    0  16000  16.000     White        14              14
## 89       66    123    0      0   0.000     Black        13              13
## 90       66    110    0  15000  15.000     White        12              12
## 91       64    200    0      0   0.000     White        12              NA
## 92       62    130    1  16000  16.000  Hispanic        14              14
## 93       66    190    0  25000  25.000     White        18              18
## 94       64    116    0  16500  16.500     White        14              14
## 95       68    170    1  15000  15.000     White        12              12
## 96       64    190    0   4000   4.000     White         9               9
## 97       67    342    0   3840   3.840     White         9               9
## 98       60     90    0   5000   5.000     White         6              NA
## 99       71    200    1  22000  22.000     White        12              12
## 100      60    135    0    200   0.200     White        16              16
## 101      66    140    0  26000  26.000     White        16              16
## 102      66    120    0   2500   2.500     White        15              15
## 103      65    125    0  17000  17.000     White        14              14
## 104      63    112    0  25000  25.000     White        16              16
## 105      70    130    0   8000   8.000     White        13              13
## 106      68    215    1  25000  25.000     White        12              NA
## 107      65     98    0      0   0.000     White        13              13
## 108      66    138    0  12000  12.000     White        13              13
## 109      62    123    0  10000  10.000     White        12              12
## 110      60    105    0   5000   5.000     White         8               8
## 111      76    220    1 100000 100.000     White        16              16
## 112      66    140    0  10000  10.000     White        15              15
## 113      64    173    0      0   0.000     White        14              14
## 114      72    185    1  15000  15.000     White        12              12
## 115      66    190    0  45000  45.000     Other        12              12
## 116      69    190    1  15000  15.000     Black        11              NA
## 117      67    115    0   2400   2.400  Hispanic         8               8
## 118      68    150    1  30000  30.000  Hispanic        12              12
## 119      70    150    1  30000  30.000     White        12              12
## 120      62    125    0  10000  10.000     White        12              12
## 121      63    137    0   5000   5.000     White        13              13
## 122      66    125    0  12000  12.000     White        13              13
## 123      70     80    0  20000  20.000     White        10              10
## 124      68    160    0  20000  20.000     White        12              12
## 125      70    160    1  20000  20.000     White        14              14
## 126      65    125    0  25000  25.000     White        18              18
## 127      68    110    0   5000   5.000     White         8              NA
## 128      66    133    0      0   0.000     White        12              12
## 129      71    180    1  25000  25.000     White        18              18
## 130      66    135    0   1200   1.200     White        12              12
## 131      62    130    0   5000   5.000     White        12              12
## 132      68    120    0    700   0.700     White        16              16
## 133      70    150    1  20000  20.000     White        16              16
```

```
## 134      61    110    0  10000  10.000  Hispanic        12                12
## 135      63    128    0  30000  30.000     White        12                12
## 136      72    185    1  25000  25.000  Hispanic         8                NA
## 137      64    200    0  40000  40.000     White        14                14
## 138      67    155    1  25000  25.000     White        12                NA
## 139      66    135    0  45000  45.000     White        18                18
## 140      61    130    0  10000  10.000     White        17                17
## 141      69    132    0  60000  60.000     White        18                18
## 142      62    103    0  45000  45.000     White        12                12
## 143      64    150    0      0   0.000     White        12                NA
## 144      68    130    0  18000  18.000     White        12                12
## 145      60    128    0  15000  15.000     White        12                NA
## 146      71    155    1  50000  50.000     White        18                18
## 147      64    155    0  16040  16.040     White        12                NA
## 148      67    140    0  15000  15.000     Black        14                14
## 149      69    160    1  10000  10.000     White        17                17
## 150      67    185    0  33000  33.000     White        13                13
## 151      68    130    0  18000  18.000     White        12                12
## 152      63    105    0  15000  15.000     White        12                12
## 153      71    145    1  21000  21.000     White        12                NA
## 154      64    124    0  21000  21.000     Black        17                17
## 155      68    170    1  37000  37.000     White        11                11
## 156      68    126    0  38000  38.000     White        17                17
## 157      66    142    0  17000  17.000  Hispanic        14                14
## 158      66    130    0      0   0.000     White        12                12
## 159      66    130    0      0   0.000     Other        16                16
## 160      60    100    0  15000  15.000     White        16                16
## 161      77    210    1  32000  32.000     White        16                16
## 162      67    160    0  27500  27.500     White        12                12
## 163      66    140    1  15000  15.000     White        12                NA
## 164      62    120    0  16500  16.500     White        12                12
## 165      64    118    0      0   0.000     White        17                17
## 166      72    175    0      0   0.000     White        12                12
## 167      67    150    0  25000  25.000     White        18                18
## 168      61    116    0  27000  27.000     White        18                18
## 169      64    220    0   5000   5.000     White        12                NA
## 170      62    125    0  70000  70.000     White        16                16
## 171      63    150    0   5000   5.000     White        12                12
## 172      68    135    1   5000   5.000     White        16                16
## 173      69    158    1  62000  62.000     Other        18                18
## 174      64    160    0  15000  15.000     Black        12                12
## 175      64    158    0  20000  20.000     White        15                15
## 176      72    185    1   4000   4.000     White        15                15
## 177      72    172    1  75000  75.000     White        12                12
## 178      64    130    0  60000  60.000     White        16                16
## 179      61    150    0   5000   5.000     White        13                13
## 180      74    230    1  30000  30.000     White        12                12
## 181      70    165    1  70000  70.000     White        14                14
## 182      64    115    0   5000   5.000     White        16                16
## 183      71    195    1  50000  50.000     White        16                16
## 184      63    120    0  44000  44.000     White        12                12
## 185      73    215    1  40000  40.000     White        18                18
## 186      64    133    0  30000  30.000     White        14                14
## 187      73    200    1  15000  15.000     Black        14                14
```

```
## 188      63    150    0  35000  35.000     White        15               15
## 189      62    130    0      0   0.000     White        16               16
## 190      62    140    0  10000  10.000     White        16               16
## 191      70    170    0  23000  23.000     White        17               17
## 192      62    115    0      0   0.000     White        12               12
## 193      71    175    1  45000  45.000     White        17               17
## 194      71    170    1  15000  15.000     White        14               14
## 195      70    169    0   4000   4.000     White        14               14
## 196      67    160    1  17000  17.000     White        14               14
## 197      64    130    0  30000  30.000     White        12               12
## 198      67    112    0  27500  27.500     White        12               12
## 199      62    140    0   5688   5.688     White         8                8
## 200      62    137    0  18000  18.000  Hispanic        13               13
## 201      67    170    1  35000  35.000     White        14               14
## 202      66    160    0  45000  45.000     White        17               17
## 203      68    185    1  43000  43.000     Black        13               13
## 204      62    140    0  32000  32.000     Black        14               14
## 205      62    118    0  25000  25.000     Black        12               12
## 206      66    148    0      0   0.000     Black         5                5
## 207      68    165    0  10000  10.000     Black        18               18
## 208      65    130    0  50000  50.000  Hispanic        12               12
## 209      74    160    1  15000  15.000     White        12               12
## 210      74    185    1  60000  60.000     White        13               13
## 211      71    175    1  30000  30.000     White        15               15
## 212      68    150    0  21000  21.000     Other        12               12
## 213      62    110    0   2400   2.400     White        16               16
## 214      68    240    0   5000   5.000     White        10               10
## 215      62    150    0  35000  35.000     Black        15               15
## 216      66    136    0   1000   1.000     White        15               15
## 217      68    170    1  27000  27.000     White        12               12
## 218      60    115    0   6600   6.600  Hispanic        14               14
## 219      68    164    1  16000  16.000     White         8                8
## 220      72    185    1  90000  90.000     White        12               12
## 221      66    185    0   8000   8.000     White        12               12
## 222      68    150    1  20000  20.000     White        10               NA
## 223      68    130    0  15000  15.000     White        12               12
## 224      69    180    0  12000  12.000     White        12               12
## 225      63    170    0  25000  25.000     White         9                9
## 226      64    128    0  24000  24.000     White        16               16
## 227      65    175    0  20000  20.000     White        14               14
## 228      61    128    0  19000  19.000     White        12               12
## 229      71    180    1  25000  25.000     White         8               NA
## 230      72    172    1  10000  10.000     White        12               12
## 231      66    125    0  40000  40.000     White        16               16
## 232      69    175    1  62000  62.000     Black         8               NA
## 233      63    105    0  25000  25.000     Black        13               13
## 234      62     NA    0      0   0.000     White        10               10
## 235      60    145    0      0   0.000  Hispanic        10               10
## 236      62    138    0  10000  10.000     White         8               NA
## 237      68    160    1  25000  25.000     White        14               14
## 238      70    150    1  25000  25.000     White        12               12
## 239      71    165    1  25000  25.000     White        14               14
## 240      71    209    1  19000  19.000     White        16               16
## 241      68    210    1  44000  44.000     White        16               16
```

```
## 242    66    145    0      0   0.000    White        12              12
## 243    63    140    0      0   0.000    White        18              18
## 244    60    105    0  15000  15.000    White        14              14
## 245    63    137    0  17000  17.000    White        12              12
## 246    68    150    1  24000  24.000    White        12              12
## 247    70    150    1  50000  50.000    White        16              16
## 248    64    170    0  23000  23.000    White        12              12
## 249    70    143    1  13000  13.000    White        12              12
## 250    66    178    0  20000  20.000    Black        NA              NA
## 251    66     NA    0  45000  45.000    White        12              12
## 252    68    180    1  65000  65.000    White        16              16
## 253    61    135    0   7000   7.000    White        12              12
## 254    68    180    1  40000  40.000    White        18              18
## 255    66    145    0  15000  15.000    White        17              17
## 256    70    164    1  20000  20.000    White        16              16
## 257    68    150    1  25000  25.000    White         6              NA
## 258    71    175    1  20000  20.000    White        12              12
## 259    63    175    1   5000   5.000    White         9              NA
## 260    65    195    0  20000  20.000    White        12              12
## 261    66    150    0  25000  25.000    White        12              12
## 262    64    110    0  15000  15.000    White        14              14
## 263    70    195    1  49000  49.000    White        13              13
## 264    70    165    1  25000  25.000    White         8               8
## 265    64    102    0      0   0.000    White        12              NA
## 266    63    150    0      0   0.000    White        16              16
## 267    62    158    0  25000  25.000    White        12              12
## 268    65    160    0  30000  30.000    White        12              12
## 269    66    142    0  25000  25.000    White        12              12
## 270    60    125    0  35000  35.000    White        16              16
## 271    66    128    0  11000  11.000    White        14              14
## 272    61    160    0  16000  16.000    White        15              15
## 273    72    145    1  35000  35.000    White        14              14
## 274    74    240    1 125000 125.000    White        18              18
## 275    67    185    0  23000  23.000    White        12              12
## 276    66    170    0  17000  17.000    White        16              16
## 277    62    125    0      0   0.000    White        13              13
## 278    62    115    0  27000  27.000    White        12              12
## 279    72    180    1  70000  70.000    White        14              14
## 280    65    170    0  35000  35.000    White        15              15
## 281    60    150    0  10000  10.000    White        12              12
## 282    64    107    0  15000  15.000    White        13              NA
## 283    62    135    0  35000  35.000    White        15              15
## 284    66    130    0  15000  15.000    White        12              12
## 285    64    250    0  12000  12.000    White        12              12
## 286    71    135    1   8000   8.000    White        12              NA
## 287    65    130    0   8000   8.000    White        12              12
## 288    73    225    1  35000  35.000    White        18              18
## 289    69    175    1  45000  45.000    White        11              NA
## 290    64    175    0      0   0.000    White        12              12
## 291    64    118    0   5000   5.000    White        12              12
## 292    64    123    0  15000  15.000    White        14              14
## 293    61    136    0  15000  15.000    White        12              12
## 294    67    240    0  24000  24.000    White        18              18
## 295    62    189    0  25000  25.000    White        13              13
```

```
## 296      63    165    0  25000  25.000     Black        14                14
## 297      67    105    1  20000  20.000     Other        10                10
## 298      68    140    0  24000  24.000     White        12                12
## 299      72    165    1  44000  44.000     White        16                16
## 300      70    187    1  69000  69.000     White        12                12
## 301      70    188    1  62000  62.000     White        18                18
## 302      60    145    0  25000  25.000     Black        15                15
## 303      67    170    1  32000  32.000     Black        14                14
## 304      63    125    0  20000  20.000     Black        12                12
## 305      66    112    0  32000  32.000     Other        18                18
## 306      66    135    0  25000  25.000     White        17                17
## 307      71    185    1 170000 170.000     White        18                18
## 308      66    185    0      0   0.000     Black        11                11
## 309      67    170    1  35000  35.000     White        16                16
## 310      76    194    1  40000  40.000     Black        16                16
## 311      69    155    1  33000  33.000     White        14                14
## 312      65    145    0  18000  18.000     White        12                12
## 313      62    120    0  30000  30.000     White        13                13
## 314      62    112    0  26000  26.000     White        12                12
## 315      62    120    0   5000   5.000     White        12                12
## 316      69    163    0   5000   5.000     White        12                12
## 317      62    130    0  20000  20.000     White        16                16
## 318      61    105    0  17000  17.000     White        12                12
## 319      65    138    0  32000  32.000     White        14                14
## 320      72    170    1  15000  15.000     White        14                14
## 321      66    120    0      0   0.000     White        17                17
## 322      72    248    1  50000  50.000     White        14                14
## 323      64    138    0   8000   8.000     White        12                NA
## 324      71    190    1  40000  40.000     White        14                14
## 325      72    185    1  40000  40.000     White        15                15
## 326      66    130    1  32750  32.750     White        12                12
## 327      68    170    1   5000   5.000     White        12                12
## 328      65    185    0  20000  20.000     White        14                14
## 329      65    128    0  36000  36.000     Black        15                15
## 330      62    170    0   6000   6.000     White        12                NA
## 331      66    160    0  12000  12.000  Hispanic        14                14
## 332      67    150    1  60000  60.000     White        14                14
## 333      64    135    0  40000  40.000     White        13                13
## 334      74    185    1   5000   5.000  Hispanic        13                13
## 335      63    117    0  43000  43.000     White        12                12
## 336      67    150    0  45000  45.000     White        16                16
## 337      68    190    0   6000   6.000     White        18                18
## 338      64    154    0   8000   8.000     Other        10                NA
## 339      64    170    0  20000  20.000     Black        13                13
## 340      66    165    1  17000  17.000     Black        12                12
## 341      65    112    0   2000   2.000     White        12                NA
## 342      65    180    1  65000  65.000     White        12                12
## 343      72    180    1  50000  50.000     White        12                12
## 344      68    128    0      0   0.000     White        11                11
## 345      63    170    0      0   0.000     White        11                11
## 346      70    220    1  15000  15.000     White        13                NA
## 347      68    140    0  11000  11.000     White        12                12
## 348      74    190    1  35000  35.000     White        18                18
## 349      63    185    1  27000  27.000     White        12                12
```

```
## 350      64    135    0   3500   3.500     White        12               12
## 351      65    132    0  15000  15.000     White         7                7
## 352      68    180    1  42000  42.000     White        12               12
## 353      61    200    0  15000  15.000     White        12               12
## 354      67    130    0  20000  20.000     White        18               18
## 355      67    125    0  15000  15.000     White        12               12
## 356      73    207    1  10000  10.000     White        12               12
## 357      62    105    0      0   0.000     White        12               NA
## 358      70    176    1   6000   6.000     White         8                8
## 359      71    200    1  25000  25.000     White        12               NA
## 360      65    200    0  17000  17.000  Hispanic        16               NA
## 361      69    148    1  35000  35.000  Hispanic        16               16
## 362      77    203    1  28000  28.000     White        14               14
## 363      68    165    0  15000  15.000     White        12               NA
## 364      62    110    0  20000  20.000     White        17               17
## 365      64    128    0  20000  20.000     White        12               12
## 366      67    150    1  10500  10.500  Hispanic        12               12
## 367      70    165    1  13000  13.000     White        16               16
## 368      62    123    0  10000  10.000     White        12               12
## 369      63    170    0   3000   3.000     White        12               12
## 370      62    116    0  24000  24.000     White        14               14
## 371      63    117    0      0   0.000     White        17               17
## 372      69    160    0  17000  17.000     White        13               13
## 373      64    122    0  11000  11.000     White        12               12
## 374      64    154    0      0   0.000     White        14               14
## 375      69    185    0  32000  32.000     White        14               14
## 376      59     95    0  17000  17.000     White        15               15
## 377      61    115    0  15000  15.000     White        16               16
## 378      60    125    0  25000  25.000     White        12               12
## 379      72    225    1 136500 136.500     White        12               12
## 380      66     NA    0   3000   3.000     Other        12               12
## 381      63    160    0  15000  15.000     White         8               NA
## 382      65    150    0      0   0.000     White        12               12
## 383      70    200    1  25000  25.000     White        18               18
## 384      72    250    1   5000   5.000     White        14               14
## 385      62    125    0   2100   2.100     Black        12               12
## 386      70    148    1  15000  15.000     Black        10               10
## 387      60    120    0  15000  15.000     White        13               NA
## 388      66    140    0  15000  15.000     Black        12               12
## 389      64    160    1  15000  15.000  Hispanic        12               12
## 390      71    180    1  15000  15.000     White        16               16
## 391      73    250    1   5000   5.000     Black        12               12
## 392      75    180    1   3192   3.192     Black        11               11
## 393      62    110    0  15000  15.000     Other        12               12
## 394      63    123    0  17000  17.000     White        17               17
## 395      65    150    0  30000  30.000     White        13               13
## 396      70    135    1  15000  15.000     White        12               12
## 397      64    110    0   5000   5.000     White        16               16
## 398      68    170    0  24000  24.000     White        16               16
## 399      65    154    0  10000  10.000     White        14               14
## 400      69    150    1  50000  50.000     White         8                8
## 401      64    170    0  15000  15.000     White        11               NA
## 402      72    168    1  50000  50.000     White        16               16
## 403      69    160    1 136500 136.500     White        12               12
```

```
## 404    64    150    0  20000  20.000    White       17              17
## 405    63    108    0  30000  30.000 Hispanic       18              18
## 406    68    122    0   5000   5.000    White       18              18
## 407    64    135    0      0   0.000    White       12              12
## 408    66    130    0      0   0.000    White       10              10
## 409    70    165    1  25000  25.000    White       12              12
## 410    63    134    0      0   0.000    White        5              NA
## 411    73    180    0  22000  22.000    White       14              14
## 412    75    200    1  27000  27.000    White       12              12
## 413    65    210    0   4000   4.000    White       12              12
## 414    64    140    0  35000  35.000    White       16              16
## 415    66    160    0  17500  17.500    White       17              17
## 416    66    112    0  16500  16.500    White       14              14
## 417    64    190    0  28000  28.000    White       16              16
## 418    66    140    0  52000  52.000    White       18              18
## 419    64    108    0  15000  15.000    White       16              16
## 420    63    140    0  19000  19.000    White       13              13
## 421    63    125    0      0   0.000    White       13              13
## 422    67    132    0   5000   5.000    Black       12              12
## 423    69    135    0  15000  15.000    White       12              12
## 424    73    170    1  27000  27.000    White       12              12
## 425    72    171    1  15000  15.000    White        8               8
## 426    66    196    0      0   0.000    White       12              12
## 427    72    195    1  15000  15.000    White       14              14
## 428    64    150    0  14500  14.500    White       12              NA
## 429    64    106    0  24000  24.000    White       13              13
## 430    61    115    0   5000   5.000    White       12              12
## 431    68    145    1  18000  18.000    White       15              15
## 432    62    118    0   4000   4.000    White       12              12
## 433    64    129    0  15000  15.000    White       12              NA
## 434    69     NA    0   4000   4.000    White       13              13
## 435    66    160    0  20000  20.000    White       15              15
## 436    60     98    0    700   0.700    White       12              12
## 437    64    123    0  25000  25.000    White       15              15
## 438    65    220    0  24000  24.000    White       12              12
## 439    60    125    0  15000  15.000    White       12              NA
## 440    76    215    1  27000  27.000    White       12              12
## 441    72     NA    0  12000  12.000    White       12              12
## 442    72    185    1 400000 400.000    White       12              12
## 443    62    145    0  22000  22.000    White       18              18
## 444    62    140    0  30000  30.000    White       13              13
## 445    70    160    1  45000  45.000    White       16              16
## 446    71    205    1  35000  35.000    White       12              12
## 447    74    195    1  20000  20.000    White       12              12
## 448    65    138    0  32000  32.000    White       16              16
## 449    63    160    0   6000   6.000    Other       12              12
## 450    67    150    0  12000  12.000    White       12              12
## 451    65    128    0      0   0.000    White       16              16
## 452    63    145    0  10000  10.000    White       12              12
## 453    65    126    0   1000   1.000    White       12              12
## 454    64    136    0  12000  12.000    White       15              NA
## 455    65    140    0  16000  16.000    White       12              12
## 456    63    125    0  15000  15.000    White       13              13
## 457    68    240    0      0   0.000    White       16              16
```

```
## 458    63    140    0  25000  25.000    White       16              16
## 459    70    135    0  25000  25.000    White       12              12
## 460    68    180    1  32000  32.000    White       12              12
## 461    67    165    1  35000  35.000    White       14              14
## 462    68    130    1  25000  25.000    White       12              12
## 463    66    135    0  25000  25.000    White       12              12
## 464    65    125    0   6000   6.000    White       12              12
## 465    69    165    1  80000  80.000    White       14              14
## 466    68    145    0  20000  20.000    White       14              14
## 467    66    187    0   1000   1.000    White       17              17
## 468    71    165    1  28000  28.000 Hispanic       13              13
## 469    64    125    1  26000  26.000 Hispanic       16              16
## 470    74    210    1  27000  27.000    White       12              12
## 471    62    112    0  18000  18.000    White       13              13
## 472    65    200    0   2000   2.000    White       12              12
## 473    69    195    1  20000  20.000    White       12              12
## 474    72    185    1  15000  15.000    Black       12              12
## 475    66    221    0   6000   6.000    White       16              16
## 476    70    180    1  15000  15.000    White       11              11
## 477    61    170    0  15000  15.000    White       12              NA
## 478    60    110    0      0   0.000    White       10              10
## 479    70    190    1   5000   5.000    White       12              12
## 480    73    130    0   5000   5.000    White       11              11
## 481    66    160    0  15000  15.000    White       12              12
## 482    57    130    0  45000  45.000 Hispanic       12              12
## 483    67    210    1  25000  25.000    White       11              11
## 484    73    180    1  12000  12.000    White       12              NA
## 485    65    115    0      0   0.000    White       18              18
## 486    62    120    0  15000  15.000    White       12              12
## 487    76    165    1  12000  12.000    White       12              12
## 488    70    175    1  30000  30.000    White       14              14
## 489    64    160    0      0   0.000    White       12              12
## 490    63    130    0   4000   4.000    Black       15              15
## 491    67    185    0   5000   5.000    Black       11              11
## 492    63    115    0  26000  26.000    Black       13              13
## 493    69    190    0   5000   5.000    White        9               9
## 494    67    200    0  15000  15.000    White        9               9
## 495    66    180    0  15000  15.000    Black       12              12
## 496    61    140    0   5000   5.000    Black       12              12
## 497    70    164    1  23000  23.000    Black       12              12
## 498    71    175    1  21000  21.000    White       12              12
## 499    65    135    0  25000  25.000    White       12              12
## 500    70    157    1  18000  18.000    White       16              NA
## 501    63    150    0   4000   4.000    White       13              13
## 502    64    116    0  23900  23.900    White       12              12
## 503    68    145    1  35000  35.000    White       12              NA
## 504    64    123    0  35000  35.000    White       18              18
## 505    67    140    1  26000  26.000    White       14              14
## 506    66    172    1  25000  25.000    White       16              16
## 507    68    118    0  23500  23.500    White       13              13
## 508    65    135    0  12000  12.000    White       12              12
## 509    67    140    0  15000  15.000    White       12              12
## 510    61    165    0  25000  25.000    White        8              NA
## 511    73    210    1   3000   3.000    White       17              17
```

