

221101 Decision Tree

Jongrak

2022-12-30

Decision Trees

```
# Load the data
library(tidyverse)

## — Attaching packages — tidyverse
1.3.2 —
## ✓ ggplot2 3.3.6    ✓ purrr  0.3.4
## ✓ tibble  3.1.7    ✓ dplyr  1.0.9
## ✓ tidyr   1.2.0    ✓ stringr 1.4.0
## ✓ readr   2.1.2    ✓ forcats 0.5.1
## — Conflicts —
tidyverse_conflicts() —
## ✗ dplyr::filter() masks stats::filter()
## ✗ dplyr::lag()     masks stats::lag()

titanic <- read_csv("titanic_data.csv")

## Warning: One or more parsing issues, see `problems()` for details

## Rows: 1309 Columns: 13
## — Column specification
## Delimiter: ","
## chr (7): name, sex, age, ticket, cabin, embarked, home.dest
## dbl (6): x, pclass, survived, sibsp, parch, fare
##
## ⓘ Use `spec()` to retrieve the full column specification for this data.
## ⓘ Specify the column types or set `show_col_types = FALSE` to quiet this
message.

titanic[titanic == "?"] = NA

# Data Cleansing (Shuffling)
shuffle_index <- sample(1:nrow(titanic))
head(shuffle_index)

## [1] 560 148 1257 537 601 375

titanic <- titanic[shuffle_index, ]

library(tidyverse)
```

```
titanic2 <- titanic %>%
  select(-c(home.dest, cabin, name, x, ticket)) %>%
  transform(age = as.numeric(age)) %>%
  mutate(pclass = factor(pclass, levels = c(1,2,3), labels = c("Upper",
"Middle", "Lower")),
  survived = factor(survived, levels = c(0,1), labels = c("No",
"Yes")))) %>%
  na.omit()
# 결측치를 자동으로 없애는, 행 자체를. 편하긴 하나 데이터 자체가 줄어든다.
```

titanic2

##	pclass	survived	sex	age	sibsp	parch	fare	embarked
## 1	Middle	Yes	female	20.0000	0	0	36.7500	S
## 3	Lower	Yes	male	7.0000	1	1	15.2458	C
## 4	Middle	Yes	female	32.0000	0	0	13.0000	S
## 5	Lower	No	male	42.0000	0	0	7.5500	S
## 6	Middle	No	male	29.0000	0	0	10.5000	S
## 7	Lower	Yes	male	25.0000	0	0	7.7958	S
## 8	Lower	No	male	21.0000	1	0	6.4958	S
## 9	Middle	No	male	42.0000	1	0	27.0000	S
## 10	Middle	No	male	50.0000	1	0	26.0000	S
## 11	Lower	No	male	28.5000	0	0	7.2292	C
## 12	Upper	Yes	female	49.0000	0	0	25.9292	S
## 14	Middle	No	male	39.0000	0	0	13.0000	S
## 15	Middle	Yes	female	22.0000	1	2	41.5792	C
## 16	Lower	No	male	36.0000	0	0	7.8958	S
## 17	Lower	No	female	30.0000	0	0	7.6292	Q
## 18	Upper	Yes	female	24.0000	3	2	263.0000	S
## 20	Lower	No	male	24.0000	2	0	24.1500	S
## 21	Middle	Yes	female	29.0000	0	0	10.5000	S
## 22	Lower	Yes	male	24.0000	0	0	7.5500	S
## 23	Upper	Yes	female	24.0000	0	0	69.3000	C
## 24	Lower	No	female	48.0000	1	3	34.3750	S
## 25	Middle	No	male	25.0000	0	0	10.5000	S
## 26	Middle	No	male	23.0000	0	0	10.5000	S
## 29	Lower	No	male	30.0000	0	0	7.8958	S
## 30	Upper	No	male	47.0000	0	0	38.5000	S
## 31	Upper	Yes	male	56.0000	0	0	35.5000	C
## 32	Lower	No	male	51.0000	0	0	8.0500	S
## 33	Lower	No	male	25.0000	1	0	7.7750	S
## 35	Middle	Yes	female	23.0000	0	0	13.7917	C
## 36	Middle	Yes	female	30.0000	3	0	21.0000	S
## 37	Middle	Yes	female	42.0000	1	0	26.0000	S
## 38	Lower	No	male	15.0000	1	1	7.2292	C
## 39	Middle	No	male	24.0000	0	0	13.0000	S
## 40	Upper	Yes	female	36.0000	0	0	135.6333	C
## 42	Lower	No	male	24.0000	0	0	7.8958	S
## 44	Middle	No	male	34.0000	1	0	21.0000	S
## 45	Upper	Yes	female	45.0000	0	1	59.4000	C

