

# Homework 03

shiva kumar peddapuram

## Instructions

- Do not make changes to this file above this line.
- Do not change the statements of the questions
- Insert your computations in the “code chunks” provided (between three backtics)
- Add textual answers, outside the code chunks
- Click on the “Knit” button above in order to run the computations and create the pdf file (you might have to allow pop-ups in your web browser to see the pdf)
- Upload the final PDF file to the Homework 3 assignment in Canvas.

## Questions

For the questions in this homework assignment **you are allowed** to use the function `t.test`.

1. Generate a sample of size  $n = 20$  of random numbers from the standard normal distribution, and store them in a vector called `X`. Find a 95% confidence interval for the mean, based on the  $t$  distribution.

```
X = rnorm(20)    ## creating and storing a sample of size 20
my.test <- t.test(X,conf.level = 0.95,mu=0) ## finding 95% confidence interval by using conf.level func
names(my.test)   ## knowing the names of the interval
```

```
## [1] "statistic"  "parameter"  "p.value"    "conf.int"   "estimate"
## [6] "null.value"  "stderr"     "alternative" "method"     "data.name"
```

```
my.test$conf.int
```

```
## [1] -0.6420509  0.1563736
## attr(,"conf.level")
## [1] 0.95
```

```
N=mean(X)    #mean for X
N ##knowing the values of A
```

```
## [1] -0.2428387
```

Does the interval contain the true value of  $\mu$ ? Answer: Yes,if we take the true value of  $\mu = 0$  then the interval contains in the value.

2. Repeat the steps in Question 1 10,000 times. Record whether each time the interval contained  $\mu$  or not into a logical (boolean) vector of length 10,000, called `contained`.

```

nrep <- 10000 ##taking repetition till 10,000
maxs <- rep(0,nrep) ##assigning max
mins <- rep(0,nrep) ## assigning mins
for(i in 1:nrep){
  X<- rnorm(20)
  my.test<- t.test(X,conf.level=0.95,mu=0)
  maxs[i] <- my.test$conf.int[2]
  mins[i] <- my.test$conf.int[1]
}
my.test$conf.int

```

```

## [1] -0.2589772 0.5064298
## attr("conf.level")
## [1] 0.95

```

```

contained <- mins < 0 & maxs >0
table(contained)/nrep

```

```

## contained
## FALSE TRUE
## 0.0481 0.9519

```

```

contained

```

```

##      [1] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
##     [13] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE FALSE TRUE TRUE
##     [25] TRUE FALSE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
##     [37] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
##     [49] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
##     [61] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
##     [73] TRUE FALSE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
##     [85] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
##     [97] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
##    [109] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
##    [121] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE FALSE TRUE
##    [133] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
##    [145] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
##    [157] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
##    [169] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE FALSE TRUE
##    [181] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
##    [193] FALSE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
##    [205] TRUE FALSE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
##    [217] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
##    [229] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
##    [241] TRUE TRUE TRUE FALSE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
##    [253] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
##    [265] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE FALSE
##    [277] TRUE TRUE TRUE TRUE TRUE TRUE FALSE TRUE TRUE TRUE TRUE TRUE TRUE FALSE
##    [289] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
##    [301] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
##    [313] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
##    [325] TRUE TRUE TRUE FALSE TRUE TRUE FALSE TRUE TRUE TRUE TRUE TRUE TRUE TRUE

```

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]



[illegible]

[illegible]

[illegible]

[illegible]

##	[6817]	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6829]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6841]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6853]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE
##	[6865]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE
##	[6877]	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	TRUE	FALSE	TRUE	TRUE
##	[6889]	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE
##	[6901]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE
##	[6913]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6925]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6937]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6949]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6961]	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE
##	[6973]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6985]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6997]	TRUE	TRUE	FALSE	FALSE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[7009]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[7021]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[7033]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[7045]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[7057]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[7069]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE
##	[7081]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE
##	[7093]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[7105]	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[7117]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[7129]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[7141]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE
##	[7153]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[7165]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[7177]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[7189]	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[7201]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE
##	[7213]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[7225]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[7237]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[7249]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[7261]	FALSE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[7273]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[7285]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE
##	[7297]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE
##	[7309]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[7321]	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE
##	[7333]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[7345]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE

[illegible]

[illegible]

[illegible]



```

## [9409] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
## [9421] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
## [9433] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE FALSE TRUE
## [9445] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE FALSE TRUE TRUE FALSE
## [9457] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
## [9469] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
## [9481] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
## [9493] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
## [9505] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
## [9517] TRUE TRUE TRUE FALSE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
## [9529] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
## [9541] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
## [9553] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE FALSE TRUE TRUE TRUE
## [9565] FALSE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
## [9577] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
## [9589] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
## [9601] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
## [9613] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
## [9625] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE FALSE TRUE TRUE
## [9637] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
## [9649] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
## [9661] TRUE TRUE TRUE TRUE TRUE FALSE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
## [9673] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE FALSE TRUE
## [9685] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
## [9697] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
## [9709] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE FALSE TRUE
## [9721] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
## [9733] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
## [9745] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
## [9757] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
## [9769] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
## [9781] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
## [9793] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
## [9805] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
## [9817] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
## [9829] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
## [9841] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
## [9853] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
## [9865] TRUE TRUE TRUE TRUE TRUE FALSE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
## [9877] TRUE FALSE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
## [9889] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
## [9901] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
## [9913] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
## [9925] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
## [9937] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE FALSE TRUE TRUE FALSE
## [9949] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE FALSE TRUE TRUE
## [9961] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
## [9973] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
## [9985] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
## [9997] TRUE TRUE TRUE TRUE

```

What proportion of times did the  $t$ -based CI cover the true  $\mu$ ? Does this match the theory?

Answer: approximately it is becoming 95% true for  $\mu$

3. Repeat the steps in Question 2, now using the standard exponential distribution to generate the sample  $X$ , but still using the  $t$ -based CI. (Recall that the mean in this case is 1.)

```
nrep <- 10000
maxs <- rep(0,nrep)
mins <- rep(0,nrep)
for(i in 1:nrep){
  X<- rexp(n=20,rate=1/1)
  my.test<- t.test(X,conf.level=0.95,mu=0)
  maxs[i] <- my.test$conf.int[2]
  mins[i] <- my.test$conf.int[1]
}
contained <- mins < 1 & maxs > 1
my.test$conf.int
```

```
## [1] 0.5810901 1.3570950
## attr(,"conf.level")
## [1] 0.95
```

```
table(contained)/nrep
```

```
## contained
## FALSE TRUE
## 0.0825 0.9175
```

```
contained
```

```
##      [1] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
##     [13] TRUE TRUE TRUE TRUE TRUE FALSE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
##     [25] TRUE TRUE TRUE TRUE TRUE TRUE TRUE FALSE TRUE TRUE TRUE TRUE FALSE TRUE
##     [37] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
##     [49] TRUE TRUE TRUE FALSE TRUE TRUE FALSE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
##     [61] TRUE TRUE TRUE TRUE FALSE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
##     [73] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE FALSE TRUE TRUE
##     [85] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
##     [97] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
##    [109] TRUE FALSE TRUE TRUE TRUE TRUE TRUE TRUE TRUE FALSE TRUE TRUE TRUE TRUE
##    [121] TRUE TRUE TRUE TRUE FALSE TRUE TRUE TRUE TRUE TRUE TRUE FALSE TRUE TRUE
##    [133] TRUE TRUE TRUE TRUE TRUE TRUE TRUE FALSE TRUE TRUE TRUE TRUE TRUE TRUE
##    [145] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
##    [157] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
##    [169] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
##    [181] TRUE TRUE FALSE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE FALSE
##    [193] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
##    [205] TRUE TRUE TRUE FALSE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
##    [217] TRUE TRUE TRUE FALSE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
##    [229] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
##    [241] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
##    [253] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
##    [265] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
##    [277] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE FALSE TRUE TRUE TRUE TRUE
##    [289] FALSE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE FALSE TRUE FALSE TRUE
```

##	[301]	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[313]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[325]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE
##	[337]	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[349]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[361]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[373]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[385]	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[397]	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[409]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[421]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[433]	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[445]	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[457]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE
##	[469]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[481]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE	TRUE	TRUE	TRUE
##	[493]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[505]	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[517]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[529]	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[541]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[553]	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE
##	[565]	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[577]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[589]	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE
##	[601]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE
##	[613]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE
##	[625]	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[637]	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[649]	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE
##	[661]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE
##	[673]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE
##	[685]	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE
##	[697]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[709]	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE
##	[721]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[733]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[745]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[757]	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[769]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[781]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[793]	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[805]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[817]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[829]	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[841]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE
##	[853]	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[865]	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE
##	[877]	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[889]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE
##	[901]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE
##	[913]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE
##	[925]	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[937]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE

##	[949]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[961]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE
##	[973]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[985]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[997]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1009]	FALSE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE
##	[1021]	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE
##	[1033]	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1045]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1057]	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE
##	[1069]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1081]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE
##	[1093]	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1105]	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1117]	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1129]	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1141]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1153]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1165]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1177]	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE
##	[1189]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE
##	[1201]	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1213]	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1225]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE
##	[1237]	TRUE	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE
##	[1249]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	TRUE
##	[1261]	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE
##	[1273]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1285]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE
##	[1297]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1309]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1321]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1333]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1345]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1357]	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1369]	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE
##	[1381]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1393]	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1405]	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1417]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1429]	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1441]	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1453]	FALSE	FALSE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE
##	[1465]	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE
##	[1477]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1489]	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE
##	[1501]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1513]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE
##	[1525]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1537]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1549]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE
##	[1561]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE
##	[1573]	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE
##	[1585]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE

##	[1597]	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1609]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1621]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1633]	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE
##	[1645]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1657]	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1669]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE
##	[1681]	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1693]	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE
##	[1705]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1717]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE
##	[1729]	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE
##	[1741]	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1753]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1765]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1777]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE
##	[1789]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1801]	TRUE	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1813]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1825]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1837]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1849]	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1861]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1873]	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	TRUE
##	[1885]	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE
##	[1897]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1909]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1921]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1933]	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1945]	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE
##	[1957]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1969]	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE
##	[1981]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[1993]	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[2005]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[2017]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE
##	[2029]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[2041]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[2053]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE
##	[2065]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[2077]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[2089]	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[2101]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[2113]	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[2125]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE

[illegible]

##	[2893]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	TRUE	TRUE
##	[2905]	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE
##	[2917]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE
##	[2929]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[2941]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE
##	[2953]	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[2965]	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[2977]	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[2989]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[3001]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE	TRUE	TRUE
##	[3013]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[3025]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE
##	[3037]	TRUE	FALSE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[3049]	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE
##	[3061]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE
##	[3073]	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE
##	[3085]	FALSE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[3097]	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[3109]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE
##	[3121]	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE
##	[3133]	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[3145]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[3157]	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE
##	[3169]	TRUE	TRUE	FALSE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[3181]	TRUE	FALSE	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[3193]	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[3205]	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE	TRUE	TRUE	TRUE
##	[3217]	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[3229]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[3241]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[3253]	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[3265]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE
##	[3277]	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[3289]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[3301]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[3313]	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE
##	[3325]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE
##	[3337]	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[3349]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[3361]	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE
##	[3373]	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[3385]	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[3397]	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[3409]	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[3421]	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[3433]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[3445]	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE
##	[3457]	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[3469]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[3481]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE	TRUE
##	[3493]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[3505]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[3517]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[3529]	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE

[illegible]



[illegible]

[illegible]

##	[5485]	TRUE	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[5497]	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE
##	[5509]	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[5521]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[5533]	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[5545]	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[5557]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE
##	[5569]	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[5581]	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[5593]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[5605]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[5617]	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[5629]	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE
##	[5641]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[5653]	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[5665]	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE
##	[5677]	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[5689]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[5701]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[5713]	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[5725]	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[5737]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[5749]	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE
##	[5761]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE
##	[5773]	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[5785]	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[5797]	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE
##	[5809]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[5821]	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE
##	[5833]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[5845]	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	TRUE
##	[5857]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[5869]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE
##	[5881]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[5893]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[5905]	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[5917]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[5929]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[5941]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[5953]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE
##	[5965]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE
##	[5977]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[5989]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE
##	[6001]	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6013]	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6025]	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6037]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6049]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE
##	[6061]	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE
##	[6073]	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE
##	[6085]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE
##	[6097]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6109]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6121]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE

##	[6133]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6145]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6157]	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6169]	TRUE	TRUE	TRUE	FALSE	FALSE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6181]	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6193]	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6205]	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6217]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6229]	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6241]	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6253]	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6265]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE
##	[6277]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6289]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6301]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE	TRUE	TRUE
##	[6313]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6325]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6337]	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE
##	[6349]	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE
##	[6361]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	TRUE
##	[6373]	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE
##	[6385]	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6397]	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6409]	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE
##	[6421]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6433]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE
##	[6445]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6457]	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6469]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE
##	[6481]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6493]	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE
##	[6505]	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6517]	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6529]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6541]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6553]	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6565]	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6577]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE
##	[6589]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6601]	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6613]	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6625]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6637]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6649]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE
##	[6661]	TRUE	TRUE	FALSE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE

##	[6781]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	FALSE	TRUE
##	[6793]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6805]	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6817]	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE
##	[6829]	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6841]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6853]	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	FALSE	TRUE
##	[6865]	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6877]	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6889]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6901]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE
##	[6913]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE
##	[6925]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6937]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6949]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE
##	[6961]	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6973]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[6985]	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE
##	[6997]	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE
##	[7009]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[7021]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[7033]	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[7045]	FALSE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[7057]	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[7069]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[7081]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[7093]	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[7105]	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[7117]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[7129]	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[7141]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE
##	[7153]	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[7165]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[7177]	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[7189]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE
##	[7201]	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[7213]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[7225]	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE
##	[7237]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE
##	[7249]	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[7261]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE
##	[7273]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[7285]	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[7297]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[7309]	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE
##	[7321]	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[7333]	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE
##	[7345]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[7357]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[7369]	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE
##	[7381]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	TRUE
##	[7393]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[7405]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE
##	[7417]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE

[illegible]

##	[8077]	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE
##	[8089]	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[8101]	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[8113]	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE	TRUE	TRUE	FALSE
##	[8125]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE
##	[8137]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[8149]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[8161]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[8173]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[8185]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[8197]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[8209]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[8221]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE
##	[8233]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[8245]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE
##	[8257]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[8269]	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[8281]	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[8293]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[8305]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE
##	[8317]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[8329]	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[8341]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[8353]	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE
##	[8365]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE
##	[8377]	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[8389]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[8401]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[8413]	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE
##	[8425]	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[8437]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE
##	[8449]	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[8461]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[8473]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE
##	[8485]	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE
##	[8497]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE
##	[8509]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE	TRUE
##	[8521]	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE
##	[8533]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE
##	[8545]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[8557]	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE
##	[8569]	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE
##	[8581]	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[8593]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[8605]	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE

##	[8725]	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE
##	[8737]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[8749]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[8761]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[8773]	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[8785]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[8797]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE
##	[8809]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE
##	[8821]	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[8833]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[8845]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[8857]	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[8869]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[8881]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[8893]	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[8905]	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE
##	[8917]	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[8929]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE
##	[8941]	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE
##	[8953]	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[8965]	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[8977]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE
##	[8989]	TRUE	TRUE	FALSE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9001]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9013]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9025]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9037]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9049]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9061]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9073]	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9085]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9097]	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9109]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE
##	[9121]	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE
##	[9133]	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9145]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9157]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9169]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9181]	TRUE	FALSE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9193]	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE
##	[9205]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE
##	[9217]	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE
##	[9229]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9241]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9253]	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE
##	[9265]	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9277]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	FALSE
##	[9289]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9301]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9313]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9325]	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9337]	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9349]	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9361]	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE



##	[9373]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE	TRUE	FALSE	TRUE
##	[9385]	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9397]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9409]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9421]	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE
##	[9433]	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE
##	[9445]	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9457]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9469]	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE
##	[9481]	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9493]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9505]	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9517]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE
##	[9529]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9541]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9553]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9565]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE
##	[9577]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE
##	[9589]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9601]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE
##	[9613]	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE
##	[9625]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9637]	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9649]	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9661]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9673]	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE
##	[9685]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9697]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE
##	[9709]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9721]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE
##	[9733]	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9745]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9757]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE
##	[9769]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9781]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE
##	[9793]	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9805]	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9817]	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9829]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE
##	[9841]	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9853]	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE
##	[9865]	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE
##	[9877]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9889]	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9901]	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9913]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9925]	FALSE	FALSE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	FALSE	TRUE
##	[9937]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9949]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE
##	[9961]	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9973]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9985]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
##	[9997]	TRUE	TRUE	FALSE	TRUE								

What is your conclusion?

Answer: the true value are containing in approximatley 92%.

4. Repeat the steps in Question 3, but using a sample size of  $n = 100$ .

```
container=logical(1e4)
for(i in 1:1e4)
{
X=rexp(100,1)
my.test=t.test(X,conf.level=0.95)
container[i]=ifelse(my.test$p.value<0.05,"Yes","No")
}
table(container)
```

```
## container
##   Yes
## 10000
```

container ## printing the values of container (sometimes it may print till 1000 and omits other values)

```
##      [1] "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes"
##     [13] "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes"
##     [25] "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes"
##     [37] "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes"
##     [49] "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes"
##     [61] "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes"
##     [73] "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes"
##     [85] "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes"
##     [97] "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes"
##    [109] "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes"
##    [121] "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes"
##    [133] "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes"
##    [145] "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes"
##    [157] "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes"
##    [169] "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes"
##    [181] "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes"
##    [193] "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes"
##    [205] "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes"
##    [217] "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes"
##    [229] "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes"
##    [241] "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes"
##    [253] "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes"
##    [265] "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes"
##    [277] "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes"
##    [289] "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes"
##    [301] "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes"
##    [313] "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes"
##    [325] "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes"
##    [337] "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes"
##    [349] "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes"
##    [361] "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes"
##    [373] "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes"
```

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]



[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]



[illegible]

What is your conclusion?

Answer: approx 94% does the interval contain the true value of 'mu'

5. Set  $\mu_1 = 0$ ,  $\sigma_1 = 3$ ,  $\mu_2 = 1$ , and  $\sigma_2 = 2$ . Generate one sample  $X$  of  $n_1 = 20$  random numbers from  $\mathcal{N}(\mu_1, \sigma_1^2)$  and another sample  $Y$  of  $n_2 = 25$  random numbers from  $\mathcal{N}(\mu_2, \sigma_2^2)$ . Perform a two-sample  $t$ -test for difference of means.

```
X = rnorm(n=20,mean=0,sd=3)
Y = rnorm(n=25,mean=1,sd=2)
my.test = t.test(X,Y)
my.test
```

```
##
## Welch Two Sample t-test
##
## data: X and Y
## t = -1.5655, df = 37.518, p-value = 0.1259
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## -2.4257530 0.3105955
## sample estimates:
## mean of x mean of y
## -0.5170883 0.5404905
```

```
my.ans = ifelse(my.test$p.value < 0.05,"Yes","No")
```

Does the test reject the null hypothesis  $H_0 : \mu_1 = \mu_2$  at the level of significance  $\alpha = 0.05$ ?