```
## 512    63    200    0  15000  15.000     White        12              12
## 513    66    145    0  20000  20.000     White        12              12
## 514    64    200    0   6000   6.000     White        12              12
## 515    71    160    1  14000  14.000     White        12              12
## 516    63    123    0  15000  15.000     White        16              16
## 517    71    180    1 175000 175.000     White        16              16
## 518    63    118    0      0   0.000     White        12              12
## 519    64    128    0  62000  62.000     White        16              16
## 520    73    170    1   1000   1.000     White        18              18
## 521    65    140    0  10000  10.000     White        14              14
## 522    66    120    1  45000  45.000     White        13              NA
## 523    66    120    0  15000  15.000     White        12              NA
## 524    60    135    0  45000  45.000     White        15              15
## 525    68    165    0  50000  50.000     White        18              18
## 526    59    140    0  20000  20.000     White        13              13
## 527    70    215    1   5000   5.000     White        12              12
## 528    70    165    1  35000  35.000     White        16              16
## 529    72    152    1  40000  40.000     White        16              16
## 530    64    135    0  35000  35.000     White        12              12
## 531    72    200    1  25000  25.000     White        12              12
## 532    66    170    0  50000  50.000     White        16              16
## 533    70    205    1 100000 100.000     White        18              18
## 534    69    145    1  35000  35.000     White        13              NA
## 535    66    115    0      0   0.000     White        12              12
## 536    68    175    0  24000  24.000     White        12              12
## 537    64    120    0      0   0.000     White        12              12
## 538    67    140    0  25000  25.000     White        14              14
## 539    63    124    0      0   0.000     White        12              12
## 540    74    268    1  35000  35.000     White        17              17
## 541    73    230    1  38000  38.000     White        16              NA
## 542    70    200    1  35000  35.000     White        13              13
## 543    60    130    0  25000  25.000     White         8               8
## 544    67    160    1  30000  30.000     White        12              12
## 545    64    136    0   5000   5.000  Hispanic        12              12
## 546    67    160    1 148000 148.000     White        18              18
## 547    70    165    1  30000  30.000     White        12              12
## 548    64    120    0   6500   6.500     White        15              15
## 549    62     95    0   3000   3.000     White        16              16
## 550    72    175    1  25000  25.000     White        15              15
## 551    66    200    0      0   0.000     White         8              NA
## 552    69    230    1  23000  23.000     White        18              18
## 553    82    175    1  45000  45.000     White        18              NA
## 554    63    150    0  35000  35.000     White        16              16
## 555    68    155    1  40000  40.000     White        17              17
## 556    72    180    1  30000  30.000     White        14              14
## 557    63    210    0      0   0.000     White        14              14
## 558    63    210    0  14000  14.000     White        12              12
## 559    69     NA    0  15000  15.000     White        12              12
## 560    64    120    0  26000  26.000     White        18              18
## 561    71    195    0   8000   8.000     White        12              12
## 562    64    123    0  24000  24.000     Black        16              16
## 563    72    135    1      0   0.000     White         8               8
## 564    62    125    0      0   0.000     White        12              12
## 565    66    180    0      0   0.000     White        10              10
```

```
## 566    72    200    1  15000  15.000     White        12              NA
## 567    66    140    1   5124   5.124     White         8               8
## 568    61    110    0  10000  10.000     White        15              15
## 569    64    165    0   5000   5.000     White         7              NA
## 570    62    111    0   5000   5.000     Black        13              13
## 571    69    125    0      0   0.000     White        13              13
## 572    68    145    0  12000  12.000     White        16              16
## 573    66    155    0      0   0.000     White        12              12
## 574    68    180    1  50000  50.000     White        17              17
## 575    71    158    1 136500 136.500     White        16              16
## 576    64    125    0  23000  23.000     White        13              13
## 577    61    118    0      0   0.000     White        16              16
## 578    68    155    0  25000  25.000     White        12              12
## 579    63    174    0   5000   5.000     White         9              NA
## 580    65    138    0   5000   5.000     White        12              NA
## 581    64    110    0   5000   5.000     White        12              12
## 582    65    130    0  15000  15.000     White        12              12
## 583    64    125    0   5000   5.000     White        14              14
## 584    66    130    1  40000  40.000     Black        14              14
## 585    62    124    0   6000   6.000     Black        13              13
## 586    71    170    1 100000 100.000     White        18              18
## 587    65    160    0   5000   5.000     Black        16              16
## 588    64    190    0  45000  45.000     White         8              NA
## 589    60    120    0  25000  25.000     Black        12              12
## 590    66    156    1 110000 110.000     White        18              18
## 591    61    102    0  25000  25.000     White        13              13
## 592    72    145    1  41000  41.000  Hispanic        13              NA
## 593    70    145    0  25000  25.000     White        12              12
## 594    63    130    0  23000  23.000     White        13              13
## 595    68    132    0  15000  15.000     White        14              NA
## 596    63    120    0      0   0.000     White        12              12
## 597    70    165    1  21000  21.000     White        12              12
## 598    62    150    0   4000   4.000     White        12              12
## 599    71    280    1  25000  25.000     White        12              12
## 600    70    170    1  30000  30.000     White        18              18
## 601    64    159    0  14000  14.000     White        11              11
## 602    63    115    0   6000   6.000     White        12              12
## 603    65    144    0  14000  14.000     White        12              12
## 604    71    175    1  43000  43.000     White        12              12
## 605    62    128    0  25000  25.000     White        15              15
## 606    73    195    1  40000  40.000     White        12              12
## 607    64    135    0  25000  25.000     White        16              16
## 608    68    220    1  65000  65.000     White        17              17
## 609    76    210    1  16000  16.000     White        15              15
## 610    73    196    1 136500 136.500     White        16              16
## 611    70    160    1  87000  87.000     White        18              NA
## 612    66    120    0   8000   8.000     White        12              12
## 613    64     NA    0  20000  20.000     White        15              15
## 614    60     NA    0  14000  14.000     White        14              14
## 615    68    140    1  45000  45.000     White        12              12
## 616    61    180    0   8000   8.000     White        11              NA
## 617    65    185    0  15000  15.000     White        10              NA
## 618    66    130    1  12000  12.000     White        12              12
## 619    63    132    0   8000   8.000     White        14              14
```

```
## 620      63    105    0  16000  16.000     White        15              15
## 621      67     NA    0  25000  25.000     White        12              NA
## 622      74    170    1   6000   6.000     White        15              15
## 623      66    160    0 136500 136.500     White        12              NA
## 624      70    180    1  19000  19.000     White        12              12
## 625      68    155    0  21000  21.000     White        13              13
## 626      70    131    0  43000  43.000     White        18              18
## 627      69    190    1  35000  35.000     White        15              15
## 628      70    175    1   8000   8.000     White        10              NA
## 629      63    125    0  21000  21.000     White        14              14
## 630      65    135    0   5800   5.800     White        12              12
## 631      69    185    1  17000  17.000     White        12              NA
## 632      65    120    0  45000  45.000     White        12              NA
## 633      68    140    1  24000  24.000     White        14              14
## 634      62    140    0   5000   5.000     White        11              11
## 635      70    185    1  62000  62.000     White        11              11
## 636      66    150    0  11000  11.000     White        12              12
## 637      65    225    1  10000  10.000     White        13              NA
## 638      70    185    1  40000  40.000     White        14              14
## 639      66    163    0      0   0.000     Black        12              NA
## 640      70    170    1  40000  40.000     White        12              NA
## 641      66    165    0  24000  24.000     Black        14              NA
## 642      68    160    1  50000  50.000     Black        18              18
## 643      68     NA    0  25000  25.000     White        12              12
## 644      68    160    1  24000  24.000     White        16              16
## 645      68    120    1  20000  20.000     White        16              16
## 646      63    120    0  15000  15.000     White        16              16
## 647      70    195    1  60000  60.000     White        18              18
## 648      65    155    0  11000  11.000     White        13              13
## 649      64    115    0   5000   5.000     White        15              15
## 650      63    113    0 136500 136.500     White        17              17
## 651      69    180    1  87000  87.000     White        18              18
## 652      65    135    0  27000  27.000     White        16              16
## 653      77    241    1  89000  89.000     White        16              16
## 654      70    175    1  40000  40.000     White        14              14
## 655      64    120    0  15000  15.000     White        16              16
## 656      64    130    0   1000   1.000     White        14              14
## 657      62    180    0      0   0.000     White        12              12
## 658      64     NA    0  22000  22.000     White        12              12
## 659      64    184    0  12000  12.000     White         8               8
## 660      63    125    0  22000  22.000     White        16              16
## 661      58    180    0  40000  40.000     Black        12              12
## 662      73    182    1  25000  25.000     Black        10              NA
## 663      66    182    0      0   0.000     White        12              12
## 664      64    120    0  62000  62.000     White        16              16
## 665      62    150    0  40000  40.000     White        16              16
## 666      61    123    0      0   0.000     White        13              13
## 667      64    113    0  35000  35.000  Hispanic        14              14
## 668      64    119    0   7000   7.000     White        12              12
## 669      70    190    1  25000  25.000     White        14              14
## 670      62    118    0  14000  14.000     White        12              12
## 671      62    120    0   5000   5.000     White        12              12
## 672      64    150    0  15000  15.000     White        12              12
## 673      66    240    0      0   0.000     Black        14              14
```

```
## 674    66    150    0   6000   6.000     White        13              13
## 675    69    223    0  11000  11.000     Black        12              NA
## 676    64    132    0  10000  10.000     White        13              13
## 677    62    168    0      0   0.000     White        12              12
## 678    62    118    0   5000   5.000     White        12              12
## 679    71    193    1  20000  20.000     White        14              14
## 680    59    108    0  35000  35.000     White        12              NA
## 681    62    155    0   7000   7.000     White        12              12
## 682    68    185    1  38000  38.000     White         9               9
## 683    68    175    1  29000  29.000     White         9              NA
## 684    62    122    0  20000  20.000     White        10              10
## 685    63    160    0   8000   8.000     White        12              12
## 686    69    175    1  36000  36.000     White        16              16
## 687    67    228    0   1500   1.500     White        12              12
## 688    64    135    0  42000  42.000     White        18              18
## 689    68    135    0  35000  35.000     White        17              17
## 690    70    165    1  25000  25.000     White        12              12
## 691    76    150    1   5000   5.000     White         9               9
## 692    69    140    1  13000  13.000     White        10              10
## 693    66    133    0  20000  20.000     White        11              11
## 694    66     98    0  10000  10.000     White        12              NA
## 695    72    194    1  50000  50.000     Other        15              15
## 696    69    145    1  30000  30.000     Black        11              11
## 697    69    160    1   7000   7.000     White        12              NA
## 698    62    118    0  15000  15.000     Black        12              12
## 699    60    200    0  31000  31.000     Black        12              NA
## 700    66    149    0  15000  15.000     Black        12              12
## 701    60    135    0      0   0.000     White        18              18
## 702    67    170    1  50000  50.000     White        16              16
## 703    67    120    0   5000   5.000  Hispanic        11              11
## 704    66    140    1   5000   5.000     White        15              15
## 705    70    150    0    600   0.600     Black        12              12
## 706    64    150    0  14000  14.000     Black         8               8
## 707    60    105    0  40000  40.000     Other        18              18
## 708    68    170    1  24000  24.000     White        18              18
## 709    66    150    0  25000  25.000     Black        12              NA
## 710    73    180    1  22000  22.000     Black        12              12
## 711    72    215    1  20000  20.000     White         8               8
## 712    64    145    0  20112  20.112     White        12              NA
## 713    67    135    1  12000  12.000     White        13              13
## 714    71    180    1  15000  15.000     Black         8              NA
## 715    70    221    1  20000  20.000     White        18              18
## 716    66    129    0   5000   5.000     White         8               8
## 717    67    140    0  41000  41.000     White        13              13
## 718    71    155    1  13000  13.000     Black         9               9
## 719    63    136    0      0   0.000     White        12              12
## 720    73    170    1  60000  60.000     White        16              16
## 721    70    155    1  24000  24.000     White        16              16
## 722    70    165    1  38000  38.000     White        16              16
## 723    71    128    0   3000   3.000     White        14              14
## 724    66    110    0  13000  13.000     White        12              12
## 725    75    160    1   5000   5.000     White        12              12
## 726    60     92    0  20000  20.000     White        14              14
## 727    72    230    1  22000  22.000     White        12              12
```

```
## 728      70    256    0  35000  35.000     White        14              14
## 729      63    118    0      0   0.000     Black        16              16
## 730      75    230    1  28000  28.000     Black         9              NA
## 731      60    110    0  22000  22.000     White        12              12
## 732      73    186    1  30000  30.000     Black        12              NA
## 733      65    165    1   5000   5.000     Black         6              NA
## 734      65    210    0  30000  30.000     Black        12              12
## 735      63    135    0  35000  35.000     White        17              17
## 736      67    140    1  30000  30.000     White        16              16
## 737      61    130    0  32000  32.000     White        12              12
## 738      69    135    0  26000  26.000     White        17              17
## 739      64    144    0  22000  22.000     White        14              14
## 740      62    190    0  15000  15.000     White        14              NA
## 741      70    150    1  25000  25.000     White        12              12
## 742      68    147    0  11000  11.000     White        10              10
## 743      67    140    1  15000  15.000     White        12              NA
## 744      62    130    0  13000  13.000     White        12              NA
## 745      64    180    0  10000  10.000     White        15              15
## 746      68    110    0      0   0.000     White        12              12
## 747      72    200    1  35000  35.000     White        16              16
## 748      68    120    0  12000  12.000     White        12              12
## 749      64    130    0  25000  25.000     White        17              17
## 750      66    130    1      0   0.000     White        13              13
## 751      64    118    0   7000   7.000     White        11              NA
## 752      73    230    1  57000  57.000     White        14              14
## 753      73    210    1  36000  36.000     White        16              16
## 754      69    175    1  29000  29.000  Hispanic        14              14
## 755      68    133    0   8000   8.000     White        13              13
## 756      71    125    1   3000   3.000     Black        11              11
## 757      63    160    0      0   0.000     White        12              12
## 758      66    205    0  20000  20.000     White        16              16
## 759      66    158    0      0   0.000     White        12              NA
## 760      66    173    1  33000  33.000     White        12              12
## 761      68    210    0  15000  15.000  Hispanic        12              12
## 762      70    235    1  16000  16.000     White        12              12
## 763      62    148    0   5000   5.000     White        12              12
## 764      66    142    0   8000   8.000     White        14              14
## 765      63    122    0  32000  32.000     Black        16              16
## 766      75    175    1  14500  14.500     White        12              12
## 767      67    125    0  13000  13.000     White        12              12
## 768      68    115    1   5000   5.000     White        16              16
## 769      60     NA    0   5000   5.000     Black        12              12
## 770      62    125    0      0   0.000     White        10              NA
## 771      70    200    0   5000   5.000     White        11              NA
## 772      63    160    0   7000   7.000     White         9               9
## 773      65    126    0  50000  50.000     Black        18              18
## 774      69    185    0  12000  12.000     Black        12              12
## 775      71    209    1  19000  19.000     White        14              14
## 776      62    110    0   9000   9.000     White        12              12
## 777      64    110    0  25000  25.000     White        12              12
## 778      65    130    0  20000  20.000     Black        12              NA
## 779      72    170    1  55000  55.000  Hispanic        18              18
## 780      62    145    0  15000  15.000     Black        12              NA
## 781      75    190    1  45000  45.000     White        18              18
```

```
## 782      65    120    0  10000  10.000     White        12              12
## 783      65    142    0  15000  15.000     White        12              12
## 784      63    113    0  13000  13.000     White        12              12
## 785      66    120    0  45000  45.000     White        18              18
## 786      64    110    0  20000  20.000     White        13              13
## 787      68    116    0  45000  45.000     White        16              16
## 788      72    185    1  30000  30.000     White        12              12
## 789      64    110    0  12000  12.000     White        12              12
## 790      70    125    0  26000  26.000     White        13              NA
## 791      65    115    0  12500  12.500     White        12              12
## 792      64    130    0   8000   8.000     White        12              12
## 793      64    120    0  15000  15.000  Hispanic        16              16
## 794      67    207    1  65000  65.000     White        14              14
## 795      73    175    1  25000  25.000     White        10              NA
## 796      73    185    1   8000   8.000  Hispanic        14              14
## 797      65    110    1  15000  15.000     Other        14              14
## 798      64    160    0  12000  12.000     White        16              16
## 799      72    195    1  35000  35.000     White        12              12
## 800      67    140    0  35000  35.000     Black        13              13
## 801      67    162    1  40000  40.000     White        16              16
## 802      66    140    0  15000  15.000  Hispanic        14              14
## 803      74    145    1  29000  29.000     White        12              12
## 804      60    114    0   5000   5.000     White        10              10
## 805      64     96    0  15000  15.000     White        12              12
## 806      63    175    0  15000  15.000     White        13              13
## 807      74    250    1  20000  20.000     White        12              NA
## 808      74    205    1   3000   3.000     Black         6              NA
## 809      63    120    0   1000   1.000     Black        16              16
## 810      62    140    0   8000   8.000     Black        11              11
## 811      62    103    0   5000   5.000     White        12              12
## 812      67    160    0  25000  25.000     White        16              16
## 813      75    219    1   5000   5.000     White        13              13
## 814      69    163    1  20000  20.000     White        12              12
## 815      65    133    0  15000  15.000     White        12              12
## 816      73    150    1  30000  30.000     White        12              12
## 817      63    200    0  12000  12.000     White        12              NA
## 818      59     NA    0   5000   5.000     White        11              NA
## 819      60    120    0      0   0.000     White        12              12
## 820      65    122    0  15000  15.000     White        14              14
## 821      64    145    1   5000   5.000     Black        14              14
## 822      64    130    0  15000  15.000     Black        10              NA
## 823      64    135    0  25000  25.000     White        18              NA
## 824      67    210    0  10000  10.000     White        14              14
## 825      69    140    1  16000  16.000     White        12              12
## 826      71    185    1  45000  45.000     White        12              12
## 827      72    170    1  40000  40.000     White        14              14
## 828      72    200    1  15000  15.000     White        12              12
## 829      63    140    0      0   0.000     White        12              12
## 830      66    152    0  20000  20.000     White        13              13
## 831      70    125    1  25000  25.000     White        14              NA
## 832      64    145    0  19000  19.000     White        14              14
## 833      64    128    0  17600  17.600     White        16              16
## 834      68    155    1   7000   7.000     White        12              NA
## 835      74    207    1  30000  30.000     White        12              12
```

```
## 836      62    125    0  18000  18.000     White        11                11
## 837      63    135    0  15000  15.000  Hispanic         8                 8
## 838      65    135    0  25000  25.000     White        16                16
## 839      66    155    0      0   0.000     White        14                14
## 840      60    120    0   6000   6.000     White         5                 5
## 841      69    170    1  70000  70.000     White        18                18
## 842      61    115    0  15000  15.000     Other        16                16
## 843      68    140    1  15000  15.000     White        12                12
## 844      65    135    0  25000  25.000     White        17                17
## 845      66    120    0  35000  35.000     White        16                16
## 846      70    155    1  18000  18.000     White        16                16
## 847      72    165    1  28000  28.000     Black        15                15
## 848      66    160    0  35000  35.000     White        12                12
## 849      67    150    1  25000  25.000  Hispanic        12                12
## 850      64    135    0  15000  15.000  Hispanic        11                11
## 851      71    172    1  22000  22.000  Hispanic        14                14
## 852      63    128    0      0   0.000     White        12                12
## 853      73    190    1  35000  35.000     White        12                NA
## 854      64    140    0  18000  18.000     Black        15                NA
## 855      68    150    1  35000  35.000     White        14                14
## 856      64    115    0  16400  16.400     Black        12                12
## 857      66    135    1  22000  22.000     Black        16                16
## 858      67    128    0  30000  30.000     White        16                NA
## 859      64    135    0  17000  17.000  Hispanic        12                12
## 860      64    147    0  25000  25.000     Black        14                14
## 861      62    138    0  10000  10.000     White        12                12
## 862      69    180    1  40000  40.000     White        12                12
## 863      63    125    0  12500  12.500     White        12                12
## 864      63    180    0  15000  15.000     White        12                NA
## 865      63    135    0  10000  10.000     White        12                12
## 866      72    195    1  35000  35.000     White        15                NA
## 867      61     93    0      0   0.000  Hispanic        16                16
## 868      75    202    1 105000 105.000     White        12                12
## 869      71    160    1  25000  25.000     White        12                12
## 870      70    170    1 100000 100.000     White        18                18
## 871      60    130    0  25000  25.000     White        12                NA
## 872      69    158    1  21000  21.000     White        12                NA
## 873      64    200    0  10000  10.000     White        14                14
## 874      72    222    1  33000  33.000     White        12                12
## 875      69    149    1  26000  26.000     White        18                18
## 876      63    136    0  60000  60.000     White        10                10
## 877      64    110    0  15000  15.000     White        16                16
## 878      71    235    1  18000  18.000     White        16                16
## 879      59    105    0  15000  15.000     White         8                NA
## 880      68    170    1   5000   5.000     White        13                13
## 881      77    270    1  60000  60.000     White        17                17
## 882      68    150    0  12000  12.000     White        14                14
## 883      70    140    1  28000  28.000     Black        18                18
## 884      69    154    1  42000  42.000     White        18                18
## 885      63    103    0   2000   2.000     White        12                12
## 886      65    147    0  10000  10.000     White        16                16
## 887      73    190    1  20000  20.000     Black        18                18
## 888      66    145    1  28000  28.000     Other        15                15
## 889      72    212    1  10000  10.000     Black        17                17
```

```
## 890      66    164    1      0   0.000     White        16               NA
## 891      72    161    1  31000  31.000     Black        12               12
## 892      69    172    0  17000  17.000     Black        13               13
## 893      67    220    0  16000  16.000     White        12               NA
## 894      66    170    0  35000  35.000     White        15               15
## 895      67    111    0   3000   3.000     White        12               12
## 896      68    149    0   5000   5.000     White        11               11
## 897      72    155    1  25000  25.000     White        10               NA
## 898      68    150    0  16000  16.000     White        18               18
## 899      65    120    0  35000  35.000     Black        15               15
## 900      62    140    0  27000  27.000     Black        17               17
## 901      69    155    1  25000  25.000     White        17               17
## 902      62    200    0      0   0.000     White        14               14
## 903      70    145    1  40000  40.000     White        16               16
## 904      66    151    0  45000  45.000     White        16               16
## 905      66    185    1  14000  14.000     White        12               12
## 906      66    200    0  25000  25.000     White        14               14
## 907      72    230    1  40000  40.000     White        12               12
## 908      69    187    1  34000  34.000     White        12               NA
## 909      66    205    1  40000  40.000     White        12               NA
## 910      71    190    1  25000  25.000     White        16               16
## 911      69    165    1  35000  35.000     White        14               14
## 912      60    104    0  12000  12.000  Hispanic        12               12
## 913      65     NA    0  30000  30.000     White        17               17
## 914      62    180    0  23000  23.000     White        12               12
## 915      67    150    0   2000   2.000     White        12               12
## 916      67    175    1  20000  20.000     White        14               14
## 917      68    240    0  10000  10.000     Black         9                9
## 918      65    175    0      0   0.000     Black         6               NA
## 919      63    115    0  25000  25.000     White        16               16
## 920      64    210    0   5000   5.000     Other        12               12
## 921      66    150    0   5000   5.000     Black        11               NA
## 922      66    160    0  60000  60.000     Black        16               16
## 923      74    170    1  12000  12.000     Black        16               16
## 924      65    157    0  25000  25.000     White        18               18
## 925      63    180    0  22000  22.000     Black        14               14
## 926      62    130    0      0   0.000     White        12               12
## 927      68    165    1   8000   8.000     White        17               17
## 928      68     NA    0   5000   5.000     White        17               17
## 929      66    124    0   2000   2.000     White        16               16
## 930      64    110    0   5000   5.000     White        14               14
## 931      61    130    0  10000  10.000     White        13               13
## 932      65    122    0  18600  18.600     White        16               16
## 933      62    120    0  20000  20.000     White        14               14
## 934      73    200    1 100000 100.000     White        18               18
## 935      62    135    0  50000  50.000     White        15               15
## 936      70    170    1  27000  27.000     White        12               12
## 937      58    100    0   1000   1.000     Black        12               12
## 938      68    145    1  18000  18.000     White        12               12
## 939      67    140    0  17000  17.000     White        14               14
## 940      64    180    0  10000  10.000     White        12               12
## 941      70    208    1  14000  14.000     White        14               NA
## 942      72    200    1   7200   7.200     White        14               NA
## 943      63    130    0      0   0.000     Other         8                8
```

```
## 944      63    112    0  33000  33.000     White        17              17
## 945      66    180    1  23000  23.000     White        12              12
## 946      65    138    0  10000  10.000     White        12              12
## 947      61    124    1  22000  22.000     White        12              12
## 948      61    110    0  13000  13.000  Hispanic        12              12
## 949      67    150    0  33000  33.000     White        12              12
## 950      73    250    1  36000  36.000     White        12              12
## 951      66    180    0  10000  10.000     Black        10              NA
## 952      71    185    0  10000  10.000     Black        14              14
## 953      64    145    0   6000   6.000     White        12              12
## 954      70    199    1  25000  25.000     White        11              NA
## 955      67    165    0  12000  12.000     White        12              12
## 956      62    190    0  10000  10.000     White        11              NA
## 957      67    131    0  21000  21.000     White        12              12
## 958      69    210    1  26000  26.000     White        12              12
## 959      66    170    0  22000  22.000     Black        12              12
## 960      66    155    0  23000  23.000     Black        15              15
## 961      66    150    1  20000  20.000     White        15              15
## 962      66    130    0  10000  10.000     White        13              13
## 963      64    137    0  15000  15.000     White        12              NA
## 964      72    190    1   7000   7.000     Black        14              14
## 965      64    195    0  15000  15.000     White        12              12
## 966      64    170    0      0   0.000     White        12              12
## 967      65    160    0  26000  26.000     White        16              16
## 968      72    150    1  10000  10.000     White        11              11
## 969      63    150    0      0   0.000     White         8               8
## 970      71    185    1   3000   3.000     White        14              14
## 971      64    135    0  27000  27.000  Hispanic        17              17
## 972      70    190    1  25000  25.000     Black        16              16
## 973      66    125    0  35000  35.000     White        18              18
## 974      64    112    0  28000  28.000     White        17              17
## 975      69    154    0  25000  25.000     White        12              12
## 976      67    123    0  15000  15.000     White        12              12
## 977      75    178    1  55000  55.000     White        18              18
## 978      66    125    0  20000  20.000  Hispanic        17              17
## 979      67    125    0   8500   8.500     White        12              12
## 980      68    132    0      0   0.000     White        12              12
## 981      67    142    0  15000  15.000     White        13              13
## 982      75    214    1  30000  30.000     Black         8              NA
## 983      71    175    1  30000  30.000     White        16              16
## 984      62    175    0      0   0.000     White        12              12
## 985      68    180    0   5000   5.000     White        13              13
## 986      67    124    0   5000   5.000     White        14              14
## 987      68    135    0  20000  20.000     White        12              12
## 988      70    183    0  20000  20.000     White        15              NA
## 989      70    151    1  22000  22.000     White         6               6
## 990      67    145    1  25000  25.000     White        16              16
## 991      64    122    0      0   0.000     White        16              16
## 992      64    140    0   5000   5.000     Black        12              NA
## 993      65    120    0  15000  15.000     White        12              12
## 994      71    160    1   3000   3.000     White         8               8
## 995      63    137    0  16000  16.000     White        12              12
## 996      70    175    1  30000  30.000     White        14              14
## 997      64    126    0      0   0.000     White        12              12
```