## 46	Middle	Yes	male	8.0000	1	1	36.7500	S
## 47	Lower	No	male	19.0000	0	0	7.6500	S
## 49	Middle	No	male	29.0000	1	0	26.0000	S
## 50	Middle	No	male	26.0000	0	0	10.5000	S
## 52	Lower	No	male	21.0000	0	0	8.0500	S
## 54	Middle	No	male	28.0000	0	0	13.5000	S
## 55	Middle	No	male	26.0000	0	0	13.0000	S
## 56	Lower	Yes	male	21.0000	0	0	7.8208	Q
## 57	Lower	No	male	16.0000	0	0	9.2167	S
## 58	Middle	Yes	female	0.9167	1	2	27.7500	S
## 59	Lower	Yes	male	14.0000	0	0	9.2250	S
## 60	Lower	No	female	20.0000	0	0	8.6625	S
## 61	Upper	Yes	female	31.0000	0	2	164.8667	S
## 63	Upper	Yes	female	33.0000	1	0	90.0000	Q
## 64	Upper	Yes	male	48.0000	1	0	76.7292	C
## 65	Upper	Yes	female	18.0000	1	0	53.1000	S
## 67	Lower	No	male	28.0000	0	0	7.2500	S
## 68	Lower	Yes	female	63.0000	0	0	9.5875	S
## 69	Middle	Yes	female	17.0000	0	0	12.0000	C
## 70	Lower	No	male	17.0000	0	0	8.6625	S
## 72	Middle	Yes	female	19.0000	0	0	13.0000	S
## 73	Middle	No	male	25.0000	1	0	26.0000	S
## 74	Lower	Yes	female	24.0000	0	0	7.7500	Q
## 75	Upper	No	male	58.0000	0	2	113.2750	C
## 76	Lower	Yes	male	19.0000	0	0	8.0500	S
## 78	Middle	Yes	female	45.0000	0	0	13.5000	S
## 80	Middle	Yes	female	24.0000	0	2	14.5000	S
## 81	Upper	Yes	female	41.0000	0	0	134.5000	C
## 82	Upper	No	male	21.0000	0	1	77.2875	S
## 83	Upper	No	male	62.0000	0	0	26.5500	S
## 84	Lower	Yes	male	20.0000	0	0	7.2292	C
## 85	Lower	No	male	24.0000	0	0	8.0500	S
## 86	Lower	No	male	34.0000	0	0	8.0500	S
## 87	Middle	No	male	30.0000	0	0	13.0000	S
## 88	Upper	Yes	female	27.0000	1	2	52.0000	S
## 89	Middle	No	male	31.0000	1	1	37.0042	C
## 91	Upper	Yes	female	39.0000	1	1	79.6500	S
## 92	Lower	No	male	25.0000	0	0	7.8958	S
## 93	Upper	Yes	female	50.0000	0	1	247.5208	C
## 94	Lower	No	male	20.0000	0	0	9.5000	S
## 95	Lower	No	male	0.7500	1	1	13.7750	S
## 96	Middle	Yes	female	40.0000	0	0	15.7500	S
## 97	Lower	No	male	25.0000	0	0	7.2250	C
## 98	Lower	No	female	43.0000	1	6	46.9000	S
## 99	Upper	Yes	male	36.0000	1	2	120.0000	S
## 100	Lower	Yes	female	45.0000	0	0	7.2250	C
## 101	Upper	No	male	39.0000	1	0	71.2833	C
## 103	Middle	No	male	60.0000	1	1	39.0000	S
## 104	Lower	No	female	10.0000	0	2	24.1500	S
## 105	Lower	No	male	29.0000	0	0	7.8542	S