Answer: No

6. Repeat the computation in Question 5 10,000 times. Store in a logical vector of length 10,000 whether the null hypothesis is rejected at the level  $\alpha = 0.05$  or not.

```
m=1e4
result= logical(m)

for(i in 1:m){
X=rnorm(n=20,mean=0,sd=3)
Y=rnorm(n=25,mean=1,sd=2)
my.test=t.test(X,Y)
my.test

result[i]=ifelse(my.test$p.value < 0.05,"Yes","No")
}
table(result)
```

```
## result
## No Yes
## 7671 2329
```

```
result
```

```
## [1] "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "Yes" "Yes"
## [13] "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "Yes" "No" "Yes"
## [25] "No" "Yes" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "Yes"
## [37] "Yes" "No" "Yes" "Yes" "No" "No" "No" "No" "Yes" "No" "No" "No" "No"
## [49] "Yes" "No" "No" "Yes" "Yes" "No" "No" "No" "Yes" "No" "Yes" "Yes" "Yes"
```

## [61] "No" "No" "Yes" "No" "No" "No" "No" "No" "Yes" "No" "Yes" "Yes" "Yes"  
 ## [73] "No" "No" "No" "Yes" "Yes" "Yes" "No" "Yes" "Yes" "No" "No" "No" "Yes"  
 ## [85] "Yes" "No" "No" "No" "No" "No" "No" "Yes" "No" "No" "No" "No" "No"  
 ## [97] "No" "Yes" "No" "No" "No" "No" "No" "No" "Yes" "No" "No" "No" "No"  
 ## [109] "No" "No" "Yes" "No" "Yes" "No" "No" "No" "No" "No" "No" "No" "No"  
 ## [121] "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No"  
 ## [133] "Yes" "No" "No" "No" "No" "Yes" "No" "No" "No" "No" "No" "No" "Yes"  
 ## [145] "Yes" "No" "No" "No" "No" "No" "No" "Yes" "Yes" "No" "Yes" "No" "No"  
 ## [157] "No" "No" "No" "No" "No" "No" "Yes" "Yes" "No" "No" "Yes" "No" "No"  
 ## [169] "No" "No" "Yes" "No" "No" "Yes" "No" "No" "Yes" "No" "Yes" "Yes" "Yes"  
 ## [181] "Yes" "Yes" "No" "No" "Yes" "Yes" "Yes" "Yes" "No" "No" "No" "No" "Yes"  
 ## [193] "Yes" "No" "No" "No" "No" "No" "Yes" "No" "No" "Yes" "No" "No" "Yes"  
 ## [205] "No" "No" "No" "No" "Yes" "No" "No" "No" "No" "No" "Yes" "No" "No"  
 ## [217] "No" "No" "No" "No" "No" "No" "No" "No" "No" "Yes" "No" "No" "Yes"  
 ## [229] "No" "Yes" "No" "No" "No" "Yes" "No" "No" "No" "No" "No" "No" "Yes"  
 ## [241] "Yes" "No" "Yes" "No" "No" "Yes" "No" "No" "No" "Yes" "Yes" "Yes" "Yes"  
 ## [253] "No" "No" "No" "Yes" "No" "No" "No" "No" "No" "No" "No" "No" "No"  
 ## [265] "No" "No" "No" "No" "No" "No" "No" "Yes" "Yes" "No" "No" "No" "No"  
 ## [277] "No" "No" "No" "No" "No" "No" "Yes" "No" "Yes" "No" "No" "No" "No"  
 ## [289] "No" "No" "No" "No" "Yes" "No" "Yes" "Yes" "No" "No" "No" "No" "No"  
 ## [301] "No" "Yes" "No" "Yes" "Yes" "Yes" "Yes" "No" "Yes" "No" "Yes" "No" "No"  
 ## [313] "No" "No" "No" "No" "Yes" "No" "No" "No" "No" "No" "No" "No" "No"  
 ## [325] "No" "No" "Yes" "No" "No" "No" "No" "No" "No" "Yes" "No" "No" "Yes"  
 ## [337] "No" "No" "No" "No" "No" "Yes" "No" "No" "No" "Yes" "Yes" "No" "No"  
 ## [349] "No" "No" "Yes" "No" "No" "No" "No" "Yes" "No" "No" "No" "No" "No"  
 ## [361] "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "Yes" "No"  
 ## [373] "No" "No" "No" "No" "Yes" "No" "No" "No" "No" "No" "No" "No" "No"  
 ## [385] "Yes" "No" "Yes" "No" "No" "No" "No" "Yes" "No" "Yes" "No" "No" "No"  
 ## [397] "No" "No" "No" "No" "No" "No" "No" "Yes" "No" "No" "No" "No" "Yes"  
 ## [409] "No" "No" "No" "Yes" "No" "No" "No" "Yes" "No" "No" "No" "No" "No"  
 ## [421] "No" "No" "No" "No" "Yes" "Yes" "No" "Yes" "No" "No" "No" "No" "No"  
 ## [433] "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No"  
 ## [445] "No" "Yes" "No" "No" "No" "No" "Yes" "No" "No" "Yes" "No" "No" "No"  
 ## [457] "No" "No" "Yes" "No" "No" "No" "No" "No" "No" "No" "No" "Yes" "No"  
 ## [469] "No" "No" "No" "No" "No" "Yes" "No" "Yes" "No" "Yes" "No" "No" "No"  
 ## [481] "No" "No" "No" "No" "No" "No" "No" "No" "No" "Yes" "No" "No" "No"  
 ## [493] "No" "No" "Yes" "No" "No" "No" "Yes" "No" "No" "No" "Yes" "No" "No"  
 ## [505] "No" "No" "No" "No" "No" "No" "Yes" "No" "Yes" "No" "Yes" "No" "No"  
 ## [517] "Yes" "Yes" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No"  
 ## [529] "Yes" "No" "No" "Yes" "No" "No" "Yes" "No" "No" "Yes" "No" "No" "No"  
 ## [541] "Yes" "No" "No" "No" "No" "No" "No" "No" "No" "No" "Yes" "No" "No"  
 ## [553] "No" "No" "Yes" "No" "No" "Yes" "No" "Yes" "No" "No" "No" "Yes" "No"  
 ## [565] "Yes" "No" "Yes" "No" "No" "No" "No" "Yes" "No" "No" "No" "Yes" "No"  
 ## [577] "No" "No" "No" "No" "No" "Yes" "No" "No" "No" "No" "No" "No" "No"  
 ## [589] "No" "No" "Yes" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No"  
 ## [601] "Yes" "No" "Yes" "No" "No" "No" "No" "Yes" "No" "Yes" "No" "Yes" "Yes"  
 ## [613] "No" "No" "No" "No" "Yes" "No" "No" "No" "Yes" "Yes" "No" "No" "No"  
 ## [625] "No" "No" "No" "No" "No" "No" "No" "Yes" "No" "Yes" "No" "No" "No"  
 ## [637] "No" "Yes" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No"  
 ## [649] "No" "No" "No" "No" "No" "Yes" "No" "Yes" "No" "Yes" "No" "No" "No"  
 ## [661] "No" "No" "Yes" "No" "Yes" "Yes" "No" "No" "No" "No" "No" "Yes" "No"  
 ## [673] "No" "No" "No" "No" "No" "No" "Yes" "No" "Yes" "No" "Yes" "No" "No"  
 ## [685] "No" "No" "Yes" "No" "No" "Yes" "Yes" "No" "No" "No" "No" "No" "No"  
 ## [697] "No" "No" "No" "No" "Yes" "Yes" "No" "No" "Yes" "Yes" "No" "No" "No"

##	[709]	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"
##	[721]	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"
##	[733]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"Yes"
##	[745]	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"
##	[757]	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[769]	"No"	"Yes"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"Yes"	"Yes"	"No"
##	[781]	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"Yes"	"No"	"No"
##	[793]	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"
##	[805]	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"
##	[817]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[829]	"Yes"	"Yes"	"Yes"	"Yes"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"Yes"
##	[841]	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"Yes"
##	[853]	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"
##	[865]	"Yes"	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"
##	[877]	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"Yes"	"No"	"Yes"
##	[889]	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"Yes"
##	[901]	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"
##	[913]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"Yes"	"No"	"No"
##	[925]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"
##	[937]	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"
##	[949]	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"
##	[961]	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"
##	[973]	"Yes"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[985]	"No"	"No"	"Yes"	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"
##	[997]	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"
##	[1009]	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[1021]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[1033]	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"
##	[1045]	"No"	"Yes"	"No"	"Yes"	"Yes"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"
##	[1057]	"No"	"Yes"	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"No"
##	[1069]	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"No"
##	[1081]	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"
##	[1093]	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"
##	[1105]	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"
##	[1117]	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"
##	[1129]	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"Yes"	"No"
##	[1141]	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"
##	[1153]	"Yes"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"
##	[1165]	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"Yes"	"No"	"Yes"	"Yes"	"No"
##	[1177]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"
##	[1189]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[1201]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[1213]	"No"	"Yes"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"Yes"
##	[1225]	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"No"
##	[1237]	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"
##	[1249]	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"
##	[1261]	"Yes"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"
##	[1273]	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"Yes"	"Yes"	"No"	"No"
##	[1285]	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"Yes"
##	[1297]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"
##	[1309]	"No"	"No"	"Yes"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"
##	[1321]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"
##	[1333]	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"Yes"
##	[1345]	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"