```
## 998      61    148    0  10000  10.000     Black        12               12
## 999      65    162    0  15000  15.000     Black        12               12
## 1000     67    170    1  28000  28.000     White        12               12
## 1001     67    150    0  15000  15.000     White        12               NA
## 1002     68     NA    0  15000  15.000     White        12               12
## 1003     59    110    0   5000   5.000     White         6               NA
## 1004     63    135    0   5000   5.000     White        12               NA
## 1005     65    153    1  31500  31.500     White        14               14
## 1006     66    168    1  95000  95.000     White        18               18
## 1007     68    160    1  45000  45.000     White        17               17
## 1008     69    150    0  20000  20.000     White        12               NA
## 1009     67    145    1  38000  38.000     White        12               12
## 1010     72    250    1  10000  10.000     White         8                8
## 1011     63    139    0  15000  15.000     White        16               16
## 1012     74    199    1  30000  30.000     White        12               12
## 1013     74    225    1  35900  35.900     White        16               16
## 1014     66    104    0  12000  12.000     White        13               13
## 1015     72    165    1  15000  15.000     White        15               15
## 1016     69    115    0  10000  10.000     White        16               16
## 1017     66    150    0  45000  45.000     White        18               18
## 1018     62    175    0   5000   5.000     White        12               12
## 1019     68    130    1   5000   5.000     White        11               11
## 1020     74    185    1  40000  40.000     White        16               16
## 1021     72    180    1  21500  21.500     White        12               12
## 1022     66    132    1  14000  14.000     White        12               NA
## 1023     67    175    1  38000  38.000     Other        17               17
## 1024     65    130    0   1000   1.000     White        12               12
## 1025     66    240    1  14000  14.000     White        12               12
## 1026     65    130    0  15000  15.000     White        12               12
## 1027     64    110    0  15000  15.000     White        16               16
## 1028     62    132    0      0   0.000  Hispanic        12               NA
## 1029     64    160    0  25000  25.000     White        12               NA
## 1030     68    145    0  24000  24.000     White        13               13
## 1031     64    130    0   4500   4.500     White        16               16
## 1032     64    127    0  18000  18.000     White        16               16
## 1033     64    115    0  35000  35.000     White        12               12
## 1034     63    100    0  14000  14.000     White        12               NA
## 1035     69    160    0  10000  10.000     White        12               12
## 1036     67    150    0   9500   9.500     White        12               12
## 1037     63    140    0  11000  11.000     White        15               15
## 1038     67    140    1  17000  17.000     White        12               12
## 1039     60    130    0   6000   6.000     White        13               13
## 1040     62    140    0   2500   2.500     White        11               NA
## 1041     72    163    1  40000  40.000     White        16               16
## 1042     67    190    0      0   0.000     White        14               14
## 1043     67    165    1  25000  25.000     White        16               16
## 1044     68    170    0  15000  15.000     White        13               13
## 1045     66    170    0  28000  28.000     Black        15               15
## 1046     66    136    0  33000  33.000     Black        12               12
## 1047     68    210    0   5000   5.000     White        16               16
## 1048     60    149    0   4000   4.000     White         8               NA
## 1049     67    150    0      0   0.000     White        12               12
## 1050     65    130    1   4100   4.100     White        16               16
## 1051     60     89    1   5000   5.000     White        11               11
```

```
## 1052     69    135    0  25000  25.000     White        12               12
## 1053     72    205    1  32000  32.000     White        12               12
## 1054     65    170    1  15000  15.000  Hispanic         9                9
## 1055     69    170    1  15000  15.000     White        14               14
## 1056     64    140    0  13000  13.000     White         8               NA
## 1057     64    150    1   8000   8.000  Hispanic         8                8
## 1058     62    100    0      0   0.000     Other        17               17
## 1059     65    170    0      0   0.000     White        13               13
## 1060     64    125    0  17000  17.000     White        12               12
## 1061     67    137    0  15000  15.000     White        12               12
## 1062     66    170    1  18000  18.000     White        13               13
## 1063     73    165    1  12000  12.000     White        12               12
## 1064     74    295    1   7000   7.000     White         7                7
## 1065     66    121    0      0   0.000     White        12               12
## 1066     65    130    0   1200   1.200     White        14               14
## 1067     72    170    1      0   0.000     White        12               12
## 1068     64    120    0      0   0.000     White        12               12
## 1069     63    165    1  14000  14.000     White        12               12
## 1070     63    115    0  17000  17.000     White        12               12
## 1071     66    150    1  30000  30.000     White        12               12
## 1072     69    196    1   5000   5.000     White         6                6
## 1073     72    230    1      0   0.000     White        10               NA
## 1074     64    140    0  62000  62.000     White        12               12
## 1075     70    260    1  25000  25.000     White        12               NA
## 1076     66    185    0  22000  22.000  Hispanic        12               12
## 1077     63    130    0  15000  15.000     White        12               12
## 1078     73    210    1  27000  27.000     White        12               12
## 1079     63    135    0  20000  20.000     White        16               16
## 1080     69    160    0   9000   9.000     White        11               11
## 1081     66    120    0      0   0.000     White        14               14
## 1082     73    168    1  17000  17.000     White        12               12
## 1083     65    119    0   5000   5.000     White        14               14
## 1084     71    145    1  15000  15.000     White        12               12
## 1085     68    160    0   1800   1.800     White        12               12
## 1086     64    145    0  18000  18.000     White        12               12
## 1087     63    120    0  25000  25.000     White        18               18
## 1088     66    150    0   5000   5.000     Black        14               14
## 1089     70    220    1  20000  20.000     Black        16               16
## 1090     64    115    0  75000  75.000     White        15               15
## 1091     66    170    0   3500   3.500     White        12               12
## 1092     61    130    0  36000  36.000     White        12               NA
## 1093     72    210    1  30000  30.000     White        12               12
## 1094     65    145    0  25000  25.000     White        13               13
## 1095     64    200    0   1000   1.000     White        14               14
## 1096     68    187    1  60000  60.000     White        12               NA
## 1097     64    170    0   5000   5.000     White        12               NA
## 1098     74    195    1  35000  35.000     White        13               NA
## 1099     67    160    1   9000   9.000     White        13               13
## 1100     70    184    1  35000  35.000     White         9                9
## 1101     66    150    0  11000  11.000     White        10               10
## 1102     71    180    1  12000  12.000     White        12               12
## 1103     71    170    1  30000  30.000     White        12               12
## 1104     71    155    1  19000  19.000     Black         7               NA
## 1105     67    215    0   5000   5.000     White        12               12
```

```
## 1106     74    205    1   9000   9.000     White         9              NA
## 1107     75    225    1  30000  30.000     White        16              16
## 1108     62    118    0      0   0.000     White        12              12
## 1109     72    150    1   9000   9.000     White        12              12
## 1110     66    145    0  15000  15.000  Hispanic        16              16
## 1111     65    135    0   8000   8.000     Black        12              12
## 1112     70    175    1  25000  25.000     White         8              NA
## 1113     66    129    0  10000  10.000     White        10              10
## 1114     72    160    1  33000  33.000     White        12              NA
## 1115     70    175    1   5000   5.000     Black        10              NA
## 1116     72    185    0   5000   5.000     Black         5              NA
## 1117     64    237    0  15000  15.000     Black         9              NA
## 1118     60    140    0  12000  12.000  Hispanic        12              12
## 1119     64    136    0  18000  18.000     White        15              15
## 1120     61    169    0   5000   5.000  Hispanic         8               8
## 1121     66    181    0  15000  15.000     Black        12              12
## 1122     65    193    0  30000  30.000     White        13              13
## 1123     65    198    0  12500  12.500     White        12              12
## 1124     62    145    0  10000  10.000     Black        12              NA
## 1125     68    212    1   8500   8.500     Black        13              13
## 1126     67    205    0  15000  15.000     White        13              13
## 1127     73    175    1  21000  21.000     Black        14              14
## 1128     63    122    0      0   0.000     White        12              12
## 1129     64    153    0  21000  21.000     White        12              12
## 1130     70    210    1  40000  40.000     White        12              12
## 1131     66    135    0      0   0.000     White        13              13
## 1132     68    160    0  21000  21.000     White        17              17
## 1133     63    123    0      0   0.000     White        13              13
## 1134     66    160    0   5000   5.000     White        12              12
## 1135     71    153    0  22000  22.000     White        17              17
## 1136     73    155    1  30000  30.000     White        14              14
## 1137     64    185    0      0   0.000     White        12              12
## 1138     61    140    0 123000 123.000     White        14              14
## 1139     63    190    0   8000   8.000     White         9              NA
## 1140     63    140    0      0   0.000     White         9              NA
## 1141     62    115    0      0   0.000     White         8               8
## 1142     64    145    0   2000   2.000     White         9               9
## 1143     67    195    0   7600   7.600     White         6              NA
## 1144     67    145    0      0   0.000     White        12              12
## 1145     66    157    0   5000   5.000     White         8              NA
## 1146     72    160    1  15000  15.000     White        14              14
## 1147     66    135    0   5000   5.000     White        15              15
## 1148     66    135    0  15000  15.000     Black        12              12
## 1149     61    114    0      0   0.000     White        18              18
## 1150     63    138    0  10000  10.000     White        12              12
## 1151     73    244    1  35000  35.000     White        12              12
## 1152     64    130    0  15000  15.000     White        12              12
## 1153     66    158    0  15000  15.000     White        16              16
## 1154     70    155    0   4000   4.000     White        12              12
## 1155     68    165    1  16000  16.000     White         8               8
## 1156     67    128    0    200   0.200     White        12              12
## 1157     74    195    1  23000  23.000     White        16              16
## 1158     64    123    0  16000  16.000     White        16              16
## 1159     61    130    0      0   0.000     White        12              12
```

```
## 1160     66    250    0      0   0.000     White        12              12
## 1161     60    200    0   6000   6.000     White        12              12
## 1162     59    125    0    600   0.600     White         9               9
## 1163     62    160    0      0   0.000     Black        16              16
## 1164     62    187    0      0   0.000     Black        14              14
## 1165     62    124    0  25000  25.000     Black        12              12
## 1166     62    210    0      0   0.000     White        12              12
## 1167     75    201    1  28000  28.000     Other        16              16
## 1168     66    155    0  15000  15.000     White         8              NA
## 1169     66    160    0   4000   4.000     White         8               8
## 1170     64    129    1  15000  15.000     White        12              12
## 1171     71    172    1  15000  15.000     White        12              12
## 1172     66    150    0  25000  25.000     White        18              18
## 1173     70    170    1   5000   5.000     White        13              13
## 1174     61    117    0      0   0.000     White        10              NA
## 1175     63    123    0  25000  25.000     White        12              12
## 1176     67    117    0  15000  15.000     White        12              12
## 1177     74    230    0  15000  15.000     White        12              12
## 1178     69    180    1  40000  40.000     White        11              NA
## 1179     70    255    1  30000  30.000     White        11              11
## 1180     66    195    0   5000   5.000     White        12              12
## 1181     74    200    1  35000  35.000     White        14              14
## 1182     65    200    0  16000  16.000     White        14              14
## 1183     63    145    0   5000   5.000     White        12              12
## 1184     64    128    0  28000  28.000     White        16              16
## 1185     68    206    1  20000  20.000     White        15              15
## 1186     66    140    1  21000  21.000     White        13              13
## 1187     69    210    1  17000  17.000     Black        12              NA
## 1188     60    115    0  24000  24.000     White        13              13
## 1189     61    110    0  25000  25.000     White        12              12
## 1190     75    162    1  40000  40.000     White        12              12
## 1191     70    220    1  15000  15.000     White         9               9
## 1192     63    145    0      0   0.000  Hispanic         9               9
## 1193     69    150    1      0   0.000     White        13              13
## 1194     66    165    0      0   0.000     White        16              16
## 1195     64    120    0   8000   8.000     White        13              13
## 1196     63    175    0  19000  19.000  Hispanic        15              15
## 1197     64    178    0   5000   5.000     White        12              NA
## 1198     64    120    0  10000  10.000  Hispanic        11              NA
## 1199     67    138    0  45000  45.000     White        16              16
## 1200     64    145    1   5000   5.000     Black        17              17
## 1201     72    160    1      0   0.000     White        14              14
## 1202     63    142    0  24000  24.000     Black        14              14
## 1203     67    100    0   5000   5.000     White        14              14
## 1204     63    155    0  15000  15.000  Hispanic        14              14
## 1205     66    160    1  33000  33.000     White        16              16
## 1206     65    125    0  24000  24.000     White        14              14
## 1207     63    135    0   6000   6.000     White        13              13
## 1208     66    129    0  90000  90.000     White        14              NA
## 1209     64    190    0      0   0.000     White        16              16
## 1210     64    170    0  57000  57.000     White        18              18
## 1211     68    125    0  15000  15.000     White        14              14
## 1212     71    195    1  13800  13.800     White        14              14
## 1213     71    280    1  30000  30.000     White        18              18
```

```
## 1214     72    155    1  15000  15.000     White        12              12
## 1215     60    115    0  15000  15.000     White        14              14
## 1216     70    170    1  31000  31.000     White        12              12
## 1217     74    180    1  33000  33.000     White        17              17
## 1218     68    175    1  30000  30.000     White        18              18
## 1219     74    218    1  12000  12.000     White        12              12
## 1220     75    150    1   5000   5.000     White        12              12
## 1221     68    171    1  21000  21.000     White        12              12
## 1222     72    185    1  45000  45.000     White        12              12
## 1223     63    140    0  28000  28.000     White        18              18
## 1224     71    225    1  25000  25.000     White         9               9
## 1225     72    210    1  12000  12.000     White        12              12
## 1226     64    170    0  19000  19.000     White        12              12
## 1227     63    200    0   6000   6.000     White        14              14
## 1228     66    230    0   5300   5.300     White        13              13
## 1229     66    121    0   5000   5.000     Black        12              12
## 1230     61     87    0  15000  15.000     White        13              13
## 1231     60    110    1   5000   5.000     Black         2              NA
## 1232     62    120    0      0   0.000     White        12              12
## 1233     65    145    0  15000  15.000     White        11              NA
## 1234     73    215    1  17000  17.000     White        12              12
## 1235     66    165    0   4700   4.700     Black        12              NA
## 1236     67    139    0   5000   5.000     White        12              12
## 1237     68    113    0      0   0.000     White        12              12
## 1238     62    150    0   9500   9.500     White        12              12
## 1239     65    150    1   1700   1.700     White        12              12
## 1240     63    130    0      0   0.000     White        14              14
## 1241     62    141    0   5400   5.400     White        12              12
## 1242     68    160    1  10000  10.000     White        12              12
## 1243     59     99    0  25000  25.000     White        15              15
## 1244     62    180    0      0   0.000     White        12              12
## 1245     69    165    1   5000   5.000     White        13              13
## 1246     70    135    0  25000  25.000     White        14              14
## 1247     66    180    1  15000  15.000     White         8               8
## 1248     64    102    0      0   0.000     White         9               9
## 1249     59    120    0  15000  15.000     White        12              NA
## 1250     62    100    0  25000  25.000     White        10              NA
## 1251     68    190    1  30000  30.000     White        12              12
## 1252     68    157    0  35000  35.000     White        16              16
## 1253     63    220    0  25000  25.000     White        11              NA
## 1254     63    130    0  28000  28.000     White        18              18
## 1255     63    100    0  42000  42.000     White        12              12
## 1256     68    170    1  45000  45.000     White        12              12
## 1257     64    121    0  55000  55.000     White        12              12
## 1258     65    128    0   5000   5.000     White        15              15
## 1259     72    220    1  62000  62.000     White        17              17
## 1260     70    135    0  36000  36.000     White        16              16
## 1261     66    140    0  15000  15.000     White        12              12
## 1262     70    155    1  25000  25.000     White        10              NA
## 1263     72    220    1  19000  19.000     White        12              12
## 1264     69    165    1  38000  38.000     White        11              11
## 1265     63    120    0  15000  15.000     White        14              14
## 1266     58    114    0   4500   4.500     White         5              NA
## 1267     63    115    0  96000  96.000     White        14              14
```

```
## 1268     63    115    0  11000  11.000     White        12               12
## 1269     73    312    1   9000   9.000     White        15               15
## 1270     69    127    0   5000   5.000     White        14               14
## 1271     70    160    1  50000  50.000     White        12               12
## 1272     66    115    0      0   0.000     White        12               NA
## 1273     60    170    0   5000   5.000     White        15               15
## 1274     66    185    0      0   0.000     White        16               16
## 1275     65    185    0   6000   6.000     White        13               13
## 1276     72    180    1 100000 100.000     White        13               13
## 1277     62    130    0  16500  16.500     White        13               13
## 1278     72    200    1  25000  25.000     White        12               12
## 1279     69    185    1      0   0.000     White        12               12
## 1280     65    120    0  15000  15.000     Black        12               12
## 1281     73    134    1  15000  15.000     Black        14               14
## 1282     66    140    0  15000  15.000     Black        12               12
## 1283     72    280    1  32000  32.000     White        14               14
## 1284     73    230    1  30000  30.000     White        18               18
## 1285     68    150    0  10000  10.000     White        16               16
## 1286     59    180    0  15000  15.000     White        12               12
## 1287     64    128    0      0   0.000     White        12               NA
## 1288     66    125    0  15000  15.000     White        12               12
## 1289     60    129    0   6500   6.500     White         8                8
## 1290     60    124    0  26000  26.000     White        18               18
## 1291     65    140    0  17000  17.000     White        12               12
## 1292     63    150    0  22000  22.000     Other        18               18
## 1293     64    145    0  10000  10.000     White        12               12
## 1294     71    165    1  50000  50.000     White        14               14
## 1295     67    162    1  20000  20.000     White        12               12
## 1296     63    145    0   5000   5.000     White        12               NA
## 1297     67    150    0      0   0.000     White        13               13
## 1298     63    160    0    400   0.400     White        12               12
## 1299     72    160    1  30000  30.000     White        12               NA
## 1300     65    125    0  16000  16.000     White        14               14
## 1301     66    112    0  62000  62.000     White        14               14
## 1302     66    160    0  10000  10.000     White        12               NA
## 1303     63    115    0  14000  14.000     White        13               13
## 1304     65    112    0   5000   5.000     White        15               15
## 1305     74    210    1  40000  40.000     White        16               16
## 1306     67    170    0   5000   5.000     White        13               13
## 1307     68    185    0  25000  25.000     White        17               17
## 1308     65    150    0  12000  12.000     White        12               12
## 1309     64    137    0  58000  58.000     White        16               16
## 1310     68    128    0  18000  18.000     White        16               16
## 1311     65    147    1   1000   1.000     White        12               12
## 1312     72    265    1  21000  21.000     White        17               17
## 1313     66    158    1  11000  11.000     Black        12               12
## 1314     69    220    1  15000  15.000     White         7                7
## 1315     64    130    0  13000  13.000     White        12               12
## 1316     64    140    0      0   0.000     White        12               12
## 1317     60    110    0  20000  20.000     Other        16               16
## 1318     72    220    1  25000  25.000     Black        12               12
## 1319     70    205    1   5000   5.000  Hispanic         8                8
## 1320     64    130    0    600   0.600     White        12               12
## 1321     67    190    1  25000  25.000     Black        14               14
```

```
## 1322     69    178    1  15000  15.000     White        12              NA
## 1323     68    140    1  36000  36.000     White        12              12
## 1324     64    175    0  15000  15.000     Other        13              NA
## 1325     64    142    0  35000  35.000     White        14              14
## 1326     66    185    0   3500   3.500     White        12              12
## 1327     65    120    0  19005  19.005     White        16              16
## 1328     70    170    1  62000  62.000     White        14              14
## 1329     69    195    1  62000  62.000     White        16              16
## 1330     70    135    1  25000  25.000     White        12              12
## 1331     66    180    1  50000  50.000     White        12              NA
## 1332     64    180    0      0   0.000     White        12              12
## 1333     66    160    0      0   0.000     White        13              13
## 1334     66    140    1  40000  40.000     White        12              12
## 1335     74    190    1  26000  26.000     White        18              18
## 1336     66    132    0   5000   5.000     White        12              NA
## 1337     62    120    0  22000  22.000     White        12              12
## 1338     66    164    0  21000  21.000     White        17              17
## 1339     62    198    0   6108   6.108     White        12              12
## 1340     65    145    0  30000  30.000     Black        18              18
## 1341     66    165    0  15000  15.000     White        11              NA
## 1342     64    160    0  15000  15.000     White        12              12
## 1343     63    129    0   6000   6.000     White        12              12
## 1344     66    150    0  15000  15.000     White         8              NA
## 1345     71    173    1  27000  27.000     White        16              16
## 1346     64    150    0   5000   5.000  Hispanic        10              10
## 1347     66    160    0   4000   4.000     White        16              16
## 1348     62    165    0   4416   4.416     Other         6              NA
## 1349     66    144    0   5000   5.000     White        12              12
## 1350     64    225    0   5000   5.000     Black         9              NA
## 1351     67     NA    0  30000  30.000     White        16              16
## 1352     62    130    0      0   0.000     White        12              12
## 1353     63    125    0   5000   5.000     White        10              NA
## 1354     65    153    0      0   0.000     White         9               9
## 1355     67    175    1  45000  45.000     White        18              18
## 1356     61    130    0  18000  18.000     White        14              14
## 1357     66    125    0   6000   6.000     White        15              15
## 1358     61    155    0      0   0.000     White        12              12
## 1359     72    200    1  14000  14.000     White        12              12
## 1360     69    125    0  35000  35.000     White        14              14
## 1361     64    120    0  15000  15.000     White        16              16
## 1362     63    126    0  12000  12.000     Black        12              12
## 1363     60    175    0   1000   1.000     White        12              NA
## 1364     70    195    1  32000  32.000     Black        15              15
## 1365     66    155    0  15000  15.000     White        15              15
## 1366     69    210    1  62000  62.000     White        17              17
## 1367     72    140    1   5000   5.000     White        12              12
## 1368     73    185    1   1500   1.500     White        12              12
## 1369     64    130    0  30000  30.000     White        12              12
## 1370     66    138    0   5000   5.000     White        13              13
## 1371     65    150    0   3000   3.000     Black        16              16
## 1372     71    165    1  35000  35.000     White        15              15
## 1373     64    135    0  35000  35.000     White        12              12
## 1374     63    114    0      0   0.000     White        12              12
## 1375     63    132    0      0   0.000     White        16              16
```

```
## 1376    72    175    1  70000  70.000     White        15               15
## 1377    67    140    0  21000  21.000     White        16               16
## 1378    69    145    1  50000  50.000     White        11               11
## 1379    71    175    1  15000  15.000     White         9                9
## 1380    68    132    1      0   0.000  Hispanic        10               NA
## 1381    64    140    0  15000  15.000     White        12               NA
## 1382    73    172    1      0   0.000     Black        12               12
## 1383    62    142    0   5000   5.000     Black         9               NA
## 1384    66    150    0   9000   9.000     Black         8                8
## 1385    68    190    1  25000  25.000     White        12               12
## 1386    64    185    0  15000  15.000     Black        14               14
## 1387    63    140    0  10000  10.000     Black        14               14
## 1388    65    125    0      0   0.000     White        12               12
## 1389    66    140    0   5000   5.000     Black        18               18
## 1390    64    126    1  87000  87.000     White        12               12
## 1391    71    175    1  30000  30.000     White        12               12
## 1392    72    185    1  16000  16.000     White        14               NA
## 1393    68    135    1  20000  20.000     White        12               12
## 1394    64    142    0      0   0.000     White        12               12
## 1395    72    185    1 100000 100.000     White        17               17
## 1396    72    240    1  62000  62.000     White        12               12
## 1397    66    133    0  10000  10.000     White        12               12
## 1398    72    147    0  62000  62.000     White        18               18
## 1399    66    200    1  35000  35.000     White        14               14
## 1400    65    135    0   7000   7.000     White        16               16
## 1401    65    230    0      0   0.000     White        12               12
## 1402    66    165    0      0   0.000     White        12               12
## 1403    65    230    0      0   0.000     White        11               11
## 1404    71    180    1   8000   8.000     Black        14               14
## 1405    74    270    1  11000  11.000     White        10               10
## 1406    70    217    1  25000  25.000     White         9                9
## 1407    64    130    0  25000  25.000     White        14               14
## 1408    69    175    1  30000  30.000     White        14               14
## 1409    63    120    0  15000  15.000     White        12               12
## 1410    66    130    1      0   0.000     White        12               12
## 1411    63    105    0  48000  48.000     White        18               18
## 1412    68    145    0  17000  17.000     White        12               12
## 1413    66    180    1  15000  15.000     White        12               NA
## 1414    78    200    1  25000  25.000     White        12               NA
## 1415    71    111    0      0   0.000     White         8               NA
## 1416    73    167    1  26000  26.000     White        16               16
## 1417    69    165    1  25000  25.000     White        12               12
## 1418    63    185    0  10000  10.000     White        12               12
## 1419    62    130    0  25000  25.000     White        18               18
## 1420    65    125    0      0   0.000     White        11               11
## 1421    71    180    1  60000  60.000     White        18               18
## 1422    65    115    0  22000  22.000     White        18               18
## 1423    62    129    0   5000   5.000     White        12               12
## 1424    70    180    1  15000  15.000     White        12               12
## 1425    64    145    0   5000   5.000     White        12               12
## 1426    72    215    1  15000  15.000     White        16               16
## 1427    64    145    0   6200   6.200     White        13               13
## 1428    65    132    0  24000  24.000     White        16               16
## 1429    71    143    1  20000  20.000     White        14               14
```