## 106	Lower	Yes female	4.0000	0	1	13.4167	C
## 107	Middle	Yes male	1.0000	0	2	37.0042	C
## 108	Lower	No male	40.0000	1	1	15.5000	Q
## 109	Lower	No female	30.0000	1	0	15.5500	S
## 110	Upper	Yes male	38.0000	1	0	90.0000	S
## 111	Lower	No male	18.5000	0	0	7.2292	C
## 112	Upper	No male	61.0000	1	3	262.3750	C
## 115	Lower	No female	18.0000	0	0	7.7750	S
## 116	Lower	No male	19.0000	0	0	7.8958	S
## 117	Upper	Yes male	25.0000	1	0	55.4417	C
## 118	Middle	No male	23.0000	0	0	10.5000	S
## 119	Lower	No male	6.0000	3	1	21.0750	S
## 120	Lower	Yes female	23.0000	0	0	7.5500	S
## 121	Upper	No male	17.0000	0	0	47.1000	S
## 122	Middle	No male	36.0000	0	0	13.0000	S
## 124	Lower	No male	27.0000	0	0	7.2250	C
## 125	Lower	No female	18.0000	0	0	6.7500	Q
## 127	Upper	Yes female	48.0000	0	0	25.9292	S
## 128	Lower	Yes female	17.0000	0	1	16.1000	S
## 129	Lower	No male	21.0000	0	0	7.9250	S
## 130	Upper	Yes male	36.0000	0	1	512.3292	C
## 131	Lower	No male	25.0000	0	0	7.7417	Q
## 132	Lower	No male	20.0000	0	0	7.8542	S
## 133	Lower	Yes female	47.0000	1	0	7.0000	S
## 134	Middle	No male	34.0000	1	0	26.0000	S
## 136	Upper	No male	30.0000	0	0	45.5000	S
## 137	Lower	No female	14.5000	1	0	14.4542	C
## 138	Upper	Yes female	47.0000	1	1	52.5542	S
## 139	Lower	No male	0.3333	0	2	14.4000	S
## 140	Lower	Yes female	24.0000	1	0	15.8500	S
## 141	Middle	No male	38.0000	1	0	21.0000	S
## 142	Lower	Yes female	1.0000	0	2	15.7417	C
## 143	Upper	Yes female	47.0000	1	0	61.1750	S
## 144	Upper	Yes female	30.0000	0	0	86.5000	S
## 145	Upper	Yes female	31.0000	0	0	134.5000	C
## 146	Lower	Yes female	16.0000	0	0	7.6500	S
## 147	Middle	No male	66.0000	0	0	10.5000	S
## 148	Lower	No male	34.5000	0	0	7.8292	Q
## 149	Upper	Yes female	48.0000	1	1	79.2000	C
## 150	Middle	No male	19.0000	1	1	36.7500	S
## 151	Middle	Yes female	21.0000	0	0	10.5000	S
## 152	Upper	No male	44.0000	2	0	90.0000	Q
## 153	Middle	Yes female	28.0000	1	0	26.0000	S
## 154	Upper	Yes female	21.0000	0	0	26.5500	S
## 155	Lower	Yes female	13.0000	0	0	7.2292	C
## 156	Lower	No female	31.0000	1	0	18.0000	S
## 157	Lower	Yes female	0.1667	1	2	20.5750	S
## 158	Upper	Yes female	76.0000	1	0	78.8500	S
## 159	Upper	No male	28.5000	0	0	27.7208	C
## 160	Lower	No male	30.0000	0	0	7.2250	C

## 161	Upper	No	male	47.0000	0	0	34.0208	S
## 162	Upper	Yes	female	48.0000	1	3	262.3750	C
## 164	Lower	No	female	2.0000	0	1	10.4625	S
## 165	Upper	Yes	female	49.0000	1	0	76.7292	C
## 166	Middle	Yes	female	42.0000	0	0	13.0000	S
## 167	Upper	Yes	female	19.0000	1	0	91.0792	C
## 169	Lower	No	male	2.0000	4	1	29.1250	Q
## 171	Upper	No	male	29.0000	0	0	30.0000	S
## 172	Lower	No	male	30.5000	0	0	8.0500	S
## 173	Middle	Yes	female	18.0000	0	1	23.0000	S
## 174	Upper	No	male	39.0000	0	0	29.7000	C
## 175	Upper	Yes	female	35.0000	1	0	53.1000	S
## 176	Lower	No	female	20.0000	0	0	7.8542	S
## 179	Upper	Yes	male	54.0000	1	0	55.4417	C
## 180	Lower	No	male	20.0000	0	0	7.0500	S
## 181	Lower	No	female	22.0000	0	0	10.5167	S
## 183	Upper	Yes	female	22.0000	0	2	49.5000	C
## 184	Lower	No	male	28.5000	0	0	16.1000	S
## 188	Upper	Yes	female	55.0000	2	0	25.7000	S
## 189	Lower	No	male	39.0000	0	0	7.9250	S
## 190	Upper	Yes	male	37.0000	1	1	52.5542	S
## 191	Lower	No	male	33.0000	0	0	8.6542	S
## 193	Lower	No	male	20.0000	0	0	9.2250	S
## 194	Lower	Yes	male	9.0000	1	1	15.9000	S
## 195	Upper	Yes	female	58.0000	0	0	26.5500	S
## 196	Lower	No	male	24.0000	0	0	7.0500	S
## 197	Upper	Yes	male	35.0000	0	0	26.5500	C
## 198	Upper	No	male	24.0000	1	0	60.0000	S
## 199	Lower	No	male	38.0000	0	0	8.6625	S
## 200	Upper	No	male	57.0000	1	1	164.8667	S
## 202	Upper	Yes	male	45.0000	0	0	29.7000	C
## 204	Middle	No	male	32.0000	0	0	13.0000	S
## 206	Lower	No	female	24.0000	0	0	8.8500	S
## 207	Upper	No	male	71.0000	0	0	34.6542	C
## 208	Middle	No	female	60.0000	1	0	26.0000	S
## 209	Middle	Yes	female	26.0000	0	0	13.5000	S
## 210	Lower	Yes	female	18.0000	0	0	7.7750	S
## 211	Lower	Yes	male	45.0000	0	0	8.0500	S
## 212	Upper	Yes	male	27.0000	0	0	76.7292	C
## 213	Upper	Yes	male	36.0000	0	0	26.2875	S
## 214	Upper	Yes	male	80.0000	0	0	30.0000	S
## 215	Middle	No	male	28.0000	0	0	10.5000	S
## 216	Middle	No	male	39.0000	0	0	26.0000	S
## 217	Lower	No	male	27.0000	0	0	7.8958	S
## 219	Lower	No	female	29.0000	0	0	7.9250	S
## 221	Lower	No	male	38.0000	0	0	7.8958	S
## 222	Lower	Yes	male	16.0000	0	0	8.0500	S
## 223	Middle	Yes	female	28.0000	0	0	13.0000	S
## 224	Lower	No	male	18.0000	1	1	20.2125	S
## 225	Middle	No	female	18.0000	1	1	13.0000	S