##	[1357]	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"Yes"	"No"
##	[1369]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[1381]	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"
##	[1393]	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"
##	[1405]	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"
##	[1417]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"
##	[1429]	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"
##	[1441]	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"
##	[1453]	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"
##	[1465]	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"Yes"
##	[1477]	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"
##	[1489]	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"
##	[1501]	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"
##	[1513]	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"
##	[1525]	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"
##	[1537]	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"
##	[1549]	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"
##	[1561]	"No"	"No"	"Yes"	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"
##	[1573]	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[1585]	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"No"
##	[1597]	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"No"
##	[1609]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"
##	[1621]	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"
##	[1633]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[1645]	"Yes"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"Yes"
##	[1657]	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"
##	[1669]	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"No"
##	[1681]	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[1693]	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"No"
##	[1705]	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"
##	[1717]	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"
##	[1729]	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"
##	[1741]	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[1753]	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"
##	[1765]	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[1777]	"Yes"	"Yes"	"Yes"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"
##	[1789]	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"
##	[1801]	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"No"
##	[1813]	"No"	"Yes"	"No"	"Yes"	"No"	"Yes"	"No"	"Yes"	"No"	"Yes"	"No"	"No"
##	[1825]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[1837]	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"
##	[1849]	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"Yes"	"No"	"No"	"No"	"Yes"
##	[1861]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[1873]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"
##	[1885]	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"
##	[1897]	"Yes"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"Yes"	"Yes"	"No"	"No"	"No"
##	[1909]	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"No"
##	[1921]	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"Yes"	"Yes"	"No"	"No"
##	[1933]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[1945]	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"Yes"
##	[1957]	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"
##	[1969]	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[1981]	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[1993]	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"

##	[2005]	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"
##	[2017]	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"
##	[2029]	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"
##	[2041]	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"Yes"	"No"
##	[2053]	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[2065]	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[2077]	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"
##	[2089]	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[2101]	"Yes"	"No"	"Yes"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"
##	[2113]	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"Yes"	"Yes"
##	[2125]	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"
##	[2137]	"No"	"No"	"Yes"	"Yes"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"
##	[2149]	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[2161]	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"No"
##	[2173]	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"
##	[2185]	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"No"
##	[2197]	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"
##	[2209]	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"
##	[2221]	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"
##	[2233]	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[2245]	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"Yes"	"No"
##	[2257]	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"
##	[2269]	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"Yes"
##	[2281]	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"
##	[2293]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"
##	[2305]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"
##	[2317]	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"
##	[2329]	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"
##	[2341]	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[2353]	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"No"
##	[2365]	"No"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"Yes"
##	[2377]	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"
##	[2389]	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"Yes"
##	[2401]	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"Yes"	"No"	"No"
##	[2413]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"Yes"	"No"
##	[2425]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"Yes"
##	[2437]	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"
##	[2449]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[2461]	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"Yes"	"No"	"No"	"Yes"	"No"
##	[2473]	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"No"
##	[2485]	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"
##	[2497]	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"
##	[2509]	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"
##	[2521]	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"
##	[2533]	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[2545]	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"No"
##	[2557]	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[2569]	"Yes"	"No"	"Yes"	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"
##	[2581]	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"
##	[2593]	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"
##	[2605]	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"Yes"
##	[2617]	"Yes"	"Yes"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"Yes"
##	[2629]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"
##	[2641]	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"Yes"

##	[2653]	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[2665]	"No"	"Yes"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"
##	[2677]	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[2689]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"
##	[2701]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[2713]	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"Yes"
##	[2725]	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"Yes"
##	[2737]	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"
##	[2749]	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"
##	[2761]	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"
##	[2773]	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"No"
##	[2785]	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"No"
##	[2797]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"
##	[2809]	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"
##	[2821]	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"
##	[2833]	"Yes"	"No"	"Yes"	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"
##	[2845]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[2857]	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"
##	[2869]	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"
##	[2881]	"Yes"	"No"	"Yes"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"
##	[2893]	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"
##	[2905]	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"
##	[2917]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[2929]	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"
##	[2941]	"No"	"Yes"	"Yes"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"Yes"	"No"	"No"
##	[2953]	"No"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"Yes"
##	[2965]	"Yes"	"Yes"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"
##	[2977]	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"
##	[2989]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"
##	[3001]	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"
##	[3013]	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[3025]	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"Yes"	"No"	"Yes"	"Yes"	"No"	"Yes"
##	[3037]	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"
##	[3049]	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"Yes"	"Yes"	"No"
##	[3061]	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"Yes"	"No"	"Yes"
##	[3073]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"No"
##	[3085]	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"
##	[3097]	"No"	"No"	"Yes"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"
##	[3109]	"Yes"	"Yes"	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"
##	[3121]	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"Yes"
##	[3133]	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"
##	[3145]	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"No"
##	[3157]	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"
##	[3169]	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[3181]	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"Yes"	"Yes"	"No"	"Yes"	"No"	"No"
##	[3193]	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"
##	[3205]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"
##	[3217]	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"Yes"	"No"
##	[3229]	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"Yes"
##	[3241]	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"
##	[3253]	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"Yes"	"Yes"	"No"	"No"
##	[3265]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"
##	[3277]	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"Yes"	"No"
##	[3289]	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"

## [3301] "Yes" "No" "No" "No" "Yes" "No" "No" "No" "No" "No" "No" "No" "No"  
 ## [3313] "No" "No" "No" "No" "Yes" "Yes" "No" "No" "Yes" "Yes" "No" "No"  
 ## [3325] "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No"  
 ## [3337] "No" "No" "No" "No" "No" "Yes" "Yes" "No" "No" "No" "No" "Yes" "Yes"  
 ## [3349] "Yes" "No" "Yes" "No" "No" "No" "Yes" "No" "No" "No" "No" "Yes" "No"  
 ## [3361] "No" "No" "No" "Yes" "No" "No" "Yes" "Yes" "No" "No" "No" "No" "No"  
 ## [3373] "No" "No" "No" "Yes" "No" "Yes" "No" "No" "No" "No" "No" "No" "No"  
 ## [3385] "No" "No" "Yes" "No" "No" "No" "Yes" "No" "No" "No" "No" "No" "No"  
 ## [3397] "Yes" "Yes" "No" "No" "No" "No" "Yes" "No" "No" "No" "No" "Yes" "No"  
 ## [3409] "No" "No" "No" "No" "Yes" "Yes" "Yes" "No" "No" "No" "No" "No" "Yes"  
 ## [3421] "Yes" "No" "No" "No" "No" "No" "No" "No" "Yes" "Yes" "Yes" "Yes" "No"  
 ## [3433] "No" "No" "No" "Yes" "No" "No" "No" "Yes" "No" "No" "No" "Yes" "No"  
 ## [3445] "No" "Yes" "No" "No" "No" "No" "No" "No" "No" "Yes" "No" "No" "No"  
 ## [3457] "Yes" "No" "Yes" "Yes" "No" "No" "No" "Yes" "Yes" "No" "No" "No" "No"  
 ## [3469] "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "Yes"  
 ## [3481] "No" "No" "No" "Yes" "No" "No" "No" "No" "No" "Yes" "No" "No" "Yes"  
 ## [3493] "No" "Yes" "No" "Yes" "Yes" "No" "No" "No" "No" "Yes" "No" "No" "No"  
 ## [3505] "Yes" "Yes" "Yes" "No" "No" "No" "No" "Yes" "Yes" "No" "Yes" "Yes" "Yes"  
 ## [3517] "No" "No" "No" "No" "No" "No" "Yes" "Yes" "No" "No" "No" "No" "Yes"  
 ## [3529] "Yes" "No" "No" "Yes" "No" "Yes" "No" "Yes" "No" "Yes" "No" "No" "Yes"  
 ## [3541] "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No"  
 ## [3553] "Yes" "No" "No" "No" "No" "No" "No" "No" "Yes" "No" "No" "No" "No"  
 ## [3565] "Yes" "No" "Yes" "No" "Yes" "Yes" "No" "Yes" "Yes" "No" "No" "No" "No"  
 ## [3577] "No" "No" "No" "Yes" "No" "No" "No" "No" "No" "Yes" "No" "No" "Yes"  
 ## [3589] "No" "No" "Yes" "No" "No" "No" "No" "No" "Yes" "No" "Yes" "No" "No"  
 ## [3601] "No" "No" "No" "Yes" "No" "Yes" "No" "No" "No" "No" "No" "Yes" "No"  
 ## [3613] "No" "No" "No" "No" "No" "No" "Yes" "No" "Yes" "No" "No" "No" "No"  
 ## [3625] "Yes" "No" "No" "No" "No" "No" "No" "Yes" "No" "No" "No" "No" "No"  
 ## [3637] "Yes" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No"  
 ## [3649] "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "Yes" "Yes"  
 ## [3661] "Yes" "No" "Yes" "No" "No" "No" "Yes" "Yes" "Yes" "No" "No" "No" "No"  
 ## [3673] "No" "No" "No" "No" "No" "Yes" "Yes" "No" "No" "No" "No" "No" "No"  
 ## [3685] "No" "No" "No" "No" "Yes" "No" "Yes" "No" "Yes" "No" "Yes" "No" "No"  
 ## [3697] "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No"  
 ## [3709] "Yes" "No" "Yes" "No" "Yes" "No" "No" "Yes" "No" "No" "No" "No" "No"  
 ## [3721] "No" "Yes" "No" "No" "No" "No" "No" "No" "No" "No" "No" "Yes" "No"  
 ## [3733] "No" "No" "No" "No" "No" "Yes" "No" "Yes" "No" "No" "No" "Yes" "Yes"  
 ## [3745] "No" "No" "No" "No" "Yes" "Yes" "No" "No" "No" "No" "No" "No" "No"  
 ## [3757] "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No"  
 ## [3769] "No" "No" "No" "Yes" "No" "No" "No" "No" "Yes" "Yes" "No" "No" "No"  
 ## [3781] "No" "Yes" "No" "No" "No" "No" "No" "No" "No" "No" "No" "Yes" "Yes"  
 ## [3793] "Yes" "No" "No" "No" "Yes" "No" "No" "No" "No" "No" "No" "No" "No"  
 ## [3805] "Yes" "Yes" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "Yes"  
 ## [3817] "No" "Yes" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "Yes"  
 ## [3829] "No" "No" "No" "No" "No" "No" "No" "Yes" "Yes" "No" "No" "No" "No"  
 ## [3841] "No" "No" "No" "No" "No" "No" "No" "Yes" "Yes" "Yes" "Yes" "Yes" "No"  
 ## [3853] "Yes" "Yes" "No" "No" "No" "No" "No" "No" "No" "Yes" "Yes" "Yes" "No"  
 ## [3865] "No" "No" "No" "Yes" "No" "No" "Yes" "No" "No" "No" "No" "No" "No"  
 ## [3877] "Yes" "Yes" "Yes" "No" "No" "No" "No" "Yes" "No" "Yes" "No" "Yes" "Yes"  
 ## [3889] "No" "No" "Yes" "Yes" "No" "No" "No" "No" "No" "No" "No" "No" "No"  
 ## [3901] "No" "Yes" "No" "No" "No" "No" "Yes" "No" "No" "No" "Yes" "No" "No"  
 ## [3913] "No" "No" "No" "No" "No" "Yes" "No" "No" "Yes" "No" "Yes" "No" "No"  
 ## [3925] "No" "No" "Yes" "No" "No" "Yes" "Yes" "No" "Yes" "No" "No" "No" "No"  
 ## [3937] "No" "Yes" "No" "Yes" "No" "No" "Yes" "Yes" "Yes" "No" "Yes" "No" "No"