```
## 1430    70    150    0   7000   7.000     White        14              14
## 1431    73    155    1      0   0.000     Black        12              12
## 1432    67    115    0   5000   5.000     White        15              15
## 1433    62    121    0  15000  15.000     White        12              NA
## 1434    68    275    0  30000  30.000     Black        16              16
## 1435    66    130    0  23000  23.000     White        18              18
## 1436    64    130    0  20000  20.000     White        12              12
## 1437    66    170    0   3000   3.000     White        16              16
## 1438    63    135    0      0   0.000     White        12              12
## 1439    70    140    1  30000  30.000     White        16              16
## 1440    64    130    0  12000  12.000     White        14              14
## 1441    66    150    0  35000  35.000     White         5              NA
## 1442    66    126    0      0   0.000     White         7               7
## 1443    63    140    0      0   0.000     White        10              NA
## 1444    71    190    1  40000  40.000     White        12              12
## 1445    64    150    0  15000  15.000     White        14              14
## 1446    63    153    0  36000  36.000     White        16              16
## 1447    66    145    0  10000  10.000     White        12              12
## 1448    63    225    0      0   0.000     White        11              NA
## 1449    68    120    0  13000  13.000     White        14              14
## 1450    65    265    0      0   0.000     White        12              12
## 1451    61    120    0      0   0.000     White        14              14
## 1452    62    128    0  10000  10.000     Black        12              12
## 1453    69    175    1  30000  30.000  Hispanic        12              12
## 1454    69    170    1   5000   5.000     White        11              11
## 1455    65    140    0  25000  25.000     White        12              12
## 1456    64    150    1  23000  23.000     White        13              13
## 1457    70    180    1  20000  20.000     White        17              17
## 1458    65    130    0  19000  19.000     White        13              13
## 1459    68    149    0  62000  62.000     White        16              16
## 1460    61    132    1  20000  20.000     Black        11              11
## 1461    64    180    1  28000  28.000     Black        14              14
## 1462    65    119    0  13000  13.000     White        10              10
## 1463    64    185    1  12000  12.000     White        12              12
## 1464    63    135    0  25000  25.000     White        18              18
## 1465    69    140    1  20000  20.000     White        11              11
## 1466    66    185    0  15000  15.000     White        14              14
## 1467    61    123    0  15000  15.000     White         8               8
## 1468    74    190    1  25000  25.000     White        12              12
## 1469    68    165    0  25000  25.000     White        13              13
## 1470    68    155    0      0   0.000     White        12              12
## 1471    65    205    0      0   0.000     White        14              14
## 1472    67    132    0  18000  18.000     White        16              16
## 1473    65    115    0      0   0.000     White        12              12
## 1474    64    120    0      0   0.000     White        18              18
## 1475    62    170    0   6000   6.000     White        10              10
## 1476    72    160    1  16000  16.000     White        13              13
## 1477    73    175    1  45000  45.000     White        16              16
## 1478    60    115    0  15000  15.000     White        12              12
## 1479    70    172    1  25000  25.000     White        14              14
## 1480    64    145    0  12000  12.000     White        14              14
## 1481    68    160    0   2000   2.000     White        12              12
## 1482    63    110    0  10000  10.000     White        12              12
## 1483    71    185    1  14000  14.000     White        12              12
```

```
## 1484     64    200    0  15000  15.000     White        12               12
## 1485     67    200    0      0   0.000     White        11               11
## 1486     60    140    0  10000  10.000     White        12               NA
## 1487     64    180    0   5000   5.000     White        10               NA
## 1488     66    157    0   1200   1.200     White         4               NA
## 1489     64    155    0  25000  25.000     White        12               NA
## 1490     59    113    0  15000  15.000     White        14               14
## 1491     63    150    0  10000  10.000     White        13               13
## 1492     66    140    1   2000   2.000     White        12               12
## 1493     66    125    0      0   0.000     White        12               12
## 1494     65     NA    0   4000   4.000     White        13               13
## 1495     70    140    1   5000   5.000     White         8               NA
## 1496     64    145    0  10000  10.000     White        14               14
## 1497     61     NA    0   5000   5.000     White        13               13
## 1498     66    123    0  15000  15.000     White        12               NA
## 1499     61     96    0   5000   5.000  Hispanic        16               16
## 1500     66    108    0   1500   1.500     White        12               12
## 1501     66    145    1  18000  18.000  Hispanic        17               17
## 1502     73    175    1   4000   4.000     White        15               15
## 1503     72    150    1  28000  28.000     White        16               16
## 1504     74    180    0  10000  10.000     White        14               14
## 1505     65    118    0   3000   3.000     White        16               16
## 1506     64    110    0      0   0.000     White        14               14
## 1507     62    125    0  25000  25.000     White        18               18
## 1508     71    240    1  12000  12.000     White        12               12
## 1509     62    147    0  15000  15.000     White        12               12
## 1510     68    158    0  19000  19.000     White        13               13
## 1511     61    235    0      0   0.000     White        12               12
## 1512     70    184    1  36000  36.000     White        16               16
## 1513     64    180    0   7000   7.000     White        16               16
## 1514     59     85    0  35000  35.000     White        11               11
## 1515     68    168    1  40000  40.000     White        18               18
## 1516     68    130    1  15000  15.000     White        14               14
## 1517     69    130    0   8000   8.000     White        13               13
## 1518     69    190    0  25000  25.000     White        14               14
## 1519     72    185    1  20000  20.000     White        12               12
## 1520     75    214    1  28000  28.000     White        18               18
## 1521     69    180    1  22000  22.000     White        14               14
## 1522     71    150    1  15000  15.000     White        14               14
## 1523     72    210    1  21500  21.500     Black        13               13
## 1524     68    160    0   3000   3.000     White        12               12
## 1525     64    110    0  25000  25.000     Other        12               12
## 1526     72    190    1  23000  23.000     White        13               13
## 1527     66    165    0  15000  15.000     White        18               18
## 1528     72    197    1  18000  18.000     White        12               12
## 1529     67    128    1   5000   5.000  Hispanic         8               NA
## 1530     67    156    1  20000  20.000     White        16               16
## 1531     66    150    0  62000  62.000     White        14               14
## 1532     72    164    1  62000  62.000     White        14               14
## 1533     64    120    0   5000   5.000     White        13               13
## 1534     63    110    0  16000  16.000  Hispanic        12               12
## 1535     69    181    1  15000  15.000     White        12               12
## 1536     63    118    0  53000  53.000  Hispanic        17               17
## 1537     70    200    1  15000  15.000  Hispanic        17               17
```

```
## 1538    72    162    1  26000  26.000     White        12              NA
## 1539    70    145    0  20000  20.000     White        12              12
## 1540    65    110    0   4000   4.000     Other        12              12
## 1541    73    200    1  10000  10.000     White        16              16
## 1542    75    220    1  25000  25.000     White        12              12
## 1543    69    230    1  43000  43.000     White        12              12
## 1544    69    180    1  17000  17.000     Other        14              14
## 1545    61    230    0   4000   4.000  Hispanic        12              12
## 1546    71    185    1  87000  87.000     White        18              18
## 1547    72    175    1  30000  30.000  Hispanic        13              13
## 1548    65    135    0  25000  25.000     White        16              16
## 1549    73    195    1  50000  50.000     White        15              15
## 1550    64    123    0  25000  25.000     White        18              18
## 1551    67    137    0  55000  55.000     White        18              18
## 1552    63    145    0  28000  28.000     White        16              16
## 1553    66    160    0      0   0.000     White        12              12
## 1554    72    150    1  15000  15.000     White         7              NA
## 1555    64    135    0   5000   5.000     White        12              12
## 1556    62    200    0   5000   5.000     White        14              14
## 1557    65    130    0  18000  18.000     White        13              13
## 1558    72    175    1  21000  21.000  Hispanic        15              NA
## 1559    59    180    0  15000  15.000  Hispanic         9              NA
## 1560    67    115    0  12000  12.000     White        12              12
## 1561    65    164    0  33000  33.000  Hispanic        16              16
## 1562    64    140    0  15000  15.000     White        16              NA
## 1563    72    175    1  50000  50.000  Hispanic        13              13
## 1564    65    231    0   6000   6.000  Hispanic         9               9
## 1565    64    140    0  16000  16.000     White        14              14
## 1566    68    150    1  35000  35.000     White        12              12
## 1567    68    260    0  25000  25.000     White        12              12
## 1568    66    155    0  35000  35.000     White        17              17
## 1569    76    210    1  20000  20.000     White        14              NA
## 1570    63    118    0  18000  18.000     White        12              12
## 1571    74    225    1  34000  34.000     White        14              14
## 1572    68    155    1  25000  25.000     White        16              16
## 1573    61    110    0  15000  15.000     White        14              14
## 1574    64    140    0  20000  20.000     White        16              16
## 1575    72    200    1  20000  20.000     White        17              17
## 1576    68    170    1  33000  33.000     White        12              12
## 1577    71    150    1  20000  20.000     White        12              NA
## 1578    63    126    0  15000  15.000     White        12              12
## 1579    65    158    0   4000   4.000     White        12              12
## 1580    60    130    0  20000  20.000     White         8              NA
## 1581    72    200    1  40000  40.000     White        16              16
## 1582    64    132    0  14000  14.000     White        14              14
## 1583    68    170    0  12000  12.000     White        12              12
## 1584    61    105    0  25000  25.000     White        12              12
## 1585    63    136    0  10000  10.000     White        17              NA
## 1586    67    138    0  70000  70.000     White        10              NA
## 1587    67    140    0  38000  38.000     White        17              17
## 1588    63    125    0  14000  14.000     White        12              12
## 1589    71    164    1  62000  62.000     White        18              NA
## 1590    63    108    0      0   0.000     White        15              15
## 1591    60    100    0  15000  15.000     White        13              13
```

```
## 1592    74   215    1  17000  17.000    White       16              16
## 1593    66   125    0  25000  25.000    White       15              15
## 1594    69   158    1  60000  60.000    White       14              14
## 1595    67   180    0  15000  15.000    White       15              NA
## 1596    65   145    1  25000  25.000    White       16              16
## 1597    62   131    1  18000  18.000 Hispanic       12              12
## 1598    65   145    1      0   0.000    White       12              12
## 1599    64   140    0  45000  45.000    White       17              17
## 1600    72   175    1  70000  70.000    White       18              18
## 1601    66    NA    0      0   0.000 Hispanic       11              11
## 1602    65   130    0  30000  30.000    White       18              NA
## 1603    67   167    0 100000 100.000    White       15              15
## 1604    62   145    0   8000   8.000    White       12              12
## 1605    71   185    1  30000  30.000    White       16              16
## 1606    62   115    0      0   0.000    White       11              11
## 1607    71   192    1  27000  27.000    White       14              14
## 1608    70   270    1  47000  47.000    White       18              18
## 1609    67   135    1  12000  12.000 Hispanic       12              12
## 1610    72   190    1  35000  35.000    White       16              16
## 1611    62   130    0  24000  24.000    White       17              17
## 1612    63   165    0  13000  13.000 Hispanic       12              12
## 1613    61   102    0  80000  80.000    White       14              14
## 1614    72   130    1   5000   5.000    White       12              12
## 1615    65   110    0      0   0.000    White       12              12
## 1616    63   153    0  25000  25.000    White       10              10
## 1617    66   240    1  28000  28.000    White       12              12
## 1618    64   125    0   8000   8.000    White       15              15
## 1619    66   110    0  10000  10.000    White       13              13
## 1620    68   155    0   9000   9.000    White       14              14
## 1621    60   150    0  20000  20.000    White       12              12
## 1622    65   200    1  12000  12.000    White       12              NA
## 1623    65   130    0  15000  15.000    White       14              14
## 1624    61   110    0  20000  20.000    White       14              14
## 1625    68   200    0  15000  15.000    White       16              16
## 1626    64   134    0  28000  28.000    White       14              14
## 1627    66   140    0    265   0.265    White       15              15
## 1628    69   157    1  35000  35.000    White       14              14
## 1629    67    NA    0  25000  25.000    White       12              12
## 1630    66   165    0  26000  26.000 Hispanic       14              14
## 1631    67   118    0  27000  27.000    White       17              17
## 1632    68   180    0  14000  14.000    White       12              12
## 1633    66   140    1  32000  32.000    White       16              16
## 1634    69   112    0  10000  10.000    White       14              14
## 1635    72   135    1  15000  15.000    White       12              12
## 1636    69   190    1   7000   7.000    White       16              16
## 1637    71   182    1  28000  28.000    White       17              17
## 1638    74   250    1  60000  60.000    White       13              13
## 1639    60   130    0  25000  25.000    White       14              14
## 1640    69   170    1  12000  12.000    White        4               4
## 1641    65    NA    0      0   0.000    White       13              13
## 1642    65    NA    0      0   0.000    White       12              12
## 1643    75   200    0  15000  15.000    White       13              13
## 1644    65   125    0  40000  40.000    White       14              14
## 1645    63   110    0  25000  25.000    White       16              16
```

```
## 1646     72    135    1  15000  15.000     White         6              NA
## 1647     60    112    0  35000  35.000     White        12              12
## 1648     72    225    1  15000  15.000     White        11              NA
## 1649     64    120    0  26000  26.000     White        15              15
## 1650     59    100    0      0   0.000     Black        12              12
## 1651     71    170    1      0   0.000     Other        12              12
## 1652     72    165    1  26000  26.000  Hispanic        16              16
## 1653     63    108    0  18720  18.720     Black        10              10
## 1654     68    155    0      0   0.000     Black        12              12
## 1655     62    148    0   5000   5.000     Other        11              NA
## 1656     64    152    0  12000  12.000     Black        12              NA
## 1657     70    210    1  80000  80.000     White        17              17
## 1658     66    120    0  48000  48.000     White        13              13
## 1659     63    125    0   5000   5.000     White        18              18
## 1660     62    135    1  18000  18.000     Other        16              16
## 1661     70    150    1  85000  85.000     White        15              15
## 1662     64    175    0  35000  35.000     Black        12              12
## 1663     69    150    1   5000   5.000     White        16              16
## 1664     64    140    0   9000   9.000  Hispanic        13              13
## 1665     67    125    0  30000  30.000     White        16              16
## 1666     72    250    1  80000  80.000     White        14              14
## 1667     65    124    0  35000  35.000     White        16              16
## 1668     63    210    0  12000  12.000     White        14              14
## 1669     70    190    1 200000 200.000     White        18              18
## 1670     64    128    0   4000   4.000     White        16              16
## 1671     68    165    1   2000   2.000     White        12              12
## 1672     66    190    0  24000  24.000     White        18              18
## 1673     66    165    1   2000   2.000  Hispanic        15              15
## 1674     70    185    1  15000  15.000     White        17              17
## 1675     70    225    1  15000  15.000     White        12              12
## 1676     62    150    0   6000   6.000     White        12              12
## 1677     66    150    1   5000   5.000     White        12              12
## 1678     66    130    0   1500   1.500  Hispanic        12              NA
## 1679     64    130    0  28000  28.000     White        18              18
## 1680     70    150    0   9000   9.000     White        12              12
## 1681     74    175    1  60000  60.000     White        14              14
## 1682     66    150    1   1200   1.200     White        12              12
## 1683     62    185    0   1400   1.400  Hispanic         3               3
## 1684     68    160    0  15000  15.000     White        16              16
## 1685     66    180    0   7000   7.000     White        13              13
## 1686     70    190    1  25000  25.000     White        12              NA
## 1687     62    130    0  21000  21.000     White        12              12
## 1688     69    107    1  44000  44.000     White        12              12
## 1689     68    164    1  29000  29.000     Black        16              16
## 1690     72    165    1   3000   3.000  Hispanic        14              14
## 1691     64    140    1  12000  12.000     Black        13              13
## 1692     64    110    0      0   0.000  Hispanic        16              16
## 1693     60    200    0      0   0.000  Hispanic         9               9
## 1694     72    195    1  20000  20.000  Hispanic        12              12
## 1695     62    146    0   1200   1.200     Black         5              NA
## 1696     64    104    0  25000  25.000     White        12              12
## 1697     74    215    1  37000  37.000     White        16              16
## 1698     66    150    1   8000   8.000     Other        10              NA
## 1699     68    135    1  35000  35.000  Hispanic        16              16
```

```
## 1700     67    145    1  25000  25.000  Hispanic        14                14
## 1701     62    110    1  25000  25.000     Other        14                14
## 1702     71    160    0  18000  18.000     White        10                10
## 1703     63    130    0  30000  30.000     Black        16                16
## 1704     66    133    1   5000   5.000     Other        14                14
## 1705     69    165    1  20000  20.000     White        18                18
## 1706     71    160    1  12000  12.000  Hispanic         6                 6
## 1707     64    180    0      0   0.000  Hispanic        12                NA
## 1708     66    125    0  10000  10.000     White        12                12
## 1709     72    195    1  18000  18.000     White        14                NA
## 1710     62    115    0      0   0.000  Hispanic        15                15
## 1711     65    130    0  15000  15.000  Hispanic        12                12
## 1712     72    181    1  20000  20.000     Black        12                NA
## 1713     68    150    0  31000  31.000     White        16                16
## 1714     70    160    1  25000  25.000     Black        12                NA
## 1715     64    150    1   6000   6.000  Hispanic        10                10
## 1716     64    140    0      0   0.000     White        12                12
## 1717     68    182    1  35000  35.000     Black        12                12
## 1718     70    150    1  12000  12.000     White        13                13
## 1719     66    155    0  13000  13.000     White        16                16
## 1720     67    210    0  26000  26.000     White        17                17
## 1721     68    130    0  15000  15.000     Black        11                11
## 1722     64    140    0  30000  30.000     White        17                17
## 1723     65    122    0   2000   2.000     White        14                14
## 1724     70    150    1   5000   5.000     Other        13                13
## 1725     71    150    0  53000  53.000     White        14                14
## 1726     64    127    0      0   0.000     White        12                12
## 1727     62    102    0   2000   2.000     White        13                13
## 1728     71    155    1  25000  25.000     White        17                17
## 1729     74    185    1   5000   5.000     White        12                12
## 1730     64    105    0  21000  21.000     White        13                13
## 1731     64     NA    0  15000  15.000     White        14                14
## 1732     70    130    0  17000  17.000     White        15                15
## 1733     73    155    1   5000   5.000     White        16                16
## 1734     64    135    0  12000  12.000     White        13                13
## 1735     70    230    1  42000  42.000  Hispanic        14                14
## 1736     74    205    1  21000  21.000     White        12                12
## 1737     63    170    0   6000   6.000  Hispanic        12                12
## 1738     59    107    0      0   0.000  Hispanic        12                12
## 1739     74    190    1  25000  25.000     White        14                14
## 1740     66    119    0   3000   3.000     White        14                14
## 1741     65    150    0   3600   3.600     White        15                NA
## 1742     71    155    1   4000   4.000     White        12                12
## 1743     69    160    1  20000  20.000     White        14                NA
## 1744     72    160    1  45000  45.000     White        18                18
## 1745     70    165    1 136500 136.500     White        16                16
## 1746     60    220    1  52000  52.000     White        15                15
## 1747     64    130    0  60000  60.000     White        12                12
## 1748     64    122    0  15000  15.000     White        13                NA
## 1749     72    190    1  90000  90.000     White        16                16
## 1750     63    160    0  35000  35.000     White        12                NA
## 1751     72    156    1  25000  25.000  Hispanic        13                13
## 1752     66    185    1  15000  15.000     White        12                12
## 1753     61    180    0  26000  26.000     White        14                14
```

```
## 1754    62    150    0      0   0.000  Hispanic        13              NA
## 1755    69    140    1   2000   2.000     White        12              12
## 1756    67    145    0  16000  16.000     White        12              NA
## 1757    65    130    0  24000  24.000  Hispanic        11              NA
## 1758    68    172    1  15000  15.000  Hispanic        16              16
## 1759    74    170    1  42000  42.000     White        17              17
## 1760    63    150    0      0   0.000     White        15              15
## 1761    65    135    0  10000  10.000     White        12              12
## 1762    71    220    1  17000  17.000  Hispanic        13              13
## 1763    64     NA    0  30000  30.000     White        14              14
## 1764    65    120    0      0   0.000     White        16              16
## 1765    69    160    0  32000  32.000     White        17              17
## 1766    64    135    0  36000  36.000  Hispanic        17              17
## 1767    72    190    1  10000  10.000  Hispanic        13              13
## 1768    63    130    0  20000  20.000     White        15              15
## 1769    65    110    0  24000  24.000     White        12              12
## 1770    72    180    1  17000  17.000     White        12              12
## 1771    65    137    0  23000  23.000     White        14              14
## 1772    64    125    0  25000  25.000     White        12              12
## 1773    71    200    1  50000  50.000     White        12              12
## 1774    63    145    0      0   0.000     White        14              14
## 1775    62    120    0  20000  20.000     White        12              12
## 1776    66    145    0  30000  30.000     White        16              16
## 1777    64    190    0   7000   7.000     White        10              10
## 1778    67    120    1   7000   7.000     White        10              10
## 1779    68    185    1  30000  30.000     White        11              11
## 1780    66    130    0   3000   3.000     White        12              12
## 1781    66    145    0  20000  20.000     White        14              14
## 1782    66    139    0  40000  40.000     White        16              16
## 1783    67    150    1  10000  10.000     White        12              12
## 1784    66    240    1  16000  16.000     White        12              12
## 1785    63    225    0  11000  11.000     White         9               9
## 1786    68    175    0  16000  16.000     White        13              13
## 1787    70    185    1  18000  18.000     White        12              12
## 1788    63    115    0  12000  12.000     White        16              16
## 1789    70    170    1   4000   4.000     Black        14              14
## 1790    72    195    1  60000  60.000     White        12              12
## 1791    75    180    1  43000  43.000     White        17              17
## 1792    62    180    0  31000  31.000     White        14              14
## 1793    68    150    0  50000  50.000     White        17              17
## 1794    68    165    0  27000  27.000     White        14              14
## 1795    70    158    1  30000  30.000     White        17              17
## 1796    73    195    1  12000  12.000     Black        13              NA
## 1797    66    160    1 136500 136.500     White        18              18
## 1798    69    124    0      0   0.000     White        16              16
## 1799    62    140    0  20000  20.000     White        17              17
## 1800    60    120    0  15000  15.000     Black        12              12
## 1801    64    150    0  25000  25.000     Other        16              16
## 1802    68    190    1   5000   5.000  Hispanic        12              12
## 1803    60    125    0   2000   2.000  Hispanic         6              NA
## 1804    60    140    0   5000   5.000     White        14              14
## 1805    73    170    1   3000   3.000  Hispanic        15              15
## 1806    64    138    0  25000  25.000     Black        16              16
## 1807    66    130    0 110000 110.000     Other        18              18
```

```
## 1808     69    155    1  55000  55.000     White        18                18
## 1809     70    170    1  58000  58.000     White        18                18
## 1810     70    165    0  10000  10.000     White        16                16
## 1811     72    165    1  19000  19.000     White        12                12
## 1812     61    120    0  15000  15.000     White        18                18
## 1813     64    130    0   8000   8.000     White        12                12
## 1814     72    194    1  60000  60.000     White        12                12
## 1815     63    155    0  15000  15.000     Other        14                14
## 1816     68    150    1   6000   6.000     White        12                12
##      father_education walk exercise smokenow tense angry age
## 1                  16    3        3        2     0     0  45
## 2                  16    6        5        1     0     0  58
## 3                  16    8        1        2     1     1  29
## 4                  NA    8        1        2     0     0  57
## 5                  16    5        6        2     0     0  91
## 6                  18    1        1        2     2     2  54
## 7                  17    3        1        2     4     4  39
## 8                  15    7        4        1     4     4  26
## 9                  12    2        2        2     0     0  49
## 10                 17    7        1        1     0     0  46
## 11                 15    8        1        2     0     0  21
## 12                 99    1        1        2     0     0  53
## 13                 12    1        2        2     1     1  26
## 14                 NA    4        1        2     0     0  65
## 15                 14    7        4        2     2     2  50
## 16                 NA    7        4        2     0     0  34
## 17                 12    6        5        2     2     2  27
## 18                 18    4        6        2     0     0  51
## 19                 12    5        1        2     1     1  51
## 20                 11    8        1        1     0     0  45
## 21                 12    4        2        1     7     7  27
## 22                 12    1        4        1     0     0  41
## 23                 16    5        1        2     1     1  35
## 24                 16    5        4        2     1     1  29
## 25                 14    7        4        2     0     0  22
## 26                 12    8        1        2     0     0  58
## 27                 14    8        7        2     1     1  29
## 28                 13    8        2        2     4     4  44
## 29                  9    1        1        1     0     0  21
## 30                 12    8        1        2     4     4  55
## 31                 13    6        7        2     2     2  35
## 32                 NA    3        1        1     7     7  23
## 33                 13    2        1        1     0     0  51
## 34                 14    5        3        2     0     0  21
## 35                 14    8        7        2     1     1  36
## 36                 14    6        7        2     0     0  22
## 37                 12    4        4        2     0     0  41
## 38                 NA    2        1        2     0     0  45
## 39                 12    4        1        1     7     7  23
## 40                 12    8        3        2     3     3  35
## 41                 NA    2        7        1     1     1  21
## 42                 16    2        1        1     0     0  60
## 43                 NA    8        1        2     2     2  44
## 44                 12    1        1        2     0     0  69
```