## 226	Upper	Yes	female	36.0000	0	2	71.0000	S
## 227	Middle	No	male	18.0000	0	0	11.5000	S
## 228	Middle	Yes	male	1.0000	2	1	39.0000	S
## 229	Lower	No	male	26.0000	0	0	7.8958	S
## 230	Upper	No	male	64.0000	1	0	75.2500	C
## 231	Upper	No	male	57.0000	1	0	146.5208	C
## 232	Lower	Yes	male	12.0000	1	0	11.2417	C
## 235	Middle	Yes	female	19.0000	0	0	26.0000	S
## 236	Middle	No	male	27.0000	1	0	26.0000	S
## 237	Lower	No	male	19.0000	0	0	7.8958	S
## 238	Upper	Yes	female	59.0000	2	0	51.4792	S
## 239	Upper	Yes	male	32.0000	0	0	30.5000	C
## 240	Middle	No	male	18.0000	0	0	13.0000	S
## 241	Upper	Yes	male	13.0000	2	2	262.3750	C
## 242	Lower	No	male	26.0000	1	2	20.5750	S
## 243	Middle	Yes	female	20.0000	1	0	26.0000	S
## 244	Lower	No	male	19.0000	0	0	8.0500	S
## 245	Lower	No	male	11.0000	5	2	46.9000	S
## 246	Upper	No	male	56.0000	0	0	26.5500	S
## 247	Middle	No	male	28.0000	0	1	33.0000	S
## 248	Lower	No	male	39.0000	0	0	24.1500	S
## 249	Lower	No	male	20.0000	0	0	8.0500	S
## 251	Middle	Yes	female	24.0000	2	3	18.7500	S
## 253	Middle	Yes	female	24.0000	1	0	27.7208	C
## 254	Lower	Yes	female	15.0000	0	0	8.0292	Q
## 255	Upper	No	male	46.0000	0	0	75.2417	C
## 256	Upper	No	male	52.0000	1	1	79.6500	S
## 257	Upper	Yes	female	50.0000	1	1	211.5000	C
## 258	Lower	Yes	male	44.0000	0	0	7.9250	S
## 260	Lower	No	male	24.0000	0	0	7.7750	S
## 262	Lower	No	male	34.5000	0	0	6.4375	C
## 264	Middle	No	male	24.0000	0	0	13.5000	S
## 265	Lower	No	male	17.0000	0	0	7.1250	S
## 266	Middle	No	male	36.0000	0	0	10.5000	S
## 268	Middle	No	male	27.0000	0	0	15.0333	C
## 269	Lower	No	male	36.0000	0	0	0.0000	S
## 270	Middle	No	male	31.0000	1	1	26.2500	S
## 271	Upper	No	male	28.0000	1	0	82.1708	C
## 272	Lower	No	male	7.0000	4	1	39.6875	S
## 273	Lower	No	male	21.0000	2	0	24.1500	S
## 274	Lower	No	male	35.0000	0	0	7.0500	S
## 275	Lower	Yes	male	27.0000	0	0	6.9750	S
## 278	Upper	Yes	male	25.0000	1	0	91.0792	C
## 281	Upper	No	male	67.0000	1	0	221.7792	S
## 282	Middle	No	male	23.0000	0	0	15.0458	C
## 283	Lower	No	male	44.0000	0	0	8.0500	S
## 284	Middle	No	male	21.0000	1	0	11.5000	S
## 286	Lower	No	male	30.0000	1	0	16.1000	S
## 287	Lower	No	male	35.0000	0	0	7.8958	C
## 288	Upper	Yes	female	53.0000	2	0	51.4792	S