##	[3949]	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"
##	[3961]	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"
##	[3973]	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"
##	[3985]	"No"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"
##	[3997]	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"No"
##	[4009]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"
##	[4021]	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"
##	[4033]	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"No"
##	[4045]	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"Yes"	"No"	"No"
##	[4057]	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"
##	[4069]	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"Yes"	"Yes"
##	[4081]	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"Yes"
##	[4093]	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"
##	[4105]	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"
##	[4117]	"Yes"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"
##	[4129]	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[4141]	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"Yes"
##	[4153]	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"
##	[4165]	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"No"
##	[4177]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[4189]	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"Yes"	"Yes"
##	[4201]	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"
##	[4213]	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"
##	[4225]	"Yes"	"Yes"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[4237]	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"
##	[4249]	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"
##	[4261]	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"
##	[4273]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"
##	[4285]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[4297]	"No"	"Yes"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"No"
##	[4309]	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"
##	[4321]	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"Yes"	"No"	"No"	"No"
##	[4333]	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"Yes"
##	[4345]	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"
##	[4357]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"No"
##	[4369]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"
##	[4381]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"Yes"
##	[4393]	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"No"
##	[4405]	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"
##	[4417]	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"
##	[4429]	"No"	"Yes"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"Yes"
##	[4441]	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"
##	[4453]	"No"	"No"	"Yes"	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"
##	[4465]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"
##	[4477]	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"
##	[4489]	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"No"
##	[4501]	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"
##	[4513]	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"
##	[4525]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"
##	[4537]	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"
##	[4549]	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"
##	[4561]	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"Yes"	"No"
##	[4573]	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"Yes"	"No"
##	[4585]	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"

## [4597] "Yes" "Yes" "No" "No" "Yes" "No" "No" "No" "No" "No" "No" "Yes" "No"  
 ## [4609] "No" "Yes" "No" "Yes" "No" "No" "No" "No" "No" "No" "No" "No" "No"  
 ## [4621] "No" "Yes" "No" "No" "Yes" "Yes" "Yes" "Yes" "Yes" "No" "No" "No" "No"  
 ## [4633] "No" "Yes" "No" "No" "No" "Yes" "No" "No" "No" "No" "No" "Yes" "Yes"  
 ## [4645] "Yes" "Yes" "No" "No" "No" "Yes" "Yes" "No" "No" "No" "Yes" "No" "Yes"  
 ## [4657] "No" "No" "No" "No" "No" "No" "No" "No" "Yes" "No" "No" "No" "Yes"  
 ## [4669] "No" "No" "No" "No" "No" "No" "No" "No" "Yes" "No" "No" "No" "No"  
 ## [4681] "No" "No" "Yes" "No" "No" "No" "Yes" "No" "Yes" "No" "No" "No" "No"  
 ## [4693] "Yes" "Yes" "No" "No" "Yes" "Yes" "No" "No" "No" "No" "No" "No" "No"  
 ## [4705] "No" "No" "No" "No" "Yes" "No" "Yes" "No" "No" "No" "No" "No" "No"  
 ## [4717] "No" "No" "Yes" "Yes" "No" "No" "No" "No" "Yes" "No" "No" "No" "No"  
 ## [4729] "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No"  
 ## [4741] "Yes" "No" "No" "No" "Yes" "No" "No" "No" "No" "No" "No" "No" "Yes"  
 ## [4753] "Yes" "Yes" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No"  
 ## [4765] "No" "No" "Yes" "Yes" "No" "No" "No" "No" "No" "No" "No" "No" "No"  
 ## [4777] "No" "No" "No" "No" "No" "No" "Yes" "No" "No" "Yes" "No" "No" "No"  
 ## [4789] "No" "No" "No" "No" "Yes" "No" "No" "No" "Yes" "No" "No" "No" "No"  
 ## [4801] "Yes" "Yes" "Yes" "No" "No" "No" "No" "No" "No" "Yes" "No" "No" "No"  
 ## [4813] "Yes" "Yes" "No" "No" "No" "No" "Yes" "Yes" "No" "No" "No" "No" "No"  
 ## [4825] "Yes" "No" "No" "No" "No" "No" "No" "No" "No" "Yes" "No" "No" "No"  
 ## [4837] "Yes" "No" "No" "No" "No" "No" "No" "No" "No" "No" "Yes" "No" "No"  
 ## [4849] "Yes" "No" "No" "No" "Yes" "No" "Yes" "No" "No" "Yes" "No" "Yes" "No"  
 ## [4861] "Yes" "No" "Yes" "No" "No" "No" "No" "No" "No" "No" "No" "No" "Yes"  
 ## [4873] "No" "Yes" "Yes" "No" "No" "No" "No" "No" "Yes" "No" "No" "No" "No"  
 ## [4885] "No" "No" "Yes" "No" "No" "No" "No" "Yes" "Yes" "No" "No" "No" "No"  
 ## [4897] "No" "No" "No" "Yes" "Yes" "No" "Yes" "Yes" "Yes" "Yes" "No" "No" "No"  
 ## [4909] "No" "No" "No" "No" "No" "No" "No" "No" "Yes" "No" "No" "No" "No"  
 ## [4921] "No" "Yes" "No" "No" "No" "No" "No" "No" "Yes" "No" "No" "No" "No"  
 ## [4933] "No" "No" "No" "Yes" "No" "No" "No" "No" "No" "Yes" "Yes" "No" "No"  
 ## [4945] "No" "No" "No" "No" "Yes" "No" "Yes" "No" "No" "No" "Yes" "No" "No"  
 ## [4957] "No" "Yes" "Yes" "No" "No" "No" "No" "No" "Yes" "No" "Yes" "Yes" "No"  
 ## [4969] "No" "Yes" "No" "No" "No" "No" "No" "No" "Yes" "Yes" "No" "No" "No"  
 ## [4981] "No" "No" "No" "No" "Yes" "No" "No" "No" "No" "Yes" "No" "Yes" "No"  
 ## [4993] "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No"  
 ## [5005] "No" "No" "No" "No" "Yes" "Yes" "No" "No" "No" "No" "No" "No" "No"  
 ## [5017] "No" "No" "Yes" "Yes" "No" "No" "No" "No" "Yes" "No" "No" "No" "No"  
 ## [5029] "Yes" "No" "Yes" "Yes" "No" "No" "No" "No" "No" "No" "No" "No" "No"  
 ## [5041] "No" "Yes" "No" "Yes" "No" "No" "No" "No" "Yes" "No" "No" "No" "Yes"  
 ## [5053] "No" "No" "No" "No" "Yes" "No" "No" "No" "No" "No" "No" "No" "No"  
 ## [5065] "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No"  
 ## [5077] "No" "No" "No" "No" "No" "Yes" "No" "No" "Yes" "No" "No" "No" "Yes"  
 ## [5089] "Yes" "Yes" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No"  
 ## [5101] "No" "No" "No" "No" "No" "Yes" "No" "No" "No" "Yes" "No" "No" "Yes"  
 ## [5113] "No" "No" "Yes" "No" "No" "No" "No" "No" "No" "No" "No" "Yes" "No"  
 ## [5125] "No" "No" "No" "No" "No" "Yes" "Yes" "Yes" "No" "No" "Yes" "No" "No"  
 ## [5137] "No" "No" "No" "No" "No" "No" "Yes" "No" "No" "No" "No" "No" "No"  
 ## [5149] "No" "Yes" "Yes" "No" "No" "Yes" "Yes" "No" "Yes" "Yes" "No" "No" "No"  
 ## [5161] "Yes" "No" "No" "No" "Yes" "No" "Yes" "Yes" "No" "Yes" "No" "No" "No"  
 ## [5173] "No" "No" "Yes" "Yes" "No" "No" "No" "No" "Yes" "No" "No" "No" "No"  
 ## [5185] "Yes" "No" "No" "No" "No" "Yes" "No" "No" "No" "Yes" "No" "No" "No"  
 ## [5197] "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "Yes"  
 ## [5209] "No" "No" "Yes" "No" "Yes" "No" "No" "No" "No" "No" "No" "No" "No"  
 ## [5221] "No" "No" "Yes" "No" "No" "No" "No" "No" "Yes" "No" "Yes" "No" "No"  
 ## [5233] "No" "Yes" "No" "No" "No" "No" "Yes" "No" "No" "Yes" "No" "Yes" "No"