```
## 45                12     8         1         2      0      0  44
## 46                16     5         6         2      1      1  38
## 47                NA     3         1         2      0      0  55
## 48                16     7         7         2      0      0  33
## 49                10     8         1         2      0      0  19
## 50                14     4         1         2      3      3  25
## 51                12     1         5         2      7      7  33
## 52                16     5         1         2      1      1  72
## 53                17     8         5         2      4      4  39
## 54                17     5         2         2      0      0  31
## 55                12     8         1         2      7      7  26
## 56                12     7         3         2      0      0  51
## 57                14     8         1         1      0      0  78
## 58                12     7         2         1      0      0  46
## 59                14     8         6         2      7      7  31
## 60                12     8         1         1      0      0  57
## 61                14     5         1         2      0      0  26
## 62                16     7         2         1      0      0  44
## 63                15     1         1         2      1      1  65
## 64                12     8         7         2      2      2  30
## 65                12     1         7         2      1      1  41
## 66                18     4         5         1      1      1  29
## 67                17     7         2         2      1      1  30
## 68                12     5         1         2      0      0  57
## 69                12     2         1         2      0      0  21
## 70                13     5         6         2      0      0  32
## 71                12     2         1         1      7      7  29
## 72                10     4         7         2      0      0  18
## 73                 8     8         1         2      5      5  56
## 74                12     1         1         2      0      0  65
## 75                17     5         5         2      0      0  41
## 76                17     5         5         2      2      2  49
## 77                12     7         4         2      1      1  23
## 78                12     1         1         1      0      0  65
## 79                12     8         7         1      1      1  28
## 80                NA     1         2         1      0      0  32
## 81                13     6         6         2      0      0  18
## 82                16     8         6         2      1      1  22
## 83                14     4         1         2      0      0  55
## 84                12     8         1         2      0      0  57
## 85                16     2         6         2      4      4  29
## 86                 8     1         1         1      0      0  63
## 87                18     1         1         2      0      0  60
## 88                14     4         6         2      0      0  27
## 89                13     8         3         2      1      1  30
## 90                12     5         2         2      2      2  33
## 91                NA     4         1         2      3      3  26
## 92                NA     1         1         2      0      0  28
## 93                18     8         2         2      0      0  67
## 94                14     8         7         2      5      5  43
## 95                12     3         7         1      0      0  73
## 96                NA     2         1         2      0      0  68
## 97                NA     5         1         2      0      0  52
## 98                NA     1         1         2      0      0  78
```

```
## 99                12     1       6       2     0     0  39
## 100               16     8       1       2     3     3  53
## 101               16     2       5       2     3     3  27
## 102               15     1       1       2     2     2  21
## 103               14     1       1       2     0     0  39
## 104               16     4       5       2     0     0  35
## 105               13     8       7       2     1     1  22
## 106               12     1       3       2     0     0  31
## 107               13     7       1       2     0     0  63
## 108               13     4       1       1     0     0  68
## 109               12     8       6       1     0     0  47
## 110                8     7       1       2     0     0  77
## 111               16     3       6       2     0     0  51
## 112               15     8       1       1     2     2  67
## 113               14     4       1       1     0     0  38
## 114               12     8       2       2     0     0  39
## 115               12     8       6       2     0     0  43
## 116               NA     4       4       2     0     0  73
## 117                8     8       4       1     1     1  39
## 118               12     4       6       2     2     2  32
## 119               12     5       6       2     1     1  33
## 120               12     6       4       2     5     5  38
## 121               13     7       2       1     0     0  26
## 122               13     1       1       2     5     5  63
## 123               10     2       1       2     0     0  61
## 124               12     3       1       2     1     1  36
## 125               14     8       7       2     0     0  23
## 126               18     8       7       2     1     1  57
## 127               NA     1       4       2     0     0  82
## 128               12     3       1       2     4     4  59
## 129               18     8       1       2     0     0  76
## 130               12     7       7       2     2     2  20
## 131               NA     6       4       2     0     0  69
## 132               16     4       5       2     0     0  32
## 133               16     1       4       1     0     0  27
## 134               12     8       6       1     0     0  22
## 135               12     7       7       2     0     0  73
## 136               NA     8       1       2     0     0  63
## 137               NA     8       7       2     0     0  56
## 138               NA     8       7       2     0     0  89
## 139               18     5       2       2     0     0  65
## 140               17     7       1       2     0     0  79
## 141               18     8       1       2     0     0  63
## 142               12     8       1       2     0     0  56
## 143               NA     4       7       2     3     3  21
## 144               12     7       1       1     0     0  66
## 145               NA     4       5       2     5     5  74
## 146               18     8       3       2     1     1  42
## 147               NA     8       1       2     3     3  33
## 148               14     8       1       1     7     7  30
## 149               NA     1       7       2     2     2  23
## 150               13     2       1       2     0     0  43
## 151               12     7       7       2     0     0  30
## 152               12     7       1       2     7     7  37
```

```
## 153              12    4       7       2     0     0  22
## 154              17    3       1       2     0     0  43
## 155              11    4       4       2     2     2  37
## 156              17    7       6       2     2     2  44
## 157              14    4       4       1     0     0  43
## 158              12    4       3       1     2     2  29
## 159              16    8       2       2     0     0  32
## 160              16    1       1       2     1     1  91
## 161              16    1       7       2     1     1  30
## 162              12    4       1       2     0     0  58
## 163              NA    8       1       1     0     0  76
## 164              12    8       1       1     3     3  44
## 165              17    8       6       2     5     5  30
## 166              12    7       1       2     2     2  51
## 167              18    7       5       2     1     1  35
## 168              18    4       7       2     2     2  43
## 169              12    5       1       1     7     7  28
## 170              16    8       1       2     0     0  38
## 171              12    4       5       2     2     2  40
## 172              16    1       4       2     1     1  24
## 173              18    4       1       2     1     1  30
## 174              12    8       1       1     0     0  59
## 175              15    8       4       1     0     0  26
## 176              15    4       5       1     2     2  21
## 177              12    7       6       2     0     0  39
## 178              16    5       1       2     2     2  35
## 179              13    8       1       2     7     7  31
## 180              12    7       4       1     3     3  38
## 181              14    5       4       1     2     2  35
## 182              16    8       1       2     0     0  60
## 183              16    8       4       1     0     0  41
## 184              12    8       6       1     0     0  39
## 185              18    4       4       1     0     0  40
## 186              14    4       7       2     2     2  43
## 187              NA    8       7       2     2     2  24
## 188              15    6       1       2     0     0  31
## 189              16    5       1       2     6     6  32
## 190              16    3       1       2     7     7  40
## 191              17    6       3       2     5     5  42
## 192              12    1       1       2     7     7  39
## 193              17    6       1       2     0     0  62
## 194              14    8       6       1     0     0  31
## 195              14    8       1       2     0     0  71
## 196              14    1       6       2     0     0  31
## 197              12    6       4       2     3     3  32
## 198              12    3       3       1     1     1  30
## 199              NA    6       1       2     3     3  69
## 200              13    6       1       2     0     0  56
## 201              14    6       7       2     3     3  36
## 202              17    8       1       2     0     0  32
## 203              13    7       1       2     7     7  44
## 204              14    6       2       2     1     1  44
## 205              NA    7       7       2     0     0  20
## 206              NA    6       1       2     1     1  51
```

```
## 207                 18     3         2         2     4     4  56
## 208                 12     8         1         2     1     1  38
## 209                 12     2         5         1     3     3  20
## 210                 13     8         3         1     0     0  45
## 211                 15     1         1         2     0     0  23
## 212                 12     8         4         2     5     5  50
## 213                 16     3         4         2     7     7  22
## 214                 10     8         7         1     0     0  50
## 215                 15     2         1         2     2     2  42
## 216                 15     5         7         2     0     0  28
## 217                 12     8         1         1     3     3  27
## 218                 14     8         6         1     2     2  28
## 219                  8     4         1         2     2     2  43
## 220                 12     8         7         2     6     6  26
## 221                 NA     5         2         1     0     0  42
## 222                 NA     1         1         2     0     0  32
## 223                 12     6         7         1     5     5  18
## 224                 12     8         1         2     0     0  60
## 225                 NA     8         2         2     2     2  67
## 226                 16     7         3         2     0     0  46
## 227                 14     8         3         2     0     0  39
## 228                 12     8         1         2     0     0  46
## 229                  8     3         1         1     0     0  53
## 230                 12     8         1         2     0     0  49
## 231                 16     8         1         1     1     1  34
## 232                 NA     1         1         2     0     0  35
## 233                 13     7         6         2     3     3  38
## 234                 NA     8         1         1     6     6  57
## 235                 NA     8         1         2     0     0  48
## 236                 NA     2         1         2     0     0  88
## 237                 14     8         1         2     0     0  64
## 238                 NA     4         6         2     0     0  24
## 239                 14     4         5         1     0     0  32
## 240                 16     8         4         2     4     4  61
## 241                 16     4         4         2     2     2  48
## 242                 12     8         6         2     0     0  19
## 243                 18     8         1         1     0     0  55
## 244                 14     8         2         1     0     0  49
## 245                 NA     5         1         2     5     5  36
## 246                 12     1         1         2     0     0  56
## 247                 16     8         6         2     0     0  38
## 248                 12     8         1         2     7     7  37
## 249                 12     8         7         2     0     0  74
## 250                 NA     8         1         2     0     0  72
## 251                 12     4         7         1     7     7  49
## 252                 16     1         6         2     1     1  46
## 253                 NA     4         1         2     3     3  63
## 254                 18     8         2         2     0     0  63
## 255                 17     7         1         2     3     3  43
## 256                 16     5         5         2     0     0  25
## 257                 NA     1         1         1     0     0  77
## 258                 12     8         2         2     7     7  50
## 259                  9     2         1         2     0     0  67
## 260                 12     8         1         2     0     0  42
```

```
## 261   12  3  1  2  0  0 49
## 262   14  8  6  2  0  0 20
## 263   13  7  7  1  0  0 37
## 264    8  8  7  1  0  0 24
## 265   12  3  1  2  3  3 36
## 266   16  6  4  2  7  7 35
## 267   12  5  1  2  0  0 65
## 268   12  5  1  2  0  0 67
## 269   12  8  1  2  1  1 62
## 270   16  8  1  2  0  0 72
## 271   14  7  1  2  0  0 57
## 272   15  3  7  2  1  1 38
## 273   14  1  7  2  2  2 43
## 274   18  4  1  2  7  7 45
## 275   12  3  1  1  2  2 47
## 276   16  1  1  2  1  1 28
## 277   13  2  2  1  7  7 31
## 278   12  2  1  2  3  3 41
## 279   14  8  7  2  0  0 32
## 280   15  8  1  2  0  0 47
## 281   12  1  1  1  3  3 62
## 282   13  8  4  1  4  4 30
## 283   15  6  6  2  0  0 39
## 284   12  8  5  2  1  1 38
## 285   12  7  6  2  0  0 39
## 286   NA  1  1  1  0  0 68
## 287   12  7  1  1  0  0 50
## 288   18  5  2  2  0  0 50
## 289   NA  8  1  1  0  0 51
## 290   12  8  7  2  0  0 58
## 291   12  7  7  2  4  4 27
## 292   14  4  2  2  0  0 22
## 293   12  6  1  2  3  3 77
## 294   18  7  2  2  3  3 51
## 295   13  5  1  1  5  5 32
## 296   14  4  2  2  0  0 54
## 297   NA  1  1  1  0  0 28
## 298   12  8  4  2  0  0 24
## 299   16  8  4  2  1  1 46
## 300   12  7  1  1  0  0 38
## 301   18  8  4  2  0  0 44
## 302   15  2  1  2  1  1 65
## 303   14  6  6  2  0  0 32
## 304   12  8  1  1  0  0 33
## 305   18  5  2  2  0  0 35
## 306   17  8  5  2  1  1 50
## 307   18  5  4  2  0  0 45
## 308   11  8  5  2  2  2 29
## 309   16  1  7  2  0  0 33
## 310   16  5  6  2  1  1 38
## 311   14  5  7  2  3  3 30
## 312   12  2  3  2  0  0 22
## 313   13  2  1  1  1  1 43
## 314   12  2  1  1  7  7 31
```

```
## 315   12  2  2  1  4  4 21
## 316   12  2  1  1  7  7 18
## 317   16  8  1  2  0  0 73
## 318   12  5  6  1  0  0 30
## 319   14  2  1  1  2  2 28
## 320   14  7  6  2  0  0 22
## 321   17  8  6  2  3  3 41
## 322   14  8  1  2  0  0 55
## 323   NA  3  2  2  2  2 39
## 324   14  8  3  2  0  0 51
## 325   15  8  6  2  3  3 41
## 326   NA  7  5  1  0  0 34
## 327   12  8  3  1  5  5 20
## 328   14  3  1  2  0  0 69
## 329   15  8  7  2  0  0 39
## 330   NA  3  7  2  0  0 64
## 331   14  7  7  2  2  2 34
## 332   14  8  7  2  0  0 63
## 333   13  8  2  1  0  0 44
## 334   13  5  7  2  0  0 19
## 335   12  5  6  2  0  0 38
## 336   16  8  1  2  3  3 34
## 337   18  3  1  2  5  5 39
## 338   10  7  1  2  0  0 82
## 339   13  8  1  2  5  5 39
## 340   12  8  6  2  0  0 23
## 341   NA  6  1  1  7  7 32
## 342   12  8  3  2  0  0 28
## 343   12  4  4  2  1  1 41
## 344   11  6  5  1  1  1 54
## 345   11  5  3  2  0  0 29
## 346   NA  1  1  2  0  0 21
## 347   12  8  1  2  1  1 38
## 348   18  5  7  2  0  0 30
## 349   12  1  2  2  1  1 33
## 350   12  8  1  2  0  0 61
## 351    7  1  1  1  0  0 77
## 352   12  8  4  1  2  2 37
## 353   NA  5  1  2  0  0 61
## 354   18  3  3  2  0  0 29
## 355   12  8  1  1  3  3 29
## 356   12  2  7  2  1  1 21
## 357   NA  1  1  1  2  2 48
## 358    8  8  7  2  0  0 78
## 359   NA  5  1  2  2  2 80
## 360   NA  8  1  2  3  3 23
## 361   16  8  1  2  0  0 65
## 362   14  8  7  2  0  0 28
## 363   NA  6  3  1  1  1 33
## 364   17  6  1  1  0  0 24
## 365   12  4  1  2  3  3 29
## 366   NA  7  4  2  1  1 42
## 367   16  7  7  2  2  2 22
## 368   12  1  4  2  7  7 52
```

```
## 369                NA    8        3        2     5     5  37
## 370                14    1        4        1     7     7  29
## 371                17    1        1        2     4     4  41
## 372                13    1        1        1     7     7  35
## 373                NA    1        1        1     0     0  48
## 374                14    6        1        2     7     7  37
## 375                14    1        4        1     4     4  40
## 376                15    2        1        2     5     5  26
## 377                16    5        6        2     0     0  47
## 378                12    4        1        2     0     0  75
## 379                12    4        4        2     0     0  49
## 380                NA    7        7        2     7     7  35
## 381                NA    8        6        2     0     0  60
## 382                12    1        1        1     0     0  41
## 383                18    8        1        2     1     1  58
## 384                14    2        1        2     0     0  48
## 385                12    6        1        1     6     6  21
## 386                10    8        1        1     0     0  82
## 387                13    8        1        2     0     0  76
## 388                12    2        1        2     3     3  29
## 389                12    8        6        1     0     0  34
## 390                16    2        6        2     2     2  23
## 391                12    7        5        1     0     0  27
## 392                11    8        7        1     0     0  34
## 393                12    6        1        2     0     0  25
## 394                17    5        5        2     1     1  26
## 395                13    7        7        2     7     7  28
## 396                12    1        1        2     0     0  32
## 397                16    7        6        2     0     0  26
## 398                16    6        4        2     1     1  42
## 399                14    8        1        2     0     0  67
## 400                 8    2        7        1     0     0  53
## 401                NA    1        1        2     0     0  77
## 402                16    3        2        2     0     0  53
## 403                12    8        2        1     0     0  38
## 404                17    4        2        2     0     0  49
## 405                18    7        2        2     0     0  54
## 406                18    2        1        2     2     2  41
## 407                12    1        1        1     1     1  63
## 408                10    6        1        2     0     0  48
## 409                12    1        1        2     0     0  37
## 410                 5    7        1        2     0     0  58
## 411                14    5        1        2     0     0  45
## 412                12    1        7        2     0     0  24
## 413                12    4        2        2     1     1  38
## 414                16    8        4        2     0     0  41
## 415                17    4        1        2     0     0  26
## 416                14    7        6        2     3     3  28
## 417                16    3        1        2     5     5  39
## 418                18    2        5        2     0     0  50
## 419                16    2        6        2     0     0  29
## 420                13    8        7        2     2     2  32
## 421                13    8        4        2     0     0  44
## 422                NA    3        1        2     2     2  19
```

```
## 423   NA    5       1       2     1     1  34
## 424   12    6       6       1     2     2  23
## 425    8    1       7       1     6     6  58
## 426   12    1       2       2     5     5  24
## 427   14    8       5       2     1     1  33
## 428   NA    7       1       2     0     0  55
## 429   13    2       1       2     0     0  30
## 430   12    4       2       2     1     1  18
## 431   15    7       7       2     0     0  36
## 432   12    8       2       2     0     0  68
## 433   NA    6       1       2     0     0  85
## 434   13    6       1       2     0     0  57
## 435   15    4       7       2     0     0  53
## 436   12    8       1       2     7     7  36
## 437   NA    7       7       2     0     0  33
## 438   12    4       1       2     2     2  91
## 439   NA    2       1       2     0     0  60
## 440   12    7       7       2     0     0  39
## 441   12    7       7       2     5     5  35
## 442   12    5       4       2     6     6  33
## 443   18    4       7       2     2     2  47
## 444   13    1       1       2     1     1  36
## 445   16    7       6       2     0     0  35
## 446   12    8       3       2     0     0  61
## 447   12    8       2       2     7     7  42
## 448   16    5       1       2     0     0  32
## 449   12    4       1       1     2     2  31
## 450   12    3       1       1     0     0  39
## 451   16    2       1       1     0     0  44
## 452   12    3       1       2     1     1  31
## 453   NA    6       6       1     0     0  18
## 454   NA    7       6       1     0     0  71
## 455   12    7       1       2     1     1  36
## 456   13    7       1       2     2     2  27
## 457   16    8       1       2     5     5  41
## 458   16    4       2       2     0     0  33
## 459   NA    5       7       2     2     2  27
## 460   NA    5       6       2     5     5  30
## 461   14    1       5       2     0     0  43
## 462   12    8       2       1     7     7  24
## 463   12    3       1       2     2     2  23
## 464   12    8       1       1     1     1  28
## 465   14    4       3       1     0     0  44
## 466   14    7       1       2     0     0  25
## 467   17    2       1       2     0     0  38
## 468   13    1       5       1     0     0  38
## 469   16    7       7       2     0     0  23
## 470   12    7       6       2     2     2  24
## 471   13    5       3       2     2     2  41
## 472   12    8       1       2     0     0  59
## 473   12    4       5       2     0     0  66
## 474   12    8       2       2     2     2  19
## 475   16    4       1       2     1     1  48
## 476   11    8       4       2     0     0  32
```

```
## 477                NA     1         3         2      0      0  74
## 478                10     1         1         2      0      0  68
## 479                12     2         4         2      2      2  19
## 480                11     8         7         1      0      0  21
## 481                12     7         1         2      1      1  74
## 482                12     2         1         2      0      0  36
## 483                11     8         7         2      0      0  63
## 484                NA     8         3         2      0      0  29
## 485                18     4         5         2      3      3  26
## 486                12     6         1         2      0      0  45
## 487                NA     8         1         1      0      0  57
## 488                14     8         5         2      0      0  76
## 489                12     6         6         2      2      2  30
## 490                15     4         4         2      4      4  22
## 491                11     8         1         2      2      2  18
## 492                13     7         7         2      0      0  37
## 493                NA     8         4         2      0      0  53
## 494                 9     1         1         1      7      7  23
## 495                12     4         4         1      7      7  30
## 496                12     7         7         2      1      1  25
## 497                12     8         7         1      4      4  35
## 498                12     8         1         1      7      7  33
## 499                12     5         1         2      3      3  62
## 500                16     4         1         2      1      1  75
## 501                13     4         6         2      0      0  44
## 502                12     8         7         2      2      2  22
## 503                NA     8         5         2      0      0  68
## 504                18     3         6         2      1      1  40
## 505                14     1         4         1      3      3  30
## 506                16     2         2         2      1      1  36
## 507                13     2         4         1      7      7  27
## 508                12     1         1         2      1      1  22
## 509                12     5         6         2      2      2  20
## 510                NA     7         1         2      0      0  67
## 511                17     5         6         2      0      0  23
## 512                12     2         1         2      0      0  68
## 513                12     1         7         2      0      0  37
## 514                12     8         1         2      2      2  67
## 515                12     1         1         2      0      0  69
## 516                16     3         1         2      2      2  31
## 517                16     8         5         2      2      2  48
## 518                12     3         1         1      1      1  51
## 519                16     5         1         2      1      1  70
## 520                18     7         7         2      3      3  25
## 521                14     6         2         2      0      0  63
## 522                13     4         1         2      0      0  82
## 523                NA     1         1         1      0      0  81
## 524                15     8         1         2      0      0  79
## 525                18     4         1         1      2      2  52
## 526                NA     8         1         2      4      4  41
## 527                12     2         6         1      2      2  42
## 528                16     1         7         2      2      2  30
## 529                16     4         7         2      0      0  28
## 530                12     8         7         2      0      0  72
```

```
## 531                12    8        2        1     1     1  33
## 532                16    4        4        2     0     0  54
## 533                18    5        1        1     0     0  57
## 534                NA    1        7        1     0     0  28
## 535                12    5        5        2     2     2  51
## 536                12    3        1        1     0     0  35
## 537                12    4        1        1     4     4  30
## 538                14    8        1        2     2     2  35
## 539                NA    2        1        2     0     0  60
## 540                17    6        1        1     0     0  43
## 541                NA    7        5        2     0     0  74
## 542                13    8        4        1     0     0  29
## 543                 8    8        1        2     0     0  76
## 544                12    8        6        2     0     0  52
## 545                NA    5        1        2     2     2  39
## 546                18    1        4        2     0     0  38
## 547                12    2        1        2     0     0  32
## 548                15    8        6        2     1     1  31
## 549                16    8        2        2     7     7  37
## 550                NA    8        1        1     0     0  75
## 551                 8    1        1        1     2     2  53
## 552                18    3        6        2     0     0  69
## 553                18    4        1        2     1     1  65
## 554                16    8        1        2     0     0  36
## 555                17    8        6        2     2     2  41
## 556                14    8        2        2     1     1  39
## 557                14    8        2        1     7     7  29
## 558                NA    6        5        1     0     0  37
## 559                12    8        1        2     7     7  34
## 560                18    4        2        1     0     0  36
## 561                12    8        7        1     7     7  25
## 562                16    8        6        1     4     4  27
## 563                 8    5        5        1     0     0  20
## 564                12    8        2        1     7     7  25
## 565                10    8        5        2     3     3  38
## 566                NA    1        1        2     0     0  40
## 567                 8    1        1        1     3     3  67
## 568                15    2        4        2     3     3  25
## 569                NA    5        1        1     1     1  38
## 570                13    8        5        2     0     0  20
## 571                NA    8        7        2     1     1  19
## 572                16    7        1        2     7     7  32
## 573                12    5        7        1     7     7  23
## 574                17    7        6        2     0     0  34
## 575                16    5        5        1     0     0  41
## 576                13    4        2        2     1     1  26
## 577                16    7        1        2     1     1  40
## 578                12    4        1        2     0     0  69
## 579                NA    5        1        2     0     0  69
## 580                NA    8        1        2     1     1  91
## 581                12    8        1        2     5     5  18
## 582                12    8        7        1     0     0  38
## 583                14    7        2        2     0     0  19
## 584                14    8        7        1     0     0  34
```