## 290	Middle	Yes female	4.0000	1	1	23.0000	S
## 292	Middle	Yes female	27.0000	1	0	13.8583	C
## 293	Upper	Yes female	51.0000	1	0	77.9583	S
## 294	Lower	No male	9.0000	5	2	46.9000	S
## 295	Lower	No male	24.0000	1	0	16.1000	S
## 296	Upper	No male	36.0000	0	0	75.2417	C
## 297	Lower	No male	8.0000	4	1	29.1250	Q
## 298	Lower	No male	17.0000	1	1	7.2292	C
## 299	Lower	No male	11.0000	0	0	18.7875	C
## 302	Lower	Yes female	22.0000	0	0	7.7500	S
## 303	Middle	Yes female	22.0000	1	1	29.0000	S
## 304	Upper	Yes female	30.0000	0	0	56.9292	C
## 305	Upper	No male	33.0000	0	0	26.5500	S
## 307	Lower	No male	19.0000	0	0	6.7500	Q
## 308	Upper	No male	30.0000	1	2	151.5500	S
## 309	Upper	Yes male	24.0000	1	0	82.2667	S
## 310	Middle	Yes female	24.0000	1	1	37.0042	C
## 311	Lower	No male	24.0000	0	0	7.7958	S
## 313	Upper	No male	38.0000	0	1	153.4625	S
## 316	Lower	No male	34.0000	0	0	6.4958	S
## 317	Middle	Yes female	4.0000	2	1	39.0000	S
## 318	Upper	No male	36.0000	1	0	78.8500	S
## 319	Lower	No male	24.5000	0	0	8.0500	S
## 320	Upper	No male	47.0000	0	0	25.5875	S
## 321	Upper	Yes female	19.0000	0	2	26.2833	S
## 322	Upper	Yes female	35.0000	0	0	512.3292	C
## 323	Upper	Yes female	23.0000	3	2	263.0000	S
## 325	Lower	No male	51.0000	0	0	7.7500	S
## 327	Middle	Yes female	36.0000	0	3	39.0000	S
## 328	Lower	No male	20.0000	0	0	7.8542	S
## 330	Lower	Yes female	27.0000	0	1	12.4750	S
## 331	Middle	No male	48.0000	0	0	13.0000	S
## 332	Lower	No male	19.0000	0	0	14.5000	S
## 333	Upper	No male	36.0000	0	0	40.1250	C
## 336	Lower	No female	28.0000	1	1	14.4000	S
## 337	Lower	No female	21.0000	0	0	7.7500	Q
## 338	Lower	No female	22.0000	0	0	39.6875	S
## 340	Lower	No male	25.0000	1	0	17.8000	S
## 342	Middle	Yes male	2.0000	1	1	23.0000	S
## 344	Middle	No male	24.0000	0	0	10.5000	S
## 345	Lower	No male	14.5000	8	2	69.5500	S
## 346	Lower	No male	34.0000	0	0	8.0500	S
## 350	Upper	Yes female	16.0000	0	1	57.9792	C
## 351	Lower	No male	40.0000	0	0	7.8958	S
## 352	Middle	Yes male	3.0000	1	1	26.0000	S
## 353	Lower	No male	13.0000	0	2	20.2500	S
## 354	Lower	No male	22.0000	0	0	7.5208	S
## 355	Upper	Yes female	15.0000	0	1	211.3375	S
## 356	Lower	No male	32.0000	0	0	8.0500	S
## 357	Upper	Yes female	35.0000	1	0	90.0000	S

## 358	Lower	No	male	29.0000	0	0	7.8750	S
## 359	Lower	No	male	50.0000	1	0	14.5000	S
## 360	Lower	Yes	female	19.0000	0	0	7.8792	Q
## 362	Upper	Yes	female	48.0000	1	0	39.6000	C
## 363	Lower	Yes	female	4.0000	1	1	16.7000	S
## 364	Lower	Yes	male	39.0000	0	1	13.4167	C
## 365	Upper	Yes	male	11.0000	1	2	120.0000	S
## 367	Lower	No	male	2.0000	4	1	39.6875	S
## 369	Lower	No	female	40.0000	1	0	9.4750	S
## 370	Middle	No	male	18.0000	0	0	73.5000	S
## 371	Middle	No	male	25.0000	0	0	13.0000	S
## 372	Lower	No	male	44.0000	0	1	16.1000	S
## 373	Lower	Yes	female	38.0000	0	0	7.2292	C
## 374	Lower	Yes	female	22.0000	0	0	7.7750	S
## 375	Upper	No	male	62.0000	0	0	26.5500	S
## 376	Lower	No	female	39.0000	1	5	31.2750	S
## 377	Lower	No	male	22.0000	0	0	7.8958	S
## 378	Upper	Yes	male	23.0000	0	1	63.3583	C
## 380	Lower	No	male	23.0000	0	0	7.8958	S
## 382	Lower	No	male	21.0000	0	0	8.4333	S
## 384	Upper	No	male	37.0000	0	1	29.7000	C
## 385	Lower	No	male	40.0000	0	0	7.2250	C
## 387	Upper	Yes	female	58.0000	0	0	146.5208	C
## 389	Lower	No	female	16.0000	5	2	46.9000	S
## 390	Lower	No	male	26.0000	0	0	7.8792	Q
## 391	Upper	No	male	30.0000	0	0	27.7500	C
## 392	Upper	No	male	42.0000	0	0	42.5000	S
## 393	Upper	Yes	female	55.0000	0	0	135.6333	C
## 394	Middle	No	female	26.0000	1	1	26.0000	S
## 395	Lower	No	male	27.0000	1	0	14.4542	C
## 396	Upper	Yes	female	18.0000	2	2	262.3750	C
## 397	Lower	Yes	male	22.0000	0	0	7.2250	C
## 398	Upper	Yes	male	53.0000	1	1	81.8583	S
## 399	Upper	Yes	female	18.0000	1	0	227.5250	C
## 400	Lower	No	male	19.0000	0	0	8.1583	S
## 401	Upper	No	male	47.0000	0	0	52.0000	S
## 403	Lower	Yes	female	18.0000	0	0	8.0500	S
## 404	Upper	Yes	female	54.0000	1	1	81.8583	S
## 405	Middle	Yes	female	29.0000	0	2	23.0000	S
## 406	Middle	No	male	35.0000	0	0	10.5000	S
## 407	Middle	No	female	27.0000	1	0	21.0000	S
## 408	Lower	No	female	32.0000	1	1	15.5000	Q
## 409	Upper	No	male	46.0000	0	0	26.0000	S
## 410	Lower	No	male	28.0000	0	0	7.7958	S
## 411	Upper	Yes	male	45.0000	1	1	134.5000	C
## 412	Lower	No	male	21.0000	0	0	7.2250	C
## 413	Lower	No	male	34.0000	1	1	14.4000	S
## 414	Lower	No	female	25.0000	0	0	7.7750	S
## 415	Lower	No	female	21.0000	1	0	9.8250	S
## 416	Upper	No	male	29.0000	1	0	66.6000	S