##	[5245]	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"
##	[5257]	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"
##	[5269]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"
##	[5281]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"
##	[5293]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"
##	[5305]	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"
##	[5317]	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"
##	[5329]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"Yes"	"No"
##	[5341]	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"
##	[5353]	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"
##	[5365]	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"Yes"	"No"
##	[5377]	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"No"
##	[5389]	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"
##	[5401]	"Yes"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"Yes"
##	[5413]	"No"	"No"	"No"	"Yes"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"
##	[5425]	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"Yes"
##	[5437]	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"Yes"	"No"
##	[5449]	"No"	"Yes"	"Yes"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"
##	[5461]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"
##	[5473]	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"
##	[5485]	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"No"
##	[5497]	"No"	"Yes"	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"
##	[5509]	"Yes"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"
##	[5521]	"No"	"Yes"	"Yes"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"No"
##	[5533]	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"
##	[5545]	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"Yes"	"No"	"No"
##	[5557]	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[5569]	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"
##	[5581]	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"
##	[5593]	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[5605]	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"
##	[5617]	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[5629]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"
##	[5641]	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[5653]	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[5665]	"No"	"Yes"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"No"
##	[5677]	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"
##	[5689]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"
##	[5701]	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"Yes"	"No"	"Yes"	"No"
##	[5713]	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"
##	[5725]	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"
##	[5737]	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[5749]	"No"	"Yes"	"Yes"	"No"	"Yes"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"
##	[5761]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"
##	[5773]	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"
##	[5785]	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"
##	[5797]	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"
##	[5809]	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"
##	[5821]	"No"	"No"	"Yes"	"Yes"	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"No"
##	[5833]	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"Yes"	"No"
##	[5845]	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"Yes"	"No"
##	[5857]	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"
##	[5869]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"
##	[5881]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"

##	[5893]	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"Yes"	"No"	"No"	"No"	"Yes"	"No"
##	[5905]	"No"	"No"	"Yes"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"
##	[5917]	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"
##	[5929]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"
##	[5941]	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"
##	[5953]	"Yes"	"Yes"	"No"	"Yes"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"
##	[5965]	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[5977]	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"Yes"	"Yes"	"No"	"No"
##	[5989]	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[6001]	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"
##	[6013]	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"
##	[6025]	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[6037]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"
##	[6049]	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"
##	[6061]	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"Yes"	"Yes"	"No"
##	[6073]	"No"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"Yes"
##	[6085]	"No"	"No"	"No"	"Yes"	"Yes"	"Yes"	"Yes"	"No"	"Yes"	"No"	"No"	"No"
##	[6097]	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"
##	[6109]	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"
##	[6121]	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"Yes"
##	[6133]	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"
##	[6145]	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"Yes"	"Yes"	"No"	"Yes"	"No"	"Yes"
##	[6157]	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"No"
##	[6169]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[6181]	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"
##	[6193]	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[6205]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[6217]	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"Yes"	"No"	"Yes"
##	[6229]	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"Yes"	"No"	"No"
##	[6241]	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[6253]	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"Yes"	"No"
##	[6265]	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"Yes"	"Yes"
##	[6277]	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"Yes"	"No"	"No"	"No"
##	[6289]	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"Yes"	"No"	"No"
##	[6301]	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"No"
##	[6313]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"
##	[6325]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"
##	[6337]	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[6349]	"Yes"	"Yes"	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"
##	[6361]	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"
##	[6373]	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"
##	[6385]	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[6397]	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"
##	[6409]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[6421]	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"
##	[6433]	"No"	"No"	"Yes"	"No"	"Yes"	"Yes"	"Yes"	"Yes"	"No"	"No"	"Yes"	"No"
##	[6445]	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"
##	[6457]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"
##	[6469]	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"
##	[6481]	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"
##	[6493]	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"
##	[6505]	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[6517]	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"No"
##	[6529]	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"No"

##	[6541]	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"No"
##	[6553]	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"
##	[6565]	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"
##	[6577]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"
##	[6589]	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[6601]	"No"	"No"	"No"	"Yes"	"Yes"	"Yes"	"No"	"Yes"	"No"	"No"	"Yes"	"No"
##	[6613]	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"
##	[6625]	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"
##	[6637]	"Yes"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"
##	[6649]	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"
##	[6661]	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[6673]	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"
##	[6685]	"Yes"	"Yes"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"
##	[6697]	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"
##	[6709]	"Yes"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[6721]	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"Yes"	"Yes"	"No"
##	[6733]	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"
##	[6745]	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"No"
##	[6757]	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[6769]	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"No"
##	[6781]	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[6793]	"No"	"Yes"	"No"	"Yes"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"
##	[6805]	"No"	"Yes"	"Yes"	"No"	"Yes"	"Yes"	"Yes"	"Yes"	"No"	"No"	"Yes"	"No"
##	[6817]	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"Yes"	"No"	"Yes"	"No"
##	[6829]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"Yes"
##	[6841]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[6853]	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"No"
##	[6865]	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[6877]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"
##	[6889]	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"
##	[6901]	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"
##	[6913]	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"
##	[6925]	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"
##	[6937]	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"
##	[6949]	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"
##	[6961]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"No"
##	[6973]	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"
##	[6985]	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"Yes"
##	[6997]	"No"	"Yes"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"
##	[7009]	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"Yes"	"No"
##	[7021]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"
##	[7033]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"
##	[7045]	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"
##	[7057]	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"
##	[7069]	"Yes"	"Yes"	"Yes"	"Yes"	"Yes"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"Yes"
##	[7081]	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[7093]	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"
##	[7105]	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[7117]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"Yes"	"No"
##	[7129]	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"
##	[7141]	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"Yes"
##	[7153]	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"No"
##	[7165]	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"No"	"Yes"
##	[7177]	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"Yes"

##	[7189]	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"Yes"
##	[7201]	"Yes"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"
##	[7213]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"
##	[7225]	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"
##	[7237]	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[7249]	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[7261]	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"
##	[7273]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"Yes"
##	[7285]	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[7297]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"
##	[7309]	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"
##	[7321]	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"
##	[7333]	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"Yes"	"No"	"No"
##	[7345]	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"Yes"
##	[7357]	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[7369]	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"
##	[7381]	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"
##	[7393]	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"Yes"	"No"	"Yes"	"No"	"Yes"
##	[7405]	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"
##	[7417]	"Yes"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"
##	[7429]	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"Yes"	"Yes"
##	[7441]	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"
##	[7453]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"
##	[7465]	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"
##	[7477]	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"
##	[7489]	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"
##	[7501]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"
##	[7513]	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"Yes"	"No"	"Yes"	"No"	"Yes"
##	[7525]	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"Yes"
##	[7537]	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"
##	[7549]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[7561]	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"
##	[7573]	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"No"
##	[7585]	"No"	"No"	"Yes"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"Yes"	"Yes"	"No"
##	[7597]	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"
##	[7609]	"Yes"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"Yes"
##	[7621]	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"
##	[7633]	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"Yes"	"No"
##	[7645]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"
##	[7657]	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"No"
##	[7669]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"Yes"
##	[7681]	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"
##	[7693]	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[7705]	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"
##	[7717]	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"
##	[7729]	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"Yes"
##	[7741]	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"
##	[7753]	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"Yes"
##	[7765]	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"
##	[7777]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"
##	[7789]	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[7801]	"No"	"Yes"	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"
##	[7813]	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[7825]	"Yes"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"