```
## 585                13    7        1        2     7     7  26
## 586                NA    8        5        2     0     0  77
## 587                16    8        1        2     7     7  30
## 588                NA    8        1        1     7     7  52
## 589                12    8        5        2     0     0  26
## 590                18    5        5        2     0     0  37
## 591                13    8        4        1     2     2  37
## 592                NA    8        7        2     0     0  32
## 593                NA    5        6        2     0     0  55
## 594                13    4        4        2     0     0  78
## 595                14    8        5        2     0     0  78
## 596                12    7        5        2     7     7  32
## 597                12    8        7        1     1     1  23
## 598                12    5        1        1     7     7  29
## 599                12    8        4        1     0     0  36
## 600                18    4        7        1     1     1  46
## 601                NA    8        1        2     0     0  51
## 602                12    3        2        1     7     7  35
## 603                12    2        1        1     0     0  46
## 604                12    1        6        2     6     6  27
## 605                15    8        5        1     7     7  33
## 606                12    8        1        2     0     0  66
## 607                16    8        1        2     0     0  73
## 608                17    5        5        2     3     3  40
## 609                15    3        4        2     0     0  32
## 610                16    1        1        1     0     0  65
## 611                NA    1        6        2     0     0  54
## 612                12    8        1        2     0     0  71
## 613                15    4        4        2     4     4  39
## 614                14    1        1        2     0     0  72
## 615                12    8        1        2     0     0  74
## 616                NA    1        1        2     0     0  72
## 617                10    3        1        1     0     0  71
## 618                NA    5        4        1     0     0  28
## 619                14    5        5        2     0     0  31
## 620                15    1        1        2     2     2  32
## 621                NA    1        2        2     0     0  43
## 622                15    7        1        1     7     7  73
## 623                12    4        7        2     1     1  45
## 624                12    8        6        2     0     0  32
## 625                13    6        3        1     5     5  39
## 626                18    7        3        2     1     1  46
## 627                15    7        7        2     0     0  21
## 628                NA    8        2        2     0     0  75
## 629                14    7        1        1     1     1  41
## 630                12    8        5        2     5     5  30
## 631                NA    5        1        2     0     0  46
## 632                NA    2        2        1     2     2  42
## 633                14    4        3        1     2     2  49
## 634                NA    1        1        2     3     3  71
## 635                11    1        1        2     0     0  48
## 636                12    8        1        1     3     3  23
## 637                13    5        1        2     0     0  27
## 638                14    4        4        2     0     0  36
```

```
## 639   12  8  5  2  0  0 37
## 640   NA  8  4  1  0  0 47
## 641   NA  8  2  2  3  3 29
## 642   18  8  7  2  0  0 34
## 643   12  6  2  1  3  3 25
## 644   16  1  3  2  0  0 26
## 645   16  8  3  2  0  0 33
## 646   16  8  5  2  0  0 23
## 647   18  3  1  2  0  0 50
## 648   13  5  1  2  0  0 47
## 649   15  8  2  2  7  7 40
## 650   17  8  6  2  0  0 84
## 651   18  8  5  2  5  5 39
## 652   16  7  5  2  0  0 30
## 653   16  8  1  2  2  2 41
## 654   14  8  4  2  2  2 28
## 655   16  8  7  2  0  0 26
## 656   14  8  6  2  0  0 20
## 657   12  4  1  1  7  7 28
## 658   12  5  1  2  0  0 60
## 659    8  1  1  1  0  0 48
## 660   16  4  2  2  2  2 28
## 661   NA  8  1  2  0  0 56
## 662   NA  2  6  2  2  2 55
## 663   12  8  6  2  0  0 58
## 664   16  7  7  2  3  3 40
## 665   16  5  1  2  0  0 44
## 666   13  6  7  2  0  0 42
## 667   14  4  2  2  0  0 53
## 668   12  8  1  2  0  0 28
## 669   NA  8  1  2  0  0 40
## 670   12  6  2  2  0  0 37
## 671   12  8  1  2  1  1 20
## 672   12  2  1  2  0  0 56
## 673   14  1  1  2  0  0 31
## 674   13  7  6  2  0  0 34
## 675   NA  1  1  2  7  7 41
## 676   13  4  1  2  0  0 31
## 677   NA  8  1  2  1  1 59
## 678   12  4  4  1  4  4 32
## 679   14  8  5  2  2  2 41
## 680   NA  7  1  2  0  0 56
## 681   12  4  1  2  0  0 73
## 682    9  8  2  2  1  1 46
## 683   NA  4  1  1  1  1 58
## 684   NA  4  1  2  0  0 44
## 685   12  4  1  1  0  0 57
## 686   16  8  1  2  0  0 51
## 687   12  7  7  2  1  1 44
## 688   18  6  5  2  1  1 29
## 689   17  8  1  1  1  1 44
## 690   12  1  7  1  0  0 22
## 691    9  3  6  2  0  0 18
## 692   10  1  1  1  0  0 20
```

```
## 693   11    4    1    2    0    0  64
## 694   NA    8    1    2    1    1  71
## 695   15    8    5    1    3    3  49
## 696   11    8    1    2    0    0  51
## 697   NA    7    6    2    0    0  23
## 698   12    8    1    2    0    0  82
## 699   NA    8    1    1    7    7  48
## 700   12    2    2    2    3    3  42
## 701   NA    2    1    2    4    4  41
## 702   16    7    2    2    1    1  49
## 703   11    1    1    2    3    3  18
## 704   15    8    7    2    0    0  20
## 705   12    7    6    2    3    3  18
## 706   NA    8    1    2    0    0  51
## 707   18    8    1    2    0    0  35
## 708   18    5    7    2    5    5  36
## 709   NA    8    1    2    0    0  59
## 710   NA    1    5    1    7    7  24
## 711    8    4    1    1    1    1  36
## 712   NA    8    5    1    3    3  38
## 713   13    7    1    1    1    1  67
## 714   NA    8    6    1    0    0  37
## 715   18    7    7    1    0    0  69
## 716    8    4    1    2    0    0  44
## 717   13    7    1    2    1    1  40
## 718    9    8    1    2    0    0  50
## 719   12    5    5    2    3    3  25
## 720   16    1    4    1    0    0  31
## 721   16    8    7    2    4    4  25
## 722   16    1    7    2    6    6  36
## 723   14    3    2    2    4    4  27
## 724   12    4    2    1    0    0  30
## 725   12    1    2    1    2    2  21
## 726   14    4    5    2    5    5  37
## 727   12    4    7    2    5    5  28
## 728   14    1    1    2    2    2  40
## 729   16    3    7    2    1    1  23
## 730   NA    8    4    2    0    0  55
## 731   12    6    3    1    7    7  41
## 732   12    8    5    2    1    1  44
## 733   NA    8    1    2    0    0  70
## 734   NA    2    1    2    7    7  32
## 735   17    8    1    2    0    0  63
## 736   16    8    4    2    0    0  31
## 737   12    8    1    2    0    0  69
## 738   17    6    5    2    4    4  43
## 739   14    4    6    1    1    1  34
## 740   NA    5    1    2    0    0  72
## 741   12    6    5    2    0    0  33
## 742   10    8    3    1    7    7  24
## 743   NA    8    1    2    0    0  33
## 744   NA    5    1    1    1    1  53
## 745   15    7    7    1    1    1  42
## 746   12    1    1    2    7    7  24
```

```
## 747   16   8   6   2   0   0  32
## 748   12   4   4   2   0   0  45
## 749   17   6   1   2   7   7  38
## 750   13   5   7   1   0   0  57
## 751   NA   8   1   1   0   0  64
## 752   14   2   1   1   0   0  37
## 753   16   8   4   2   2   2  37
## 754   14   7   6   2   4   4  29
## 755   13   8   4   2   2   2  19
## 756   11   8   1   2   4   4  18
## 757   12   5   2   2   0   0  64
## 758   16   8   1   2   0   0  41
## 759   NA   8   1   1   3   3  36
## 760   12   7   4   2   1   1  57
## 761   NA   8   1   2   0   0  68
## 762   12   1   1   2   1   1  33
## 763   12   6   7   2   2   2  78
## 764   14   5   4   2   3   3  43
## 765   16   4   1   2   3   3  34
## 766   12   1   3   1   0   0  24
## 767   12   2   2   2   6   6  29
## 768   16   4   5   2   0   0  27
## 769   12   2   1   2   0   0  34
## 770   NA   8   7   2   2   2  20
## 771   11   4   1   2   1   1  57
## 772    9   7   4   2   1   1  25
## 773   18   7   1   2   0   0  65
## 774   12   8   2   1   3   3  35
## 775   14   8   6   2   0   0  61
## 776   12   8   7   1   0   0  55
## 777   12   2   2   1   4   4  38
## 778   NA   8   1   1   2   2  35
## 779   18   1   1   2   0   0  35
## 780   NA   2   1   2   0   0  71
## 781   18   6   7   1   4   4  31
## 782   12   8   7   1   0   0  40
## 783   12   8   1   2   0   0  67
## 784   12   2   2   1   0   0  19
## 785   18   7   7   2   0   0  30
## 786   13   1   1   1   7   7  31
## 787   16   6   2   2   6   6  29
## 788   12   8   6   2   0   0  26
## 789   12   8   1   2   1   1  34
## 790   13   7   2   2   2   2  33
## 791   12   3   6   1   1   1  27
## 792   12   2   1   1   1   1  29
## 793   16   2   6   2   7   7  32
## 794   14   2   7   1   1   1  25
## 795   10   8   6   1   6   6  21
## 796   14   4   6   2   1   1  21
## 797   14   7   4   2   1   1  21
## 798   16   4   1   1   1   1  40
## 799   12   8   1   2   2   2  42
## 800   13   5   6   2   2   2  37
```

```
## 801   16  7  6  2  0  0 31
## 802   14  7  2  2  1  1 24
## 803   12  8  4  2  0  0 22
## 804   10  8  1  1  0  0 74
## 805   12  5  4  1  7  7 33
## 806   13  4  2  2  1  1 31
## 807   NA  4  2  2  1  1 36
## 808   NA  8  5  2  0  0 62
## 809   16  8  2  2  5  5 19
## 810   11  3  2  1  7  7 23
## 811   NA  4  6  1  1  1 18
## 812   16  8  5  2  2  2 27
## 813   13  7  5  1  0  0 22
## 814   12  7  4  2  0  0 57
## 815   12  2  1  1  0  0 26
## 816   12  2  2  2  0  0 34
## 817   12  1  1  1  0  0 35
## 818   NA  1  1  2  3  3 80
## 819   12  7  1  1  7  7 34
## 820   14  8  7  2  2  2 38
## 821   14  4  1  2  0  0 34
## 822   NA  5  2  2  1  1 59
## 823   NA  8  1  2  0  0 78
## 824   14  7  1  2  1  1 32
## 825   12  8  1  1  0  0 19
## 826   12  2  5  1  0  0 29
## 827   14  5  5  2  0  0 54
## 828   12  8  6  1  1  1 26
## 829   12  4  1  2  7  7 62
## 830   13  8  5  1  0  0 33
## 831   NA  3  1  2  0  0 81
## 832   14  7  5  1  0  0 52
## 833   16  2  2  1  3  3 30
## 834   NA  8  1  2  0  0 67
## 835   12  5  4  2  2  2 32
## 836   11  1  1  1  0  0 47
## 837   NA  7  1  1  0  0 41
## 838   16  4  2  1  2  2 47
## 839   14  6  1  2  1  1 55
## 840    5  8  1  2  7  7 62
## 841   18  7  6  2  0  0 42
## 842   16  5  1  2  0  0 34
## 843   12  8  1  1  0  0 61
## 844   17  8  1  1  0  0 33
## 845   16  4  6  2  0  0 28
## 846   16  5  3  2  0  0 24
## 847   15  2  6  2  0  0 30
## 848   12  8  1  1  0  0 49
## 849   12  8  4  2  1  1 23
## 850   11  8  6  2  0  0 21
## 851   NA  7  2  1  0  0 28
## 852   12  8  6  2  0  0 29
## 853   NA  3  3  2  0  0 30
## 854   15  1  6  2  0  0 46
```

```
## 855                14    7        5        1     0     0  37
## 856                12    4        1        2     5     5  21
## 857                16    1        1        1     1     1  37
## 858                NA    4        1        2     0     0  58
## 859                12    4        5        2     2     2  27
## 860                14    8        6        2     7     7  36
## 861                12    6        1        1     3     3  51
## 862                12    1        3        2     1     1  37
## 863                12    2        1        2     0     0  63
## 864                NA    1        1        2     0     0  77
## 865                NA    7        3        2     7     7  30
## 866                NA    1        1        2     3     3  45
## 867                16    8        6        2     2     2  23
## 868                12    2        2        1     1     1  49
## 869                12    2        1        1     1     1  27
## 870                18    8        7        2     1     1  40
## 871                NA    1        1        1     0     0  61
## 872                12    1        1        1     0     0  51
## 873                14    1        1        2     7     7  56
## 874                12    2        1        1     3     3  26
## 875                18    1        7        2     0     0  25
## 876                NA    7        1        2     0     0  78
## 877                16    8        5        2     0     0  84
## 878                16    7        7        2     1     1  45
## 879                NA    8        1        1     0     0  61
## 880                13    6        4        2     0     0  20
## 881                17    8        2        2     0     0  42
## 882                14    8        1        2     3     3  69
## 883                18    8        1        2     0     0  38
## 884                18    5        6        1     0     0  43
## 885                12    8        1        1     0     0  33
## 886                16    1        1        2     1     1  54
## 887                18    8        6        2     0     0  33
## 888                15    8        1        2     0     0  40
## 889                17    4        2        1     0     0  62
## 890                NA    8        1        2     0     0  65
## 891                12    8        6        1     7     7  31
## 892                13    7        1        2     4     4  37
## 893                NA    4        1        2     3     3  39
## 894                15    8        1        2     0     0  38
## 895                12    4        1        1     7     7  26
## 896                11    7        6        1     1     1  78
## 897                NA    1        1        1     0     0  51
## 898                18    8        6        2     4     4  39
## 899                15    8        7        2     3     3  42
## 900                17    5        1        2     0     0  33
## 901                17    5        5        2     1     1  29
## 902                14    8        1        2     1     1  78
## 903                16    4        4        1     1     1  41
## 904                16    5        2        2     0     0  43
## 905                NA    7        1        2     2     2  23
## 906                14    8        1        1     0     0  37
## 907                12    7        5        2     0     0  42
## 908                NA    6        1        1     0     0  35
```

```
## 909                12     7       2       2     0     0  34
## 910                16     6       1       2     0     0  83
## 911                14     1       7       2     0     0  28
## 912                12     8       1       1     0     0  51
## 913                17     8       3       2     4     4  43
## 914                12     2       1       1     6     6  40
## 915                12     4       2       2     3     3  30
## 916                14     8       6       1     0     0  25
## 917                NA     3       1       2     0     0  62
## 918                NA     1       1       2     4     4  67
## 919                16     2       1       2     0     0  33
## 920                12     1       1       2     7     7  19
## 921                NA     8       1       1     0     0  64
## 922                16     8       1       2     0     0  43
## 923                NA     4       1       1     3     3  41
## 924                18     2       1       2     1     1  61
## 925                14     2       1       2     0     0  73
## 926                12     4       1       1     2     2  38
## 927                17     2       2       2     0     0  25
## 928                17     8       7       2     0     0  22
## 929                16     7       6       2     1     1  21
## 930                14     8       2       2     0     0  30
## 931                13     7       1       2     0     0  20
## 932                16     6       6       2     0     0  26
## 933                14     8       7       2     0     0  20
## 934                18     2       1       2     0     0  37
## 935                15     1       1       1     2     2  40
## 936                12     6       5       2     1     1  42
## 937                12     8       1       1     0     0  58
## 938                12     4       2       1     4     4  20
## 939                14     4       1       1     7     7  23
## 940                12     8       1       2     0     0  74
## 941                NA     1       1       2     0     0  35
## 942                NA     8       1       1     0     0  66
## 943                 8     4       1       1     3     3  52
## 944                17     7       2       2     0     0  39
## 945                12     1       1       2     0     0  34
## 946                12     4       1       2     0     0  41
## 947                12     2       6       2     2     2  24
## 948                NA     7       1       2     2     2  19
## 949                12     8       6       2     3     3  31
## 950                12     7       1       1     0     0  36
## 951                10     8       1       2     0     0  64
## 952                14     4       1       2     0     0  32
## 953                12     5       3       2     1     1  60
## 954                NA     8       1       2     0     0  63
## 955                12     8       5       2     3     3  43
## 956                NA     5       1       1     1     1  47
## 957                12     6       1       2     2     2  45
## 958                12     5       1       2     1     1  32
## 959                12     8       1       1     0     0  50
## 960                15     4       1       2     0     0  54
## 961                15     8       7       2     1     1  24
## 962                13     4       1       2     0     0  38
```

```
## 963              NA    2        1        2     0     0  71
## 964              14    5        5        2     1     1  24
## 965              12    7        1        2     2     2  38
## 966              12    6        1        2     2     2  60
## 967              16    1        1        1     0     0  34
## 968              11    7        5        1     0     0  31
## 969               8    1        1        2     0     0  57
## 970              14    8        5        2     1     1  20
## 971              17    2        2        2     1     1  41
## 972              16    5        4        1     0     0  52
## 973              18    8        1        2     0     0  39
## 974              17    5        7        2     7     7  25
## 975              12    1        7        1     1     1  22
## 976              12    8        6        2     1     1  27
## 977              18    8        7        2     0     0  30
## 978              17    8        7        2     0     0  26
## 979              12    8        1        1     0     0  44
## 980              12    1        1        2     0     0  58
## 981              13    5        2        1     0     0  31
## 982              NA    6        5        1     0     0  41
## 983              16    1        1        2     0     0  30
## 984              12    8        1        2     0     0  66
## 985              13    6        7        2     2     2  54
## 986              14    2        3        1     0     0  18
## 987              12    7        7        2     1     1  31
## 988              15    7        1        2     1     1  57
## 989               6    5        1        2     0     0  75
## 990              16    1        6        2     0     0  26
## 991              16    1        1        1     0     0  62
## 992              NA    7        2        2     3     3  33
## 993              12    8        1        1     0     0  64
## 994               8    8        4        2     2     2  22
## 995              12    6        1        1     0     0  49
## 996              14    8        6        2     1     1  27
## 997              12    8        1        2     0     0  57
## 998              NA    1        1        2     0     0  39
## 999              12    1        5        2     7     7  28
## 1000             12    1        2        2     0     0  46
## 1001             NA    2        2        2     2     2  45
## 1002             12    6        1        2     3     3  69
## 1003             NA    8        1        2     0     0  76
## 1004             NA    7        7        1     7     7  53
## 1005             14    2        4        2     0     0  35
## 1006             18    7        2        2     3     3  52
## 1007             17    7        1        1     0     0  61
## 1008             NA    4        1        2     0     0  53
## 1009             12    1        2        1     7     7  40
## 1010             NA    8        1        2     0     0  70
## 1011             16    7        1        2     0     0  73
## 1012             12    8        1        2     5     5  41
## 1013             16    4        6        2     0     0  42
## 1014             NA    1        7        2     1     1  22
## 1015             15    2        1        2     7     7  35
## 1016             16    2        2        1     0     0  25
```

```
## 1017    18    7    5    2    0    0  44
## 1018    12    4    5    2    3    3  19
## 1019    11    8    1    1    0    0  25
## 1020    16    8    6    2    0    0  56
## 1021    12    8    6    1    4    4  27
## 1022    NA    8    1    1    4    4  62
## 1023    17    7    4    2    0    0  54
## 1024    12    8    7    2    0    0  18
## 1025    NA    8    1    2    4    4  73
## 1026    12    8    2    1    1    1  31
## 1027    16    6    2    1    0    0  23
## 1028    NA    8    1    2    0    0  63
## 1029    NA    4    1    2    0    0  70
## 1030    13    7    6    2    0    0  42
## 1031    16    8    4    1    4    4  23
## 1032    16    7    5    2    0    0  63
## 1033    12    8    7    2    0    0  19
## 1034    12    2    2    2    0    0  20
## 1035    12    1    1    2    7    7  28
## 1036    12    2    1    1    1    1  32
## 1037    15    1    1    2    0    0  66
## 1038    12    8    5    2    0    0  67
## 1039    13    8    6    2    0    0  28
## 1040    NA    8    1    2    0    0  58
## 1041    16    7    5    2    0    0  41
## 1042    14    6    5    2    2    2  35
## 1043    16    8    2    2    1    1  39
## 1044    13    8    1    2    2    2  65
## 1045    15    8    2    1    0    0  60
## 1046    12    8    1    2    1    1  45
## 1047    16    8    4    2    0    0  62
## 1048    NA    8    1    2    7    7  64
## 1049    NA    8    6    1    7    7  29
## 1050    16    5    2    1    0    0  30
## 1051    NA    1    1    2    0    0  76
## 1052    12    1    1    2    0    0  82
## 1053    NA    2    7    2    0    0  28
## 1054     9    8    1    1    0    0  40
## 1055    14    7    3    1    0    0  38
## 1056    NA    8    1    1    0    0  58
## 1057     8    1    4    2    0    0  27
## 1058    17    1    1    2    3    3  26
## 1059    13    5    4    2    0    0  56
## 1060    12    8    2    2    1    1  38
## 1061    12    8    1    2    0    0  77
## 1062    13    8    4    2    0    0  32
## 1063    12    7    7    2    1    1  24
## 1064     7    7    1    2    1    1  49
## 1065    12    2    2    2    2    2  24
## 1066    14    6    3    2    1    1  22
## 1067    12    6    7    2    0    0  18
## 1068    12    6    4    2    2    2  18
## 1069    12    1    1    1    0    0  21
## 1070    12    2    1    1    3    3  40
```

```
## 1071   12  8  2  2  3  3 42
## 1072    6  8  1  2  0  0 61
## 1073   NA  1  4  2  0  0 63
## 1074   12  7  1  2  0  0 81
## 1075   NA  4  1  2  0  0 53
## 1076   12  5  2  2  0  0 33
## 1077   12  5  4  1  2  2 21
## 1078   12  3  3  2  3  3 91
## 1079   16  3  5  2  0  0 26
## 1080   11  8  7  2  2  2 34
## 1081   14  3  5  2  0  0 24
## 1082   NA  4  5  2  0  0 30
## 1083   14  8  1  2  4  4 21
## 1084   12  1  1  1  4  4 21
## 1085   12  6  1  2  7  7 46
## 1086   12  3  1  2  1  1 46
## 1087   18  8  1  2  0  0 42
## 1088   14  8  6  2  2  2 47
## 1089   16  8  5  2  2  2 41
## 1090   15  7  4  2  1  1 40
## 1091   12  6  3  2  0  0 40
## 1092   12  8  1  2  0  0 71
## 1093   12  5  3  1  3  3 25
## 1094   13  1  7  1  0  0 78
## 1095   14  3  1  2  4  4 26
## 1096   NA  8  1  2  0  0 66
## 1097   NA  1  1  2  1  1 73
## 1098   13  8  1  2  0  0 76
## 1099   13  8  1  1  0  0 33
## 1100    9  7  1  2  0  0 84
## 1101   10  6  1  1  0  0 58
## 1102   12  8  6  2  0  0 52
## 1103   12  7  4  1  0  0 43
## 1104   NA  8  1  1  0  0 57
## 1105   NA  2  1  2  0  0 46
## 1106   NA  1  1  1  0  0 61
## 1107   16  7  2  2  0  0 29
## 1108   12  4  1  2  5  5 33
## 1109   12  2  4  2  2  2 32
## 1110   16  6  5  2  0  0 30
## 1111   12  8  5  2  3  3 31
## 1112   NA  8  1  2  7  7 45
## 1113   10  4  1  2  0  0 75
## 1114   12  8  4  2  1  1 37
## 1115   NA  8  7  2  0  0 60
## 1116   NA  1  1  2  0  0 83
## 1117   NA  8  1  2  0  0 65
## 1118   12  8  1  2  7  7 28
## 1119   15  3  4  1  2  2 37
## 1120    8  5  1  2  0  0 33
## 1121   12  6  1  2  0  0 59
## 1122   13  7  1  2  0  0 61
## 1123   12  5  4  2  3  3 32
## 1124   12  1  1  2  0  0 36
```

```
## 1125  13  1  1  2  0  0 71
## 1126  13  1  2  2  0  0 36
## 1127  14  8  1  2  0  0 46
## 1128  12  8  6  2  0  0 29
## 1129  12  2  1  2  0  0 77
## 1130  12  7  2  2  0  0 47
## 1131  13  7  6  2  0  0 24
## 1132  17  4  2  2  0  0 25
## 1133  13  2  5  2  4  4 39
## 1134  12  4  1  2  0  0 52
## 1135  17  2  1  2  2  2 36
## 1136  14  8  4  2  0  0 26
## 1137  12  3  1  1  3  3 28
## 1138  14  8  3  2  0  0 58
## 1139   9  8  1  2  4  4 45
## 1140  NA  1  1  1  1  1 54
## 1141   8  7  1  1  0  0 56
## 1142  NA  3  1  2  0  0 25
## 1143   6  5  1  2  0  0 62
## 1144  12  1  1  2  2  2 18
## 1145  NA  7  1  2  0  0 69
## 1146  14  7  5  2  2  2 22
## 1147  15  1  1  2  0  0 27
## 1148  12  5  1  2  0  0 30
## 1149  18  3  1  2  0  0 45
## 1150  12  2  1  2  4  4 25
## 1151  12  8  2  2  2  2 48
## 1152  12  1  1  2  7  7 26
## 1153  16  7  5  1  0  0 57
## 1154  12  8  3  1  0  0 22
## 1155  NA  2  6  2  0  0 24
## 1156  12  7  1  2  0  0 33
## 1157  16  4  4  2  0  0 25
## 1158  16  8  5  1  2  2 27
## 1159  12  2  1  2  1  1 27
## 1160  12  1  1  2  0  0 52
## 1161  12  2  1  2  3  3 49
## 1162   9  8  1  2  0  0 46
## 1163  16  5  1  2  1  1 36
## 1164  14  8  1  2  2  2 61
## 1165  12  7  1  2  7  7 21
## 1166  12  1  1  2  0  0 25
## 1167  16  8  6  1  0  0 34
## 1168  NA  6  1  1 NA NA 47
## 1169   8  4  1  2  2  2 66
## 1170  12  8  1  1  2  2 35
## 1171  12  8  7  2  1  1 25
## 1172  18  5  2  2  0  0 36
## 1173  13  1  1  1  0  0 61
## 1174  NA  2  6  1  2  2 35
## 1175  12  4  5  1  0  0 30
## 1176  12  5  1  2  1  1 26
## 1177  NA  4  1  2  0  0 49
## 1178  NA  8  7  1  0  0 44
```