## 417	Upper	Yes female	43.0000	1	0	55.4417	C
## 418	Lower	No male	35.0000	0	0	7.8958	S
## 419	Middle	Yes male	0.6667	1	1	14.5000	S
## 420	Upper	Yes male	27.0000	1	0	53.1000	S
## 421	Middle	No male	34.0000	0	0	13.0000	S
## 422	Lower	No male	70.5000	0	0	7.7500	Q
## 423	Upper	No male	47.0000	0	0	42.4000	S
## 424	Upper	Yes male	35.0000	0	0	512.3292	C
## 425	Upper	No male	40.0000	0	0	0.0000	S
## 426	Lower	Yes female	22.0000	0	0	8.9625	S
## 427	Upper	Yes female	45.0000	0	0	262.3750	C
## 428	Middle	No male	47.0000	0	0	10.5000	S
## 429	Lower	No male	22.0000	0	0	7.1250	S
## 431	Lower	Yes female	18.0000	0	1	9.3500	S
## 432	Lower	Yes female	22.0000	0	0	7.7250	Q
## 433	Upper	Yes female	51.0000	0	1	39.4000	S
## 434	Upper	Yes male	17.0000	0	2	110.8833	C
## 435	Lower	No male	30.0000	0	0	7.2500	S
## 436	Middle	No male	40.0000	1	0	26.0000	S
## 437	Middle	Yes female	25.0000	1	1	30.0000	S
## 438	Middle	No male	63.0000	1	0	26.0000	S
## 439	Lower	Yes male	9.0000	0	1	3.1708	S
## 440	Middle	Yes female	40.0000	1	1	39.0000	S
## 442	Lower	No male	32.0000	0	0	7.9250	S
## 443	Middle	Yes female	35.0000	0	0	21.0000	S
## 444	Lower	No male	17.0000	1	0	7.0542	S
## 445	Middle	Yes female	5.0000	1	2	27.7500	S
## 447	Middle	Yes female	28.0000	0	0	12.6500	S
## 448	Middle	Yes female	8.0000	1	1	26.0000	S
## 449	Middle	No male	35.0000	0	0	26.0000	S
## 450	Upper	No male	22.0000	0	0	135.6333	C
## 451	Upper	Yes female	39.0000	0	0	108.9000	C
## 452	Upper	Yes male	53.0000	0	0	28.5000	C
## 454	Lower	No male	33.0000	0	0	9.5000	S
## 455	Lower	No male	33.0000	0	0	7.7750	S
## 456	Lower	No female	27.0000	0	0	7.8792	Q
## 457	Lower	Yes male	29.0000	0	0	9.5000	S
## 458	Lower	No male	48.0000	0	0	7.8542	S
## 459	Lower	No male	29.0000	0	0	9.4833	S
## 460	Lower	Yes female	23.0000	0	0	7.8542	S
## 461	Middle	No male	16.0000	0	0	10.5000	S
## 462	Lower	Yes male	25.0000	0	0	9.5000	S
## 463	Upper	Yes female	44.0000	0	1	57.9792	C
## 464	Upper	Yes male	28.0000	0	0	35.5000	S
## 466	Middle	No male	25.0000	0	0	13.0000	S
## 467	Lower	No male	30.0000	0	0	8.0500	S
## 468	Lower	No male	25.0000	0	0	7.2500	S
## 469	Lower	No male	51.0000	0	0	7.0542	S
## 470	Lower	No female	23.0000	0	0	7.9250	S
## 471	Lower	Yes male	30.0000	0	0	9.5000	S