## [7837] "Yes" "No" "No" "No" "No" "No" "No" "No" "No" "Yes" "No" "Yes" "No"  
 ## [7849] "No" "No" "Yes" "Yes" "Yes" "No" "Yes" "Yes" "Yes" "Yes" "No" "No" "No"  
 ## [7861] "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No"  
 ## [7873] "Yes" "No" "No" "No" "No" "No" "No" "No" "No" "Yes" "No" "Yes" "No"  
 ## [7885] "No" "Yes" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "Yes"  
 ## [7897] "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "Yes" "No"  
 ## [7909] "Yes" "Yes" "No" "No" "No" "No" "No" "Yes" "No" "No" "No" "Yes" "Yes"  
 ## [7921] "No" "No" "No" "No" "Yes" "No" "No" "Yes" "No" "No" "No" "No" "No"  
 ## [7933] "Yes" "Yes" "Yes" "No" "No" "Yes" "No" "Yes" "No" "No" "No" "No" "Yes"  
 ## [7945] "No" "No" "Yes" "No" "Yes" "Yes" "No" "Yes" "No" "No" "No" "No" "No"  
 ## [7957] "Yes" "No" "No" "No" "No" "No" "No" "Yes" "No" "No" "No" "No" "No"  
 ## [7969] "No" "No" "No" "No" "No" "Yes" "No" "No" "No" "No" "No" "Yes" "No"  
 ## [7981] "No" "No" "No" "No" "Yes" "No" "No" "No" "No" "No" "No" "No" "No"  
 ## [7993] "No" "No" "No" "No" "Yes" "No" "Yes" "No" "No" "No" "No" "No" "No"  
 ## [8005] "No" "Yes" "Yes" "No" "No" "Yes" "Yes" "No" "No" "No" "Yes" "No" "No"  
 ## [8017] "No" "No" "No" "No" "No" "No" "Yes" "No" "No" "No" "No" "No" "Yes"  
 ## [8029] "Yes" "Yes" "No" "No" "No" "Yes" "No" "No" "No" "No" "No" "No" "Yes"  
 ## [8041] "No" "No" "No" "No" "No" "Yes" "No" "No" "No" "No" "No" "Yes" "No"  
 ## [8053] "No" "No" "No" "No" "Yes" "Yes" "No" "No" "Yes" "No" "No" "No" "Yes"  
 ## [8065] "No" "No" "No" "Yes" "Yes" "No" "Yes" "No" "No" "No" "No" "No" "No"  
 ## [8077] "Yes" "No" "Yes" "No" "No" "No" "No" "No" "No" "No" "No" "Yes" "No"  
 ## [8089] "No" "No" "No" "No" "No" "Yes" "Yes" "No" "No" "No" "No" "No" "No"  
 ## [8101] "No" "No" "Yes" "No" "No" "No" "No" "No" "No" "Yes" "No" "No" "No"  
 ## [8113] "No" "No" "Yes" "Yes" "No" "No" "Yes" "No" "No" "No" "No" "No" "Yes"  
 ## [8125] "No" "No" "Yes" "Yes" "No" "No" "No" "Yes" "No" "No" "No" "Yes" "No"  
 ## [8137] "No" "No" "No" "No" "No" "No" "Yes" "No" "Yes" "Yes" "No" "No" "No"  
 ## [8149] "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "Yes" "No"  
 ## [8161] "Yes" "No" "No" "No" "Yes" "No" "Yes" "Yes" "No" "No" "No" "No" "No"  
 ## [8173] "No" "No" "No" "Yes" "No" "Yes" "No" "No" "No" "No" "No" "No" "No"  
 ## [8185] "No" "No" "Yes" "No" "No" "No" "No" "No" "No" "No" "Yes" "No" "No"  
 ## [8197] "No" "No" "No" "Yes" "No" "No" "No" "Yes" "No" "No" "No" "No" "No"  
 ## [8209] "Yes" "No" "No" "No" "Yes" "No" "No" "No" "No" "Yes" "No" "No" "No"  
 ## [8221] "No" "No" "No" "No" "Yes" "No" "Yes" "No" "No" "No" "No" "Yes" "No"  
 ## [8233] "No" "No" "No" "Yes" "No" "No" "Yes" "Yes" "No" "No" "No" "No" "No"  
 ## [8245] "No" "Yes" "Yes" "No" "No" "Yes" "No" "No" "Yes" "No" "Yes" "Yes" "Yes"  
 ## [8257] "No" "No" "No" "Yes" "No" "No" "No" "No" "No" "No" "No" "Yes" "No"  
 ## [8269] "No" "No" "Yes" "No" "No" "No" "No" "No" "No" "No" "No" "Yes" "Yes"  
 ## [8281] "No" "No" "Yes" "No" "Yes" "No" "No" "No" "No" "Yes" "No" "No" "No"  
 ## [8293] "No" "Yes" "No" "No" "Yes" "No" "Yes" "Yes" "No" "No" "No" "No" "No"  
 ## [8305] "No" "No" "Yes" "No" "No" "No" "No" "No" "Yes" "Yes" "Yes" "Yes" "No"  
 ## [8317] "No" "Yes" "No" "No" "Yes" "No" "No" "Yes" "No" "No" "No" "No" "No"  
 ## [8329] "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No"  
 ## [8341] "Yes" "No" "No" "Yes" "No" "No" "No" "No" "No" "No" "No" "No" "No"  
 ## [8353] "No" "Yes" "No" "No" "No" "No" "No" "No" "Yes" "Yes" "No" "Yes" "Yes"  
 ## [8365] "No" "No" "No" "Yes" "No" "No" "No" "No" "No" "Yes" "No" "No" "No"  
 ## [8377] "No" "Yes" "No" "Yes" "Yes" "No" "No" "Yes" "No" "No" "No" "No" "No"  
 ## [8389] "No" "Yes" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No"  
 ## [8401] "No" "No" "No" "No" "No" "Yes" "Yes" "No" "No" "No" "No" "Yes" "No"  
 ## [8413] "No" "No" "No" "Yes" "No" "Yes" "No" "Yes" "Yes" "Yes" "Yes" "No" "Yes"  
 ## [8425] "No" "No" "No" "No" "Yes" "No" "Yes" "No" "No" "Yes" "No" "No" "No"  
 ## [8437] "No" "No" "No" "No" "Yes" "No" "Yes" "No" "Yes" "Yes" "Yes" "No" "No"  
 ## [8449] "No" "No" "Yes" "Yes" "No" "No" "No" "Yes" "No" "No" "No" "No" "No"  
 ## [8461] "No" "Yes" "No" "No" "No" "No" "No" "No" "Yes" "Yes" "No" "No" "No"  
 ## [8473] "No" "Yes" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No"

##	[8485]	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"
##	[8497]	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"No"
##	[8509]	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"
##	[8521]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"
##	[8533]	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"
##	[8545]	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"Yes"	"No"	"Yes"	"Yes"
##	[8557]	"No"	"Yes"	"Yes"	"Yes"	"Yes"	"Yes"	"No"	"No"	"Yes"	"Yes"	"Yes"	"Yes"
##	[8569]	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[8581]	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"No"
##	[8593]	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"No"
##	[8605]	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"
##	[8617]	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"
##	[8629]	"Yes"	"No"	"No"	"Yes"	"No"	"Yes"	"Yes"	"No"	"Yes"	"No"	"No"	"No"
##	[8641]	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"Yes"
##	[8653]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"
##	[8665]	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"
##	[8677]	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"
##	[8689]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"
##	[8701]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"Yes"	"Yes"
##	[8713]	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"
##	[8725]	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"Yes"	"Yes"	"No"
##	[8737]	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"Yes"
##	[8749]	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"Yes"	"Yes"	"No"	"Yes"
##	[8761]	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"
##	[8773]	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"
##	[8785]	"Yes"	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"
##	[8797]	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"
##	[8809]	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"
##	[8821]	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"
##	[8833]	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"No"
##	[8845]	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"
##	[8857]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"
##	[8869]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[8881]	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"No"
##	[8893]	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"
##	[8905]	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"Yes"
##	[8917]	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"Yes"	"No"
##	[8929]	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[8941]	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"
##	[8953]	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"
##	[8965]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"
##	[8977]	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"Yes"	"No"
##	[8989]	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"No"
##	[9001]	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"Yes"	"Yes"	"Yes"	"No"	"No"
##	[9013]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"No"
##	[9025]	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[9037]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"Yes"	"Yes"
##	[9049]	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"Yes"	"Yes"	"No"	"No"	"No"
##	[9061]	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"No"
##	[9073]	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"Yes"	"No"	"No"	"No"
##	[9085]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"
##	[9097]	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"Yes"	"Yes"
##	[9109]	"No"	"No"	"Yes"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"
##	[9121]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"