```
## 1179   11    5    1    2    0    0  51
## 1180   12    8    1    1    7    7  29
## 1181   14    8    7    2    0    0  34
## 1182   14    2    1    2    3    3  31
## 1183   12    3    1    2    7    7  36
## 1184   16    7    7    2    0    0  40
## 1185   15    1    2    2    7    7  42
## 1186   13    8    7    1    7    7  30
## 1187   NA    7    4    1    2    2  42
## 1188   13    7    1    1    0    0  50
## 1189   12    8    1    2    0    0  75
## 1190   12    4    7    2    1    1  46
## 1191    9    2    2    2    0    0  25
## 1192    9    8    3    2    7    7  23
## 1193   13    6    6    2    0    0  20
## 1194   16    7    1    2    0    0  63
## 1195   13    7    5    1    1    1  19
## 1196   15    1    1    1    0    0  45
## 1197   12    1    1    2    0    0  76
## 1198   NA    8    3    2    2    2  36
## 1199   16    7    6    1    0    0  69
## 1200   17    8    1    2    0    0  33
## 1201   14    7    5    2    0    0  21
## 1202   14    4    5    2    1    1  40
## 1203   14    4    5    2    1    1  19
## 1204   14    4    5    2    1    1  42
## 1205   16    7    7    2    0    0  34
## 1206   14    8    1    2    0    0  24
## 1207   13    4    1    2    0    0  23
## 1208   NA    6    1    2    0    0  55
## 1209   16    6    2    2    4    4  45
## 1210   18    7    6    2    0    0  47
## 1211   14    3    2    2    0    0  21
## 1212   14    4    1    1    1    1  54
## 1213   18    4    2    2    1    1  37
## 1214   12    4    3    1    3    3  40
## 1215   14    7    1    2    0    0  75
## 1216   12    8    7    2    1    1  29
## 1217   17    8    7    2    1    1  40
## 1218   18    8    1    2    0    0  61
## 1219   12    2    1    2    0    0  38
## 1220   12    6    1    2    0    0  22
## 1221   12    6    6    2    0    0  59
## 1222   12    8    7    1    0    0  59
## 1223   18    2    4    2    0    0  46
## 1224    9    1    1    2    0    0  62
## 1225   12    3    2    2    2    2  31
## 1226   12    8    2    2    0    0  46
## 1227   14    8    1    2    6    6  35
## 1228   13    1    1    2    0    0  60
## 1229   12    1    1    2    0    0  21
## 1230   13    1    4    2    7    7  28
## 1231   NA    1    1    2    0    0  90
## 1232   12    2    2    2    3    3  29
```

```
## 1233              NA    6        1        1     0     0  59
## 1234              12    8        1        2     4     4  46
## 1235              12    5        1        2     6     6  78
## 1236              12    8        1        2     0     0  75
## 1237              12    1        1        2     0     0  18
## 1238              12    3        1        2     0     0  65
## 1239              12    8        1        2     1     1  22
## 1240              14    8        5        2     1     1  43
## 1241              12    6        1        1     1     1  31
## 1242              12    7        2        2     0     0  31
## 1243              15    7        1        2     0     0  83
## 1244              12    6        3        2     2     2  39
## 1245              NA    4        2        1     0     0  38
## 1246              14    8        4        1     2     2  33
## 1247              NA    8        1        2     0     0  82
## 1248               9    8        1        1     2     2  63
## 1249              NA    1        1        2     0     0  82
## 1250              NA    8        1        1     0     0  73
## 1251              12    4        2        2     1     1  42
## 1252              16    7        5        2     2     2  43
## 1253              NA    4        1        2     7     7  46
## 1254              18    4        2        2     0     0  44
## 1255              12    7        1        1     5     5  40
## 1256              12    8        1        2     0     0  58
## 1257              12    8        7        2     1     1  51
## 1258              15    1        5        2     0     0  39
## 1259              17    6        1        2     2     2  55
## 1260              16    3        2        2     1     1  30
## 1261              12    1        1        2     0     0  81
## 1262              NA    8        2        1     0     0  31
## 1263              12    6        5        2     0     0  28
## 1264              11    4        2        2     0     0  50
## 1265              14    8        4        2     1     1  37
## 1266              NA    1        1        2     0     0  85
## 1267              14    3        7        2     0     0  27
## 1268              12    8        1        2     0     0  47
## 1269              15    8        2        2     0     0  34
## 1270              14    7        7        2     0     0  24
## 1271              12    8        1        1     0     0  51
## 1272              12    7        1        2     0     0  59
## 1273              NA    8        1        2     0     0  56
## 1274              16    8        1        2     0     0  62
## 1275              13    8        1        2     0     0  44
## 1276              13    6        7        2     7     7  22
## 1277              13    7        1        2     1     1  46
## 1278              12    8        1        2     0     0  54
## 1279              12    8        7        2     0     0  18
## 1280              12    5        6        2     7     7  32
## 1281              14    2        2        2     0     0  26
## 1282              12    8        5        2     3     3  40
## 1283              14    7        1        2     0     0  40
## 1284              18    1        1        2     0     0  41
## 1285              16    4        1        2     0     0  42
## 1286              12    1        1        2     0     0  62
```

```
## 1287              NA    1        1        1     1     1  35
## 1288              12    8        5        2     0     0  19
## 1289               8    5        1        2     0     0  83
## 1290              18    6        5        2     0     0  63
## 1291              12    8        3        2     0     0  59
## 1292              18    8        1        2     0     0  59
## 1293              NA    8        1        2     0     0  41
## 1294              14    8        7        2     0     0  58
## 1295              12    6        1        2     0     0  35
## 1296              NA    3        1        2     0     0  67
## 1297              13    1        7        2     0     0  59
## 1298              12    4        5        1     3     3  31
## 1299              NA    7        1        1     0     0  67
## 1300              14    5        1        2     1     1  59
## 1301              14    6        2        2     1     1  43
## 1302              NA    3        1        2     0     0  66
## 1303              13    4        6        2     0     0  58
## 1304              15    3        2        2     5     5  20
## 1305              16    5        4        2     0     0  34
## 1306              13    8        1        1     2     2  55
## 1307              17    1        1        1     0     0  47
## 1308              12    2        1        2     1     1  51
## 1309              16    4        7        2     5     5  34
## 1310              16    4        2        2     1     1  26
## 1311              12    7        5        2     0     0  18
## 1312              17    6        7        2     1     1  47
## 1313              12    6        4        1     0     0  62
## 1314               7    6        1        2     0     0  77
## 1315              12    3        1        2     4     4  36
## 1316              12    8        1        1     0     0  53
## 1317              16    6        1        2     0     0  88
## 1318              12    5        7        1     1     1  35
## 1319               8    7        1        1     0     0  74
## 1320              12    5        1        2     0     0  43
## 1321              14    2        4        2     1     1  26
## 1322              12    8        1        1     1     1  91
## 1323              12    2        2        1     0     0  28
## 1324              13    1        1        2     0     0  33
## 1325              14    8        5        2     3     3  36
## 1326              12    8        1        2     0     0  51
## 1327              16    1        7        1     1     1  34
## 1328              14    1        6        2     0     0  54
## 1329              16    7        1        2     0     0  35
## 1330              12    8        2        2     1     1  42
## 1331              NA    8        1        2     0     0  52
## 1332              12    1        1        1     1     1  28
## 1333              13    5        1        2     0     0  26
## 1334              12    8        6        1     0     0  61
## 1335              18    2        4        2     1     1  26
## 1336              12    8        1        2     0     0  72
## 1337              12    2        2        1     0     0  48
## 1338              17    8        1        2     1     1  39
## 1339              12    1        1        2     0     0  65
## 1340              18    8        4        1     3     3  64
```

```
## 1341              11    8       1       2     3     3  68
## 1342              12    2       2       2     0     0  79
## 1343              12    1       1       2     0     0  78
## 1344              NA    6       1       2     0     0  75
## 1345              16    7       1       2     2     2  29
## 1346              NA    2       1       2     0     0  26
## 1347              16    7       1       2     7     7  42
## 1348              NA    5       1       2     2     2  72
## 1349              12    3       1       1     0     0  39
## 1350              NA    3       1       1     7     7  62
## 1351              16    8       1       1     0     0  33
## 1352              12    8       6       2     0     0  76
## 1353              NA    8       1       2     0     0  87
## 1354               9    1       1       2     0     0  75
## 1355              18    1       7       2     0     0  40
## 1356              14    5       1       2     3     3  45
## 1357              15    8       6       2     0     0  22
## 1358              NA    7       1       2     1     1  49
## 1359              12    4       4       2     0     0  24
## 1360              14    1       1       2     7     7  24
## 1361              16    8       6       1     0     0  29
## 1362              12    6       3       2     2     2  29
## 1363              NA    5       7       2     7     7  47
## 1364              15    2       2       2     1     1  33
## 1365              15    8       3       1     0     0  25
## 1366              17    8       7       2     4     4  36
## 1367              12    5       6       2     0     0  20
## 1368              12    8       6       2     1     1  19
## 1369              12    8       6       2     0     0  18
## 1370              13    8       1       1     0     0  19
## 1371              16    3       1       2     0     0  23
## 1372              15    8       2       2     0     0  42
## 1373              12    7       5       2     7     7  42
## 1374              12    4       4       2     0     0  45
## 1375              16    7       6       2     7     7  29
## 1376              15    4       1       1     0     0  48
## 1377              16    4       7       2     4     4  28
## 1378              11    2       5       2     1     1  18
## 1379               9    8       7       1     3     3  21
## 1380              NA    2       2       1     5     5  18
## 1381              NA    1       1       1     0     0  30
## 1382              12    5       7       2     2     2  20
## 1383              NA    8       1       2     7     7  63
## 1384               8    2       1       2     0     0  35
## 1385              12    1       1       1     0     0  37
## 1386              14    6       1       2     0     0  63
## 1387              14    8       5       2     1     1  25
## 1388              12    6       1       1     1     1  60
## 1389              18    6       6       2     1     1  43
## 1390              12    8       1       2     1     1  81
## 1391              12    4       1       2     0     0  47
## 1392              14    5       7       2     0     0  21
## 1393              12    8       2       1     0     0  51
## 1394              12    2       1       2     0     0  45
```

```
## 1395   17  5  1  2  0  0 54
## 1396   12  6  1  2  1  1 69
## 1397   12  6  1  2  0  0 43
## 1398   18  1  1  2  0  0 35
## 1399   14  7  2  2  0  0 63
## 1400   16  8  4  2  2  2 31
## 1401   12  1  1  2  1  1 62
## 1402   12  1  1  2  0  0 52
## 1403   NA  2  4  2  7  7 38
## 1404   NA  1  6  2  0  0 27
## 1405   10  5  1  1  0  0 50
## 1406   NA  8  7  2  1  1 47
## 1407   14  4  1  1  0  0 45
## 1408   14  1  1  2  1  1 48
## 1409   12  1  1  2  7  7 29
## 1410   12  6  5  2  3  3 26
## 1411   18  4  7  1  0  0 34
## 1412   NA  2  1  2  0  0 46
## 1413   NA  4  1  2  0  0 69
## 1414   NA  4  2  1  0  0 64
## 1415   NA  8  1  2  0  0 70
## 1416   16  8  7  2  0  0 24
## 1417   12  8  1  2  0  0 32
## 1418   12  7  2  2  1  1 61
## 1419   18  6  1  1  0  0 50
## 1420   11  7  1  2  0  0 57
## 1421   18  8  5  2  0  0 53
## 1422   18  7  5  2  0  0 29
## 1423   12  5  6  2  0  0 20
## 1424   12  8  1  2  1  1 77
## 1425   12  3  7  2  0  0 64
## 1426   16  8  1  1  7  7 44
## 1427   13  5  1  2  0  0 83
## 1428   16  2  2  1  7  7 32
## 1429   14  8  7  2  2  2 40
## 1430   14  6  1  2  0  0 30
## 1431   12  1  6  2  1  1 19
## 1432   15  4  1  2  1  1 29
## 1433   NA  7  6  1  0  0 60
## 1434   16  8  1  2  3  3 48
## 1435   18  8  7  2  3  3 28
## 1436   12  2  1  2  0  0 40
## 1437   16  8  6  2  1  1 29
## 1438   12  4  7  2  5  5 31
## 1439   16  2  4  2  0  0 41
## 1440   14  8  5  2  1  1 23
## 1441   NA  1  1  2  7  7 73
## 1442    7  8  1  2  4  4 41
## 1443   NA  2  1  1  4  4 37
## 1444   12  8  4  2  0  0 38
## 1445   14  4  1  2  5  5 23
## 1446   NA  4  1  2  7  7 45
## 1447   12  1  1  1  0  0 53
## 1448   NA  4  1  2  0  0 65
```

```
## 1449              14    7        1        2     0     0  48
## 1450              NA    1        1        1     7     7  59
## 1451              14    6        5        2     2     2  41
## 1452              NA    2        1        2     6     6  27
## 1453              12    4        4        2     0     0  37
## 1454              11    5        5        2     1     1  18
## 1455              12    3        5        2     2     2  33
## 1456              13    8        1        1     0     0  32
## 1457              17    8        4        2     0     0  68
## 1458              13    2        1        2     1     1  82
## 1459              16    6        7        2     1     1  60
## 1460              11    7        7        2     0     0  66
## 1461              14    5        7        2     0     0  63
## 1462              NA    8        1        2     7     7  80
## 1463              12    8        1        2     0     0  75
## 1464              18    1        1        2     6     6  36
## 1465              11    8        1        2     0     0  23
## 1466              14    8        1        2     0     0  62
## 1467               8    4        1        2     0     0  78
## 1468              12    8        5        1     0     0  30
## 1469              13    5        6        2     0     0  52
## 1470              12    2        7        2     1     1  34
## 1471              14    4        1        2     2     2  41
## 1472              16    7        5        2     7     7  40
## 1473              12    8        7        1     7     7  18
## 1474              18    4        1        2     0     0  46
## 1475              10    4        1        2     1     1  68
## 1476              13    8        6        2     7     7  23
## 1477              16    4        1        1     0     0  38
## 1478              12    5        7        2     2     2  30
## 1479              14    6        1        2     1     1  69
## 1480              14    5        2        2     5     5  38
## 1481              12    2        5        2     0     0  18
## 1482              12    4        6        2     0     0  18
## 1483              12    8        1        2     7     7  36
## 1484              12    8        1        2     0     0  31
## 1485              11    8        7        2     0     0  37
## 1486              12    2        1        2     0     0  39
## 1487              NA    1        1        2     0     0  70
## 1488               4    3        1        1     4     4  64
## 1489              NA    8        1        2     0     0  74
## 1490              14    1        2        2     0     0  62
## 1491              13    8        1        2     1     1  64
## 1492              12    8        7        2     7     7  18
## 1493              12    3        2        1     7     7  35
## 1494              13    3        1        1     2     2  33
## 1495              NA    8        1        1     0     0  58
## 1496              14    3        2        2     3     3  32
## 1497              13    8        3        1     1     1  22
## 1498              NA    6        1        1     0     0  28
## 1499              16    7        6        2     0     0  22
## 1500              12    8        1        2     1     1  23
## 1501              17    8        7        2     0     0  26
## 1502              15    5        5        2     0     0  24
```

```
## 1503              16    7        5        2     0     0  26
## 1504              14    8        6        2     0     0  22
## 1505              16    8        5        2     1     1  22
## 1506              NA    5        5        2     3     3  31
## 1507              18    8        1        2     1     1  68
## 1508              12    3        3        2     1     1  21
## 1509              12    2        1        2     0     0  77
## 1510              13    8        1        1     0     0  45
## 1511              12    2        1        1     2     2  33
## 1512              16    2        1        1     1     1  39
## 1513              16    5        6        2     0     0  59
## 1514              11    8        4        1     0     0  34
## 1515              18    7        1        2     0     0  43
## 1516              14    3        1        1     0     0  25
## 1517              13    2        1        1     0     0  43
## 1518              14    8        1        2     0     0  55
## 1519              12    1        7        2     0     0  23
## 1520              18    7        6        2     0     0  38
## 1521              14    1        4        2     7     7  35
## 1522              14    1        5        2     0     0  31
## 1523              13    7        7        2     7     7  24
## 1524              12    8        2        1     4     4  23
## 1525              NA    8        1        2     2     2  22
## 1526              NA    7        4        2     7     7  28
## 1527              18    8        4        2     0     0  41
## 1528              12    8        1        2     0     0  73
## 1529               8    8        7        1     0     0  20
## 1530              16    8        5        2     0     0  71
## 1531              14    8        1        2     1     1  59
## 1532              14    7        7        2     0     0  72
## 1533              NA    8        1        2     0     0  69
## 1534              12    7        1        2     7     7  46
## 1535              12    7        4        1     3     3  26
## 1536              17    4        6        1     0     0  32
## 1537              17    8        1        2     0     0  56
## 1538              12    1        7        2     7     7  27
## 1539              12    3        3        1     0     0  33
## 1540              12    7        6        1     1     1  28
## 1541              16    8        7        2     1     1  59
## 1542              12    8        3        1     0     0  33
## 1543              12    2        1        2     0     0  51
## 1544              14    4        4        1     0     0  33
## 1545              12    5        5        2     3     3  38
## 1546              18    4        4        2     0     0  55
## 1547              13    8        7        2     5     5  23
## 1548              16    6        5        2     7     7  32
## 1549              15    8        2        2     7     7  48
## 1550              18    8        5        1     0     0  56
## 1551              18    8        7        2     3     3  51
## 1552              16    4        5        2     5     5  41
## 1553              12    8        4        2     0     0  48
## 1554              NA    8        1        1     0     0  69
## 1555              12    1        4        2     0     0  32
## 1556              14    1        1        2     2     2  48
```

```
## 1557    13    5    1    2    1    1  49
## 1558    NA    8    7    2    0    0  62
## 1559     9    6    2    1    4    4  44
## 1560    NA    8    1    1    1    1  33
## 1561    16    1    1    2    0    0  62
## 1562    NA    1    1    2    0    0  81
## 1563    13    8    1    1    2    2  64
## 1564    NA    4    1    2    0    0  74
## 1565    14    5    6    2    2    2  59
## 1566    12    4    6    1    2    2  50
## 1567    NA    8    1    2    7    7  43
## 1568    17    8    2    2    1    1  41
## 1569    14    8    5    2    0    0  26
## 1570    12    7    5    2    3    3  36
## 1571    14    3    6    2    0    0  78
## 1572    16    7    7    2    0    0  25
## 1573    14    1    5    1    0    0  65
## 1574    16    2    1    1    0    0  54
## 1575    17    8    1    2    0    0  77
## 1576    12    7    7    2    0    0  69
## 1577    NA    4    1    2    0    0  66
## 1578    12    8    1    2    0    0  76
## 1579    12    7    7    2    0    0  73
## 1580    NA    2    1    2    0    0  77
## 1581    NA    3    2    1    0    0  33
## 1582    14    7    4    1    3    3  40
## 1583    12    1    1    1    0    0  48
## 1584    12    1    2    2    0    0  31
## 1585    NA    2    1    2    0    0  60
## 1586    NA    8    1    1    0    0  72
## 1587    17    5    5    2    7    7  55
## 1588    12    5    7    2    5    5  28
## 1589    NA    8    4    2    0    0  76
## 1590    15    4    3    2    2    2  33
## 1591    13    1    7    2    0    0  37
## 1592    16    3    1    2    0    0  31
## 1593    15    7    6    2    0    0  24
## 1594    14    8    2    2    0    0  66
## 1595    15    6    1    2    2    2  69
## 1596    16    8    1    2    0    0  86
## 1597    12    8    1    2    0    0  63
## 1598    12    1    1    2    0    0  55
## 1599    17    7    4    2    0    0  54
## 1600    18    7    4    1    0    0  47
## 1601    11    7    1    2    4    4  49
## 1602    18    8    1   NA    0    0  59
## 1603    15    1    1    2    0    0  72
## 1604    12    1    1    2    0    0  51
## 1605    16    4    6    2    0    0  34
## 1606    11    6    1    1    7    7  26
## 1607    14    5    1    1    0    0  32
## 1608    18    8    7    2    1    1  43
## 1609    12    7    7    2    0    0  22
## 1610    16    4    2    1    0    0  70
```

```
## 1611   17  5  1  2  1  1 34
## 1612   12  7  1  2  0  0 35
## 1613   14  4  3  1  2  2 37
## 1614   12  7  5  2  3  3 18
## 1615   12  8  6  2  7  7 28
## 1616   10  8  6  1  0  0 60
## 1617   NA  4  3  2  2  2 44
## 1618   15  8  6  2  0  0 20
## 1619   13  8  6  1  1  1 51
## 1620   14  1  3  2  0  0 41
## 1621   12  8  1  2  0  0 37
## 1622   NA  5  1  2  0  0 71
## 1623   14  6  1  2  0  0 66
## 1624   14  8  7  1  7  7 36
## 1625   16  5  2  2  0  0 55
## 1626   14  7  6  2  7  7 36
## 1627   15  4  3  2  0  0 21
## 1628   14  7  1  2  0  0 74
## 1629   12  5  5  2  0  0 30
## 1630   14  7  1  2  2  2 32
## 1631   17  4  1  2  4  4 34
## 1632   12  2  2  2  7  7 30
## 1633   16  2  3  1  2  2 33
## 1634   14  6  1  1  1  1 32
## 1635   12  6  1  2  0  0 26
## 1636   16  7  5  2  0  0 30
## 1637   17  3  4  1  0  0 46
## 1638   13  2  1  2  5  5 54
## 1639   14  8  1  2  0  0 69
## 1640    4  6  1  2  0  0 62
## 1641   13  8  1  1  1  1 63
## 1642   12  4  2  2  0  0 46
## 1643   13  5  1  2  0  0 75
## 1644   14  7  1  2  0  0 69
## 1645   16  6  1  2  0  0 75
## 1646   NA  7  1  2  0  0 81
## 1647   12  1  7  1  7  7 36
## 1648   NA  4  1  1  1  1 63
## 1649   15  3  2  2  3  3 32
## 1650   12  1  1  1  0  0 43
## 1651   12  7  7  2  0  0 20
## 1652   16  8  7  2  0  0 25
## 1653   NA  8  1  1  7  7 36
## 1654   12  8  6  2  7  7 22
## 1655   NA  8  1  2  0  0 59
## 1656   NA  2  1  2  0  0 73
## 1657   17  8  3  2  0  0 39
## 1658   13  8  6  2  0  0 39
## 1659   18  7  6  2  0  0 25
## 1660   16  8  1  2  2  2 27
## 1661   15  8  1  2  0  0 65
## 1662   12  1  5  1  2  2 47
## 1663   16  8  6  2  0  0 22
## 1664   13  2  4  2  0  0 22
```

```
## 1665              16    8        6        2     3     3  27
## 1666              14    8        1        1     0     0  58
## 1667              16    1        7        2     4     4  32
## 1668              14    4        1        1     1     1  34
## 1669              18    6        5        2     7     7  34
## 1670              16    6        7        2     0     0  45
## 1671              12    1        7        2     1     1  18
## 1672              18    3        1        1     0     0  69
## 1673              15    8        5        2     0     0  23
## 1674              17    8        4        2     0     0  30
## 1675              12    8        1        2     0     0  65
## 1676              12    1        1        2     0     0  65
## 1677              NA    8        1        2     0     0  75
## 1678              12    5        7        2     7     7  21
## 1679              18    5        2        2     0     0  48
## 1680              12    8        3        2     0     0  35
## 1681              14    7        6        2     0     0  52
## 1682              12    4        1        2     0     0  19
## 1683               3    1        1        2     0     0  64
## 1684              NA    8        7        1     0     0  26
## 1685              13    1        1        2     0     0  43
## 1686              NA    7        1        2     1     1  72
## 1687              12    1        2        2     7     7  31
## 1688              12    1        6        2     0     0  58
## 1689              16    8        7        2     0     0  36
## 1690              14    8        1        2     4     4  18
## 1691              13    2        7        2     0     0  22
## 1692              16    1        1        2     7     7  19
## 1693               9    1        1        2     0     0  39
## 1694              12    8        4        2     0     0  28
## 1695              NA    8        4        2     0     0  73
## 1696              12    7        1        1     1     1  30
## 1697              16    2        7        2     3     3  25
## 1698              NA    7        1        2     3     3  60
## 1699              16    8        4        2     3     3  30
## 1700              14    7        7        2     0     0  23
## 1701              14    6        3        2     0     0  37
## 1702              10    5        7        2     7     7  29
## 1703              16    8        2        2     4     4  36
## 1704              14    8        7        2     3     3  27
## 1705              18    8        6        2     0     0  69
## 1706               6    1        2        2     0     0  40
## 1707              NA    1        7        2     0     0  65
## 1708              12    6        1        2     0     0  68
## 1709              NA    8        1        2     2     2  48
## 1710              15    8        1        2     0     0  59
## 1711              12    7        7        2     7     7  20
## 1712              NA    1        1        2     0     0  26
## 1713              16    8        7        2     1     1  43
## 1714              NA    4        2        2     0     0  56
## 1715              10    1        6        1     0     0  36
## 1716              12    8        7        2     0     0  38
## 1717              12    1        1        1     2     2  70
## 1718              13    1        1        2     0     0  40
```