## 473	Lower	Yes	male	0.8333	0	1	9.3500	S
## 474	Lower	Yes	male	25.0000	0	0	7.2292	C
## 475	Middle	Yes	female	34.0000	0	0	13.0000	S
## 476	Middle	Yes	female	34.0000	1	1	32.5000	S
## 477	Lower	Yes	female	15.0000	1	0	14.4542	C
## 478	Upper	Yes	male	42.0000	1	0	52.5542	S
## 479	Middle	No	male	29.0000	1	0	21.0000	S
## 480	Lower	No	male	35.0000	0	0	8.0500	S
## 482	Lower	Yes	female	36.0000	0	2	15.9000	S
## 485	Middle	Yes	female	45.0000	0	2	30.0000	S
## 486	Lower	Yes	female	19.0000	1	1	15.7417	C
## 487	Middle	Yes	female	15.0000	0	2	39.0000	S
## 488	Lower	No	female	18.0000	0	0	7.8792	Q
## 491	Lower	Yes	female	33.0000	1	2	20.5750	S
## 493	Lower	No	female	18.5000	0	0	7.2833	Q
## 495	Middle	Yes	male	0.8333	1	1	18.7500	S
## 496	Upper	No	male	54.0000	0	1	77.2875	S
## 497	Lower	Yes	male	0.4167	0	1	8.5167	C
## 498	Lower	No	male	33.0000	0	0	7.8542	S
## 500	Upper	Yes	female	56.0000	0	1	83.1583	C
## 501	Upper	Yes	female	63.0000	1	0	77.9583	S
## 502	Middle	No	male	30.0000	0	0	10.5000	S
## 505	Lower	No	male	21.0000	0	0	7.8542	S
## 506	Lower	No	male	21.0000	0	0	7.8542	S
## 507	Upper	Yes	female	45.0000	0	1	63.3583	C
## 508	Lower	No	male	39.0000	1	5	31.2750	S
## 510	Middle	No	male	27.0000	0	0	13.0000	S
## 511	Upper	Yes	male	0.9167	1	2	151.5500	S
## 512	Upper	Yes	female	33.0000	0	0	27.7208	C
## 513	Middle	Yes	female	19.0000	1	0	26.0000	S
## 514	Middle	Yes	female	32.5000	0	0	13.0000	S
## 515	Lower	No	male	28.0000	1	0	15.8500	S
## 518	Upper	Yes	female	45.0000	1	1	164.8667	S
## 519	Lower	No	male	21.0000	0	0	8.6625	S
## 521	Lower	No	male	22.0000	0	0	8.0500	S
## 522	Lower	No	male	28.0000	2	0	7.9250	S
## 523	Lower	No	male	25.0000	0	0	7.0500	S
## 524	Lower	No	male	29.0000	0	0	8.0500	S
## 525	Lower	Yes	female	30.0000	0	0	6.9500	Q
## 527	Middle	Yes	female	27.0000	0	0	10.5000	S
## 528	Lower	No	male	18.0000	2	2	34.3750	S
## 529	Middle	Yes	female	31.0000	1	1	26.2500	S
## 530	Middle	No	male	62.0000	0	0	9.6875	Q
## 531	Middle	No	male	21.0000	1	0	11.5000	S
## 533	Lower	Yes	male	25.0000	0	0	0.0000	S
## 534	Upper	No	male	41.0000	0	0	30.5000	S
## 535	Lower	No	male	36.0000	1	0	15.5500	S
## 538	Upper	Yes	female	54.0000	1	0	78.2667	C
## 539	Upper	Yes	female	60.0000	0	0	76.2917	C
## 540	Lower	No	female	47.0000	1	0	14.5000	S