##	[9133]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[9145]	"Yes"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"Yes"	"Yes"	"No"	"No"	"No"
##	[9157]	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[9169]	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"
##	[9181]	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"
##	[9193]	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"Yes"
##	[9205]	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"Yes"	"No"	"Yes"	"No"
##	[9217]	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"
##	[9229]	"No"	"Yes"	"Yes"	"Yes"	"Yes"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"
##	[9241]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[9253]	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"
##	[9265]	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"
##	[9277]	"No"	"Yes"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"
##	[9289]	"No"	"No"	"Yes"	"Yes"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"No"
##	[9301]	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"No"
##	[9313]	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"
##	[9325]	"Yes"	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"
##	[9337]	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"
##	[9349]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"
##	[9361]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"Yes"
##	[9373]	"No"	"No"	"Yes"	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"
##	[9385]	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"
##	[9397]	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"
##	[9409]	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[9421]	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"
##	[9433]	"No"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"No"
##	[9445]	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"Yes"	"No"
##	[9457]	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"
##	[9469]	"No"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"
##	[9481]	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[9493]	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"
##	[9505]	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[9517]	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"
##	[9529]	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"No"
##	[9541]	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"Yes"	"No"
##	[9553]	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"
##	[9565]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"
##	[9577]	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"Yes"
##	[9589]	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[9601]	"Yes"	"No"	"No"	"No"	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"Yes"	"No"
##	[9613]	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"No"
##	[9625]	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[9637]	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[9649]	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[9661]	"No"	"No"	"Yes"	"Yes"	"Yes"	"Yes"	"No"	"No"	"No"	"Yes"	"Yes"	"No"
##	[9673]	"Yes"	"No"	"No"	"Yes"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"
##	[9685]	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[9697]	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[9709]	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"No"
##	[9721]	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"
##	[9733]	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"No"
##	[9745]	"No"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"	"Yes"	"No"	"No"	"No"
##	[9757]	"No"	"No"	"Yes"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"No"	"Yes"
##	[9769]	"No"	"No"	"Yes"	"No"	"Yes"	"No"	"No"	"Yes"	"No"	"No"	"Yes"	"No"

```
## [9781] "No" "No" "No" "No" "No" "No" "Yes" "No" "Yes" "No" "Yes" "No" "No"
## [9793] "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "Yes" "No" "Yes"
## [9805] "No" "No" "No" "No" "No" "No" "Yes" "Yes" "No" "No" "No" "No" "Yes"
## [9817] "No" "No" "No" "No" "Yes" "No" "No" "No" "No" "No" "No" "No" "No"
## [9829] "No" "Yes" "Yes" "No" "No" "No" "Yes" "No" "No" "No" "No" "No" "No"
## [9841] "No" "No" "No" "Yes" "No" "No" "Yes" "No" "No" "Yes" "Yes" "No" "No"
## [9853] "No" "No" "No" "Yes" "No" "No" "No" "No" "No" "No" "No" "No" "No"
## [9865] "No" "No" "No" "No" "No" "No" "Yes" "Yes" "Yes" "Yes" "No" "Yes" "No"
## [9877] "Yes" "No" "Yes" "No" "Yes" "No" "No" "No" "Yes" "No" "No" "No" "No"
## [9889] "No" "No" "No" "Yes" "Yes" "No" "No" "No" "No" "No" "No" "No" "No"
## [9901] "No" "No" "No" "No" "Yes" "No" "No" "No" "No" "No" "Yes" "No" "No"
## [9913] "No" "Yes" "No" "No" "No" "No" "Yes" "No" "Yes" "No" "No" "No" "No"
## [9925] "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No" "No"
## [9937] "No" "No" "No" "No" "No" "No" "Yes" "No" "Yes" "No" "No" "Yes" "No"
## [9949] "No" "No" "No" "Yes" "No" "No" "Yes" "No" "No" "No" "No" "Yes" "No"
## [9961] "No" "No" "No" "No" "No" "No" "No" "No" "Yes" "No" "No" "Yes" "No"
## [9973] "No" "No" "No" "No" "No" "No" "Yes" "Yes" "No" "No" "Yes" "No" "No"
## [9985] "No" "No" "Yes" "Yes" "Yes" "No" "No" "Yes" "No" "No" "No" "No" "No"
## [9997] "Yes" "No" "Yes" "Yes"
```

What is the proportion of times that the null hypothesis is rejected? (This proportion, interpreted as a probability, is the *power* of the test.)

Answer: approximately 7567 times is is becoming false and 2400 times true

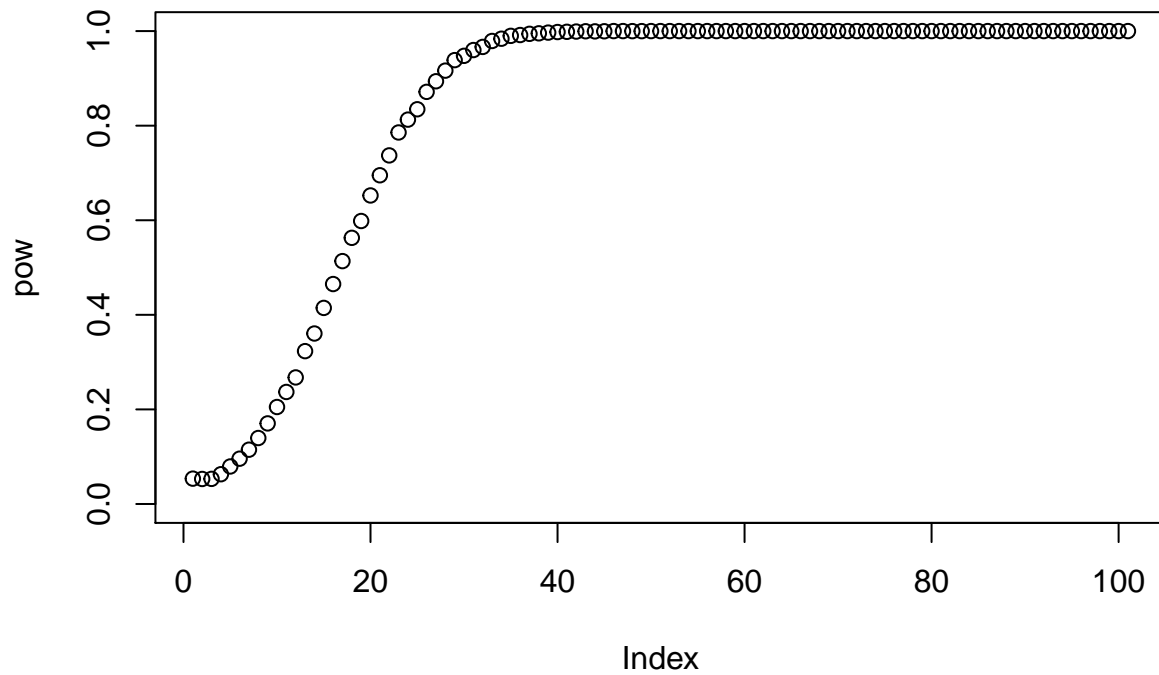
7. Repeat the computations in Question 6 for each of these values of  $\mu_2$ : 0, 0.1, 0.2, 0.3, ..., 10. Plot the resulting *power curve* (power vs.  $\mu_2$ ).

```
m=1e4
mu2s=seq(0,10,by=0.1)
pow=numeric(length(mu2s))
for(j in 1:length(mu2s))
{
  result=logical(m)
  for(i in 1:m)
  {
    X=rnorm(n=20,mean=0,sd=3)
    Y=rnorm(n=25,mean=mu2s[j],sd=2)
    my.test=t.test(X,Y)
    my.test
    result[i]=my.test$p.value<0.05
  }
  pow[j]=mean(result)
}
pow #to know the pow values
```

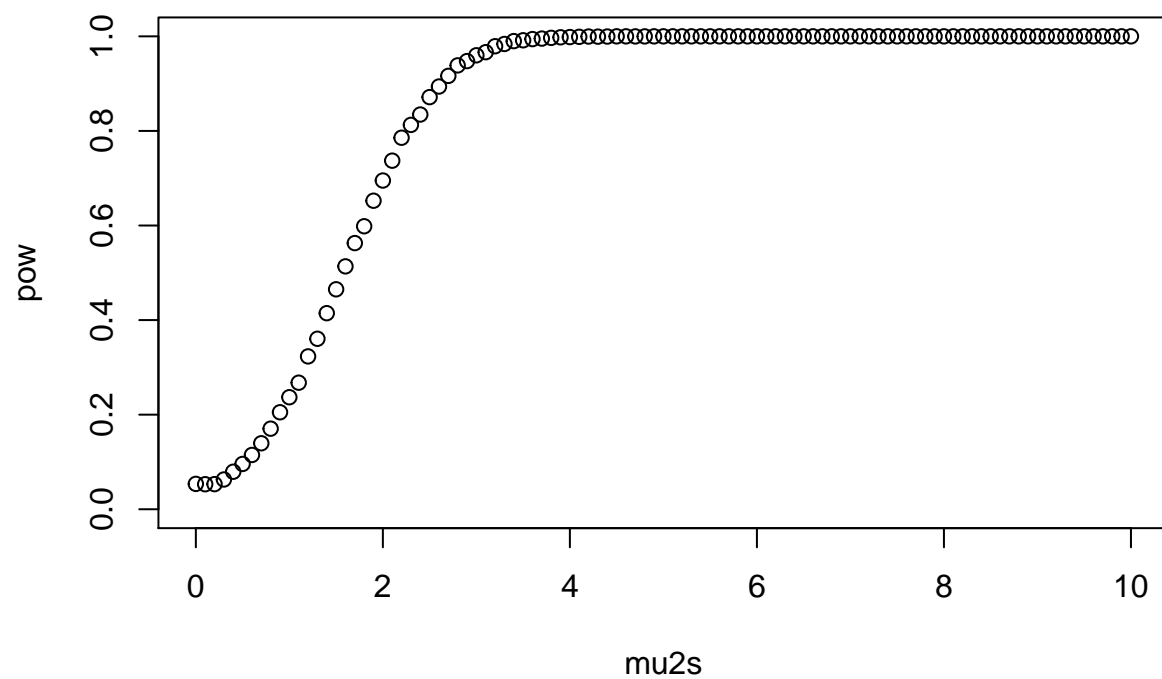
```
## [1] 0.0536 0.0529 0.0531 0.0629 0.0793 0.0958 0.1148 0.1395 0.1704 0.2051
## [11] 0.2369 0.2676 0.3232 0.3605 0.4146 0.4651 0.5136 0.5628 0.5984 0.6524
## [21] 0.6951 0.7371 0.7856 0.8128 0.8347 0.8715 0.8939 0.9164 0.9386 0.9477
## [31] 0.9599 0.9665 0.9791 0.9839 0.9899 0.9917 0.9942 0.9953 0.9968 0.9980
## [41] 0.9985 0.9990 0.9996 0.9994 0.9996 1.0000 1.0000 0.9999 0.9999 1.0000
## [51] 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000
```

```
## [61] 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000
## [71] 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000
## [81] 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000
## [91] 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000
## [101] 1.0000
```

```
plot(pow,ylim=0:1) ##plotting of only pow
```



```
plot(mu2s,pow,ylim=0:1) ## plotting of mu2s and pow
```



What are your conclusions?

Answer: in the above question we have plotted a graph between  $\mu_2s$  and power. and i can conclude that for most of the cases in null hypothesis can be true only in one way but can be false in many ways.