```
## 1719              16    3        5        2     0     0  33
## 1720              17    2        1        2     0     0  34
## 1721              11    2        2        1     7     7  31
## 1722              17    4        6        2     0     0  28
## 1723              14    8        7        2     0     0  41
## 1724              13    4        2        2     3     3  22
## 1725              14    1        1        1     1     1  26
## 1726              12    8        7        2     3     3  36
## 1727              13    1        1        2     7     7  18
## 1728              17    2        7        2     1     1  29
## 1729              12    8        7        1     0     0  18
## 1730              13    4        1        2     1     1  27
## 1731              14    8        1        2     0     0  19
## 1732              15    7        6        2     1     1  27
## 1733              16    7        7        2     0     0  22
## 1734              13    5        2        1     2     2  37
## 1735              14    4        1        2     0     0  44
## 1736              12    1        7        2     4     4  33
## 1737              12    8        1        1     0     0  65
## 1738              12    2        1        1     5     5  46
## 1739              14    1        5        2     0     0  24
## 1740              14    6        3        2     0     0  19
## 1741              15    7        1        2     0     0  67
## 1742              12    8        7        2     4     4  19
## 1743              14    8        5        2     0     0  58
## 1744              18    1        4        2     0     0  38
## 1745              16    6        4        2     0     0  51
## 1746              15    4        2        2     0     0  50
## 1747              12    4        2        2     1     1  43
## 1748              NA    5        4        2     7     7  41
## 1749              16    8        7        2     0     0  50
## 1750              NA    8        1        2     2     2  38
## 1751              13    1        6        1     3     3  19
## 1752              12    1        1        2     1     1  76
## 1753              14    7        1        2     2     2  65
## 1754              NA    5        1        1     7     7  32
## 1755              12    8        7        2     0     0  21
## 1756              12    8        1        2     0     0  61
## 1757              NA    1        1        2     4     4  27
## 1758              16    4        5        2     0     0  28
## 1759              17    8        3        2     0     0  43
## 1760              15    8        7        1     0     0  48
## 1761              12    1        5        1     7     7  43
## 1762              13    7        6        2     0     0  36
## 1763              14    3        2        2     7     7  34
## 1764              16    5        3        2     2     2  22
## 1765              17    2        1        2     0     0  37
## 1766              17    2        7        2     0     0  34
## 1767              13    8        7        2     0     0  20
## 1768              15    8        5        2     5     5  29
## 1769              12    7        2        2     1     1  29
## 1770              12    8        1        1     2     2  32
## 1771              14    5        3        2     0     0  48
## 1772              NA    4        2        2     2     2  33
```

```
## 1773               12    4        2        2     0     0  50
## 1774               14    8        7        2     2     2  39
## 1775               12    1        2        2     7     7  30
## 1776               16    2        7        2     0     0  33
## 1777               10    2        1        1     0     0  39
## 1778               10    7        3        2     0     0  78
## 1779               11    6        7        2     2     2  32
## 1780               NA    1        6        2     0     0  24
## 1781               14    8        1        1     0     0  43
## 1782               16    7        1        1     0     0  59
## 1783               12    7        1        2     0     0  77
## 1784               12    8        7        2     0     0  37
## 1785                9    3        1        2     2     2  51
## 1786               13    2        1        1     3     3  43
## 1787               12    4        5        2     0     0  27
## 1788               16    8        7        2     0     0  26
## 1789               NA    7        5        1     7     7  21
## 1790               12    1        1        1     1     1  45
## 1791               17    8        7        2     0     0  40
## 1792               14    8        1        2     2     2  39
## 1793               17    7        4        2     2     2  39
## 1794               14    7        1        2     0     0  29
## 1795               17    8        1        2     0     0  56
## 1796               NA    8        7        2     1     1  21
## 1797               18    8        7        2     0     0  49
## 1798               16    1        4        2     4     4  39
## 1799               17    7        1        1     2     2  30
## 1800               12    1        1        2     0     0  76
## 1801               16    4        1        1     0     0  37
## 1802               12    1        1        1     4     4  21
## 1803               NA    8        1        2     0     0  67
## 1804               14    8        7        2     0     0  68
## 1805               15    8        6        2     1     1  20
## 1806               NA    2        2        2     1     1  40
## 1807               18    8        1        2     1     1  48
## 1808               18    4        1        2     0     0  71
## 1809               18    8        1        2     1     1  53
## 1810               16    1        6        2     6     6  36
## 1811               12    8        2        2     0     0  29
## 1812               18    6        1        2     0     0  82
## 1813               12    1        1        1     7     7  33
## 1814               12    2        1        2     0     0  50
## 1815               14    6        1        2     2     2  69
## 1816               12    1        6        1     2     2  27
```

```
fit<-stan_glm(earnk ~ height + male,data=earnings)
```

```
##
## SAMPLING FOR MODEL 'continuous' NOW (CHAIN 1).
## Chain 1:
## Chain 1: Gradient evaluation took 3.9e-05 seconds
## Chain 1: 1000 transitions using 10 leapfrog steps per transition would take 0.39 seconds.
## Chain 1: Adjust your expectations accordingly!
## Chain 1:
## Chain 1:
```

```
## Chain 1: Iteration:    1 / 2000 [  0%]  (Warmup)
## Chain 1: Iteration:  200 / 2000 [ 10%]  (Warmup)
## Chain 1: Iteration:  400 / 2000 [ 20%]  (Warmup)
## Chain 1: Iteration:  600 / 2000 [ 30%]  (Warmup)
## Chain 1: Iteration:  800 / 2000 [ 40%]  (Warmup)
## Chain 1: Iteration: 1000 / 2000 [ 50%]  (Warmup)
## Chain 1: Iteration: 1001 / 2000 [ 50%]  (Sampling)
## Chain 1: Iteration: 1200 / 2000 [ 60%]  (Sampling)
## Chain 1: Iteration: 1400 / 2000 [ 70%]  (Sampling)
## Chain 1: Iteration: 1600 / 2000 [ 80%]  (Sampling)
## Chain 1: Iteration: 1800 / 2000 [ 90%]  (Sampling)
## Chain 1: Iteration: 2000 / 2000 [100%]  (Sampling)
## Chain 1:
## Chain 1:  Elapsed Time: 0.049 seconds (Warm-up)
## Chain 1:                0.184 seconds (Sampling)
## Chain 1:                0.233 seconds (Total)
## Chain 1:
##
## SAMPLING FOR MODEL 'continuous' NOW (CHAIN 2).
## Chain 2:
## Chain 2: Gradient evaluation took 1.3e-05 seconds
## Chain 2: 1000 transitions using 10 leapfrog steps per transition would take 0.13 seconds.
## Chain 2: Adjust your expectations accordingly!
## Chain 2:
## Chain 2:
## Chain 2: Iteration:    1 / 2000 [  0%]  (Warmup)
## Chain 2: Iteration:  200 / 2000 [ 10%]  (Warmup)
## Chain 2: Iteration:  400 / 2000 [ 20%]  (Warmup)
## Chain 2: Iteration:  600 / 2000 [ 30%]  (Warmup)
## Chain 2: Iteration:  800 / 2000 [ 40%]  (Warmup)
## Chain 2: Iteration: 1000 / 2000 [ 50%]  (Warmup)
## Chain 2: Iteration: 1001 / 2000 [ 50%]  (Sampling)
## Chain 2: Iteration: 1200 / 2000 [ 60%]  (Sampling)
## Chain 2: Iteration: 1400 / 2000 [ 70%]  (Sampling)
## Chain 2: Iteration: 1600 / 2000 [ 80%]  (Sampling)
## Chain 2: Iteration: 1800 / 2000 [ 90%]  (Sampling)
## Chain 2: Iteration: 2000 / 2000 [100%]  (Sampling)
## Chain 2:
## Chain 2:  Elapsed Time: 0.047 seconds (Warm-up)
## Chain 2:                0.189 seconds (Sampling)
## Chain 2:                0.236 seconds (Total)
## Chain 2:
##
## SAMPLING FOR MODEL 'continuous' NOW (CHAIN 3).
## Chain 3:
## Chain 3: Gradient evaluation took 8e-06 seconds
## Chain 3: 1000 transitions using 10 leapfrog steps per transition would take 0.08 seconds.
## Chain 3: Adjust your expectations accordingly!
## Chain 3:
## Chain 3:
## Chain 3: Iteration:    1 / 2000 [  0%]  (Warmup)
## Chain 3: Iteration:  200 / 2000 [ 10%]  (Warmup)
## Chain 3: Iteration:  400 / 2000 [ 20%]  (Warmup)
## Chain 3: Iteration:  600 / 2000 [ 30%]  (Warmup)
```

```
## Chain 3: Iteration:  800 / 2000 [ 40%]  (Warmup)
## Chain 3: Iteration: 1000 / 2000 [ 50%]  (Warmup)
## Chain 3: Iteration: 1001 / 2000 [ 50%]  (Sampling)
## Chain 3: Iteration: 1200 / 2000 [ 60%]  (Sampling)
## Chain 3: Iteration: 1400 / 2000 [ 70%]  (Sampling)
## Chain 3: Iteration: 1600 / 2000 [ 80%]  (Sampling)
## Chain 3: Iteration: 1800 / 2000 [ 90%]  (Sampling)
## Chain 3: Iteration: 2000 / 2000 [100%]  (Sampling)
## Chain 3:
## Chain 3:  Elapsed Time: 0.051 seconds (Warm-up)
## Chain 3:                0.18 seconds (Sampling)
## Chain 3:                0.231 seconds (Total)
## Chain 3:
##
## SAMPLING FOR MODEL 'continuous' NOW (CHAIN 4).
## Chain 4:
## Chain 4: Gradient evaluation took 1.1e-05 seconds
## Chain 4: 1000 transitions using 10 leapfrog steps per transition would take 0.11 seconds.
## Chain 4: Adjust your expectations accordingly!
## Chain 4:
## Chain 4:
## Chain 4: Iteration:    1 / 2000 [  0%]  (Warmup)
## Chain 4: Iteration:  200 / 2000 [ 10%]  (Warmup)
## Chain 4: Iteration:  400 / 2000 [ 20%]  (Warmup)
## Chain 4: Iteration:  600 / 2000 [ 30%]  (Warmup)
## Chain 4: Iteration:  800 / 2000 [ 40%]  (Warmup)
## Chain 4: Iteration: 1000 / 2000 [ 50%]  (Warmup)
## Chain 4: Iteration: 1001 / 2000 [ 50%]  (Sampling)
## Chain 4: Iteration: 1200 / 2000 [ 60%]  (Sampling)
## Chain 4: Iteration: 1400 / 2000 [ 70%]  (Sampling)
## Chain 4: Iteration: 1600 / 2000 [ 80%]  (Sampling)
## Chain 4: Iteration: 1800 / 2000 [ 90%]  (Sampling)
## Chain 4: Iteration: 2000 / 2000 [100%]  (Sampling)
## Chain 4:
## Chain 4:  Elapsed Time: 0.042 seconds (Warm-up)
## Chain 4:                0.183 seconds (Sampling)
## Chain 4:                0.225 seconds (Total)
## Chain 4:
```

```
logmodel<-stan_glm(log(earnk)~ height + male,data=earnings, subset=earn>0)
```

```
##
## SAMPLING FOR MODEL 'continuous' NOW (CHAIN 1).
## Chain 1:
## Chain 1: Gradient evaluation took 1.3e-05 seconds
## Chain 1: 1000 transitions using 10 leapfrog steps per transition would take 0.13 seconds.
## Chain 1: Adjust your expectations accordingly!
## Chain 1:
## Chain 1:
## Chain 1: Iteration:    1 / 2000 [  0%]  (Warmup)
## Chain 1: Iteration:  200 / 2000 [ 10%]  (Warmup)
## Chain 1: Iteration:  400 / 2000 [ 20%]  (Warmup)
## Chain 1: Iteration:  600 / 2000 [ 30%]  (Warmup)
## Chain 1: Iteration:  800 / 2000 [ 40%]  (Warmup)
## Chain 1: Iteration: 1000 / 2000 [ 50%]  (Warmup)
```

```
## Chain 1: Iteration: 1001 / 2000 [ 50%]  (Sampling)
## Chain 1: Iteration: 1200 / 2000 [ 60%]  (Sampling)
## Chain 1: Iteration: 1400 / 2000 [ 70%]  (Sampling)
## Chain 1: Iteration: 1600 / 2000 [ 80%]  (Sampling)
## Chain 1: Iteration: 1800 / 2000 [ 90%]  (Sampling)
## Chain 1: Iteration: 2000 / 2000 [100%]  (Sampling)
## Chain 1:
## Chain 1:  Elapsed Time: 0.033 seconds (Warm-up)
## Chain 1:                0.166 seconds (Sampling)
## Chain 1:                0.199 seconds (Total)
## Chain 1:
##
## SAMPLING FOR MODEL 'continuous' NOW (CHAIN 2).
## Chain 2:
## Chain 2: Gradient evaluation took 8e-06 seconds
## Chain 2: 1000 transitions using 10 leapfrog steps per transition would take 0.08 seconds.
## Chain 2: Adjust your expectations accordingly!
## Chain 2:
## Chain 2:
## Chain 2: Iteration:    1 / 2000 [  0%]  (Warmup)
## Chain 2: Iteration:  200 / 2000 [ 10%]  (Warmup)
## Chain 2: Iteration:  400 / 2000 [ 20%]  (Warmup)
## Chain 2: Iteration:  600 / 2000 [ 30%]  (Warmup)
## Chain 2: Iteration:  800 / 2000 [ 40%]  (Warmup)
## Chain 2: Iteration: 1000 / 2000 [ 50%]  (Warmup)
## Chain 2: Iteration: 1001 / 2000 [ 50%]  (Sampling)
## Chain 2: Iteration: 1200 / 2000 [ 60%]  (Sampling)
## Chain 2: Iteration: 1400 / 2000 [ 70%]  (Sampling)
## Chain 2: Iteration: 1600 / 2000 [ 80%]  (Sampling)
## Chain 2: Iteration: 1800 / 2000 [ 90%]  (Sampling)
## Chain 2: Iteration: 2000 / 2000 [100%]  (Sampling)
## Chain 2:
## Chain 2:  Elapsed Time: 0.037 seconds (Warm-up)
## Chain 2:                0.171 seconds (Sampling)
## Chain 2:                0.208 seconds (Total)
## Chain 2:
##
## SAMPLING FOR MODEL 'continuous' NOW (CHAIN 3).
## Chain 3:
## Chain 3: Gradient evaluation took 8e-06 seconds
## Chain 3: 1000 transitions using 10 leapfrog steps per transition would take 0.08 seconds.
## Chain 3: Adjust your expectations accordingly!
## Chain 3:
## Chain 3:
## Chain 3: Iteration:    1 / 2000 [  0%]  (Warmup)
## Chain 3: Iteration:  200 / 2000 [ 10%]  (Warmup)
## Chain 3: Iteration:  400 / 2000 [ 20%]  (Warmup)
## Chain 3: Iteration:  600 / 2000 [ 30%]  (Warmup)
## Chain 3: Iteration:  800 / 2000 [ 40%]  (Warmup)
## Chain 3: Iteration: 1000 / 2000 [ 50%]  (Warmup)
## Chain 3: Iteration: 1001 / 2000 [ 50%]  (Sampling)
## Chain 3: Iteration: 1200 / 2000 [ 60%]  (Sampling)
## Chain 3: Iteration: 1400 / 2000 [ 70%]  (Sampling)
## Chain 3: Iteration: 1600 / 2000 [ 80%]  (Sampling)
```

```
## Chain 3: Iteration: 1800 / 2000 [ 90%]  (Sampling)
## Chain 3: Iteration: 2000 / 2000 [100%]  (Sampling)
## Chain 3:
## Chain 3:  Elapsed Time: 0.035 seconds (Warm-up)
## Chain 3:                0.171 seconds (Sampling)
## Chain 3:                0.206 seconds (Total)
## Chain 3:
##
## SAMPLING FOR MODEL 'continuous' NOW (CHAIN 4).
## Chain 4:
## Chain 4: Gradient evaluation took 8e-06 seconds
## Chain 4: 1000 transitions using 10 leapfrog steps per transition would take 0.08 seconds.
## Chain 4: Adjust your expectations accordingly!
## Chain 4:
## Chain 4:
## Chain 4: Iteration:    1 / 2000 [  0%]  (Warmup)
## Chain 4: Iteration:  200 / 2000 [ 10%]  (Warmup)
## Chain 4: Iteration:  400 / 2000 [ 20%]  (Warmup)
## Chain 4: Iteration:  600 / 2000 [ 30%]  (Warmup)
## Chain 4: Iteration:  800 / 2000 [ 40%]  (Warmup)
## Chain 4: Iteration: 1000 / 2000 [ 50%]  (Warmup)
## Chain 4: Iteration: 1001 / 2000 [ 50%]  (Sampling)
## Chain 4: Iteration: 1200 / 2000 [ 60%]  (Sampling)
## Chain 4: Iteration: 1400 / 2000 [ 70%]  (Sampling)
## Chain 4: Iteration: 1600 / 2000 [ 80%]  (Sampling)
## Chain 4: Iteration: 1800 / 2000 [ 90%]  (Sampling)
## Chain 4: Iteration: 2000 / 2000 [100%]  (Sampling)
## Chain 4:
## Chain 4:  Elapsed Time: 0.037 seconds (Warm-up)
## Chain 4:                0.168 seconds (Sampling)
## Chain 4:                0.205 seconds (Total)
## Chain 4:
```

```
loo1<-loo(fit)
```

```
## Warning: Found 1 observation(s) with a pareto_k > 0.7. We recommend calling 'loo' again with argumen
```

```
loo2<-loo(logmodel)
```

(b)

Compare models from other exercises in this chapter. # This model fits better than others. The simple one's P-value is bigger than 0.05.The log one's P-value is less than 0,05,which is fitter than the simple one.

12.8

Log-log transformations: Suppose that, for a certain population of animals, we can predict log weight from log height as follows:

- An animal that is 50 centimeters tall is predicted to weigh 10 kg.
- Every increase of 1% in height corresponds to a predicted increase of 2% in weight.
- The weights of approximately 95% of the animals fall within a factor of 1.1 of predicted values.

(a)

Give the equation of the regression line and the residual standard deviation of the regression. #log(weight)=-2.398+2log(height) #The residual standard deviation is approximately 0.048.

(b)

Suppose the standard deviation of log weights is 20% in this population. What, then, is the R^2 of the regression model described here?
#The R^2 of the regression model is approximately 0.94, indicating that the model explains about 94% of the variation in log weight.

12.9

Linear and logarithmic transformations: For a study of congressional elections, you would like a measure of the relative amount of money raised by each of the two major-party candidates in each district. Suppose that you know the amount of money raised by each candidate; label these dollar values D_i and R_i. You would like to combine these into a single variable that can be included as an input variable into a model predicting vote share for the Democrats. Discuss the advantages and disadvantages of the following measures:

(a)

The simple difference, $D_i - R_i$ # It directly shows the absolute difference in fundraising between the Democratic and Republican candidates, which can be a straightforward measure of who raised more money.

(b)

The ratio, D_i/R_i #The ratio directly measures how much more the Democratic candidate raised compared to the Republican, making it easy to interpret.

(c)

The difference on the logarithmic scale, $\log D_i - \log R_i$
It gives a symmetric measure of relative differences, making it easier to interpret whether Democrats or Republicans raised more money.

(d)

The relative proportion, $D_i/(D_i + R_i)$. #It is easy to interpret as the proportion of total money raised by the Democrat, ranging between 0 and 1.

12.11

Elasticity: An economist runs a regression examining the relations between the average price of cigarettes, P, and the quantity purchased, Q, across a large sample of counties in the United States, assuming the functional form, $\log Q = \alpha + \beta \log P$. Suppose the estimate for β is 0.3. Interpret this coefficient. #The coefficient represents the price elasticity of demand for cigarettes. Specifically, it means that a 1% increase in the price of cigarettes is associated with a 0.3% increase in the quantity purchased.

12.13

Building regression models: Return to the teaching evaluations data from Exercise 10.6. Fit regression models predicting evaluations given many of the inputs in the dataset. Consider interactions, combinations of predictors, and transformations, as appropriate. Consider several models, discuss in detail the final model that you choose, and also explain why you chose it rather than the others you had considered.

```r
beauty_data <- read.csv("beauty.csv")
model1 <- lm(eval ~ beauty, data = beauty_data)
summary(model1)
```

```
##
## Call:
## lm(formula = eval ~ beauty, data = beauty_data)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -1.80015 -0.36304  0.07254  0.40207  1.10373
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
## (Intercept)  4.01002    0.02551 157.205  < 2e-16 ***
## beauty       0.13300    0.03218   4.133 4.25e-05 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.5455 on 461 degrees of freedom
## Multiple R-squared:  0.03574,    Adjusted R-squared:  0.03364
## F-statistic: 17.08 on 1 and 461 DF,  p-value: 4.247e-05
```

```r
model2 <- lm(eval ~ beauty + age + female + minority + lower + nonenglish + course_id, data = beauty_da
summary(model2)
```

```
##
## Call:
## lm(formula = eval ~ beauty + age + female + minority + lower +
##     nonenglish + course_id, data = beauty_data)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -1.84894 -0.35238  0.04637  0.39393  1.05082
##
## Coefficients:
##               Estimate Std. Error t value Pr(>|t|)
## (Intercept)  4.1936052  0.1464372  28.638  < 2e-16 ***
## beauty       0.1409025  0.0333132   4.230 2.83e-05 ***
## age         -0.0021740  0.0028013  -0.776 0.438096
## female      -0.1974499  0.0528073  -3.739 0.000208 ***
## minority    -0.0688714  0.0785761  -0.876 0.381225
## lower        0.0988180  0.0542490   1.822 0.069178 .
## nonenglish  -0.2748373  0.1106958  -2.483 0.013394 *
## course_id   -0.0003901  0.0029850  -0.131 0.896089
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.5317 on 455 degrees of freedom
## Multiple R-squared:  0.09578,    Adjusted R-squared:  0.08187
## F-statistic: 6.885 on 7 and 455 DF,  p-value: 8.511e-08
```

```r
model3 <- lm(eval ~ beauty * female + age + minority + lower + nonenglish + course_id, data = beauty_da
summary(model3)
```

```
##
## Call:
## lm(formula = eval ~ beauty * female + age + minority + lower +
##     nonenglish + course_id, data = beauty_data)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -1.82313 -0.34837  0.05002  0.40620  1.07926
##
## Coefficients:
##                Estimate Std. Error t value Pr(>|t|)
## (Intercept)    4.176433   0.146566  28.495  < 2e-16 ***
## beauty         0.192002   0.045913   4.182 3.47e-05 ***
## female        -0.204601   0.052900  -3.868 0.000126 ***
## age           -0.001605   0.002818  -0.569 0.569340
## minority      -0.038752   0.080627  -0.481 0.631012
## lower          0.093214   0.054265   1.718 0.086520 .
## nonenglish    -0.294409   0.111164  -2.648 0.008369 **
## course_id     -0.000925   0.002998  -0.309 0.757823
## beauty:female -0.105887   0.065599  -1.614 0.107186
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.5307 on 454 degrees of freedom
## Multiple R-squared:  0.1009, Adjusted R-squared:  0.0851
## F-statistic: 6.371 on 8 and 454 DF,  p-value: 7.505e-08
```

```
model4 <- lm(eval ~ beauty * minority + age + female + lower + nonenglish + course_id, data = beauty_da
summary(model4)
```

```
##
## Call:
## lm(formula = eval ~ beauty * minority + age + female + lower +
##     nonenglish + course_id, data = beauty_data)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -1.82635 -0.33698  0.04823  0.39519  1.07522
##
## Coefficients:
##                   Estimate Std. Error t value Pr(>|t|)
## (Intercept)      4.154e+00  1.479e-01  28.095  < 2e-16 ***
## beauty           1.623e-01  3.541e-02   4.584 5.91e-06 ***
## minority        -8.307e-02  7.881e-02  -1.054  0.29246
## age             -1.583e-03  2.815e-03  -0.562  0.57407
## female          -1.758e-01  5.412e-02  -3.248  0.00125 **
## lower            1.065e-01  5.430e-02   1.961  0.05044 .
## nonenglish      -2.560e-01  1.110e-01  -2.307  0.02150 *
## course_id       -7.105e-05  2.984e-03  -0.024  0.98101
## beauty:minority -1.723e-01  9.827e-02  -1.753  0.08021 .
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.5305 on 454 degrees of freedom
## Multiple R-squared:  0.1019, Adjusted R-squared:  0.08604
```

```
## F-statistic: 6.436 on 8 and 454 DF,  p-value: 6.103e-08
```

```
#Model 2 (beauty + demographic variables): If the interactions are not significant and the adjusted R-s
```

12.14

Prediction from a fitted regression: Consider one of the fitted models for mesquite leaves, for example `fit_4`, in Section 12.6. Suppose you wish to use this model to make inferences about the average mesquite yield in a new set of trees whose predictors are in data frame called new_trees. Give R code to obtain an estimate and standard error for this population average. You do not need to make the prediction; just give the code.

```
# Assuming model3 has already been fit using lm or another regression method
# and new_trees is a data frame containing the predictor variables

# Use the predict function to get both the predicted value and the standard error
#predictions <- predict(model, newdata = new_trees, se.fit = TRUE)

# Extract the estimated population average (mean predicted value) and standard error
#estimated_average <- mean(predictions$fit)  # Population average of the predictions
#standard_error <- sqrt(mean(predictions$se.fit^2))  # Standard error for the population average

# Display the results
#estimated_average
#standard_error
```

install.packages("latex")