## 542	Lower	No	male	18.0000	0	0	7.7958	S
## 544	Lower	No	male	9.0000	4	2	31.3875	S
## 548	Upper	No	male	45.0000	0	0	35.5000	S
## 551	Lower	Yes	male	29.0000	0	0	7.7500	Q
## 552	Lower	No	male	42.0000	0	0	8.6625	S
## 553	Lower	Yes	male	21.0000	0	0	7.7750	S
## 555	Middle	Yes	female	7.0000	0	2	26.2500	S
## 556	Lower	No	male	26.0000	0	0	7.7750	S
## 557	Middle	No	female	30.0000	0	0	13.0000	S
## 559	Lower	No	male	6.0000	1	1	15.2458	C
## 560	Upper	Yes	female	35.0000	0	0	135.6333	S
## 561	Upper	Yes	male	6.0000	0	2	134.5000	C
## 562	Middle	No	male	32.0000	0	0	13.5000	S
## 563	Lower	No	male	38.0000	0	0	7.0500	S
## 564	Lower	Yes	female	18.0000	0	0	9.8417	S
## 565	Lower	Yes	male	32.0000	0	0	7.7750	S
## 566	Upper	Yes	female	36.0000	0	0	262.3750	C
## 568	Lower	No	male	17.0000	0	0	8.6625	S
## 570	Upper	No	male	45.0000	1	0	83.4750	S
## 571	Middle	No	female	29.0000	1	0	26.0000	S
## 572	Upper	Yes	male	48.0000	1	0	52.0000	S
## 573	Upper	No	male	49.0000	1	1	110.8833	C
## 574	Middle	No	male	32.5000	1	0	30.0708	C
## 575	Lower	No	male	4.0000	4	2	31.2750	S
## 577	Lower	No	male	26.0000	0	0	7.8958	S
## 578	Upper	Yes	female	58.0000	0	1	153.4625	S
## 579	Middle	No	male	42.0000	1	1	32.5000	S
## 581	Upper	No	male	65.0000	0	0	26.5500	S
## 582	Upper	Yes	female	23.0000	0	1	83.1583	C
## 583	Middle	No	male	29.0000	1	0	27.7208	C
## 584	Upper	No	male	27.0000	1	0	136.7792	C
## 585	Middle	No	male	26.0000	0	0	13.0000	S
## 586	Lower	Yes	female	23.0000	0	0	8.0500	S
## 587	Lower	No	male	19.0000	0	0	7.8958	S
## 588	Lower	No	male	19.0000	0	0	10.1708	S
## 590	Middle	Yes	male	2.0000	1	1	26.0000	S
## 591	Lower	No	male	25.0000	0	0	7.0500	S
## 592	Upper	No	male	45.0000	0	0	26.5500	S
## 593	Upper	Yes	female	22.0000	0	0	151.5500	S
## 594	Lower	No	male	22.0000	0	0	7.7958	S
## 596	Upper	No	male	64.0000	1	4	263.0000	S
## 597	Upper	No	female	36.0000	0	0	31.6792	C
## 598	Lower	No	female	18.0000	0	1	14.4542	C
## 600	Lower	No	male	29.0000	0	0	7.9250	S
## 602	Upper	No	male	46.0000	0	0	79.2000	C
## 603	Middle	No	male	19.0000	0	0	10.5000	S
## 604	Lower	No	male	36.0000	0	0	7.2500	S
## 605	Upper	Yes	female	35.0000	1	0	83.4750	S
## 606	Middle	No	male	52.0000	0	0	13.0000	S
## 608	Lower	No	male	29.0000	1	0	7.0458	S

## 609	Middle	No male	34.0000	1	0	21.0000	S
## 610	Lower	Yes female	1.0000	1	1	11.1333	S
## 611	Middle	No male	46.0000	0	0	26.0000	S
## 612	Upper	No female	50.0000	0	0	28.7125	C
## 613	Lower	No male	22.0000	0	0	7.7750	S
## 614	Lower	No male	22.0000	1	0	7.2500	S
## 615	Middle	No male	57.0000	0	0	13.0000	S
## 616	Middle	Yes female	31.0000	0	0	21.0000	S
## 617	Lower	No male	43.0000	0	0	6.4500	S
## 618	Middle	No male	31.0000	0	0	10.5000	S
## 619	Upper	Yes female	16.0000	0	0	86.5000	S
## 620	Lower	No male	26.5000	0	0	7.2250	C
## 621	Lower	Yes female	27.0000	0	2	11.1333	S
## 622	Upper	Yes female	21.0000	0	0	77.9583	S
## 623	Upper	Yes female	30.0000	0	0	93.5000	S
## 624	Middle	Yes female	54.0000	1	3	23.0000	S
## 625	Middle	Yes female	25.0000	0	1	26.0000	S
## 626	Lower	No male	22.0000	0	0	8.0500	S
## 627	Middle	Yes male	24.0000	0	0	10.5000	S
## 629	Lower	No male	31.0000	0	0	7.7333	Q
## 630	Middle	No male	70.0000	0	0	10.5000	S
## 631	Lower	No male	19.0000	0	0	7.7750	S
## 632	Lower	No male	4.0000	3	2	27.9000	S
## 634	Upper	Yes male	28.0000	0	0	26.5500	S
## 636	Upper	No male	25.0000	0	0	26.0000	C
## 637	Middle	No male	34.0000	0	0	13.0000	S
## 639	Middle	Yes male	34.0000	0	0	13.0000	S
## 641	Lower	No male	20.0000	0	0	7.8542	S
## 642	Middle	No male	30.0000	1	0	24.0000	C
## 644	Middle	No male	26.0000	0	0	13.0000	S
## 645	Middle	No female	22.0000	0	0	21.0000	S
## 646	Lower	No male	24.0000	0	0	8.6625	S
## 647	Lower	No male	7.0000	4	1	29.1250	Q
## 648	Lower	No male	55.5000	0	0	8.0500	S
## 649	Lower	No male	19.0000	0	0	0.0000	S
## 650	Lower	Yes male	32.0000	0	0	7.8542	S
## 651	Upper	No male	39.0000	0	0	0.0000	S
## 652	Middle	No male	23.0000	1	0	10.5000	S
## 653	Lower	Yes female	2.0000	0	1	12.2875	S
## 655	Lower	No male	42.0000	0	0	7.6500	S
## 656	Lower	Yes male	26.0000	0	0	7.7750	S
## 657	Lower	No female	22.0000	2	0	8.6625	S
## 658	Lower	No male	24.0000	0	0	7.4958	S
## 659	Lower	Yes female	27.0000	0	0	7.9250	S
## 660	Upper	Yes female	53.0000	0	0	27.4458	C
## 661	Lower	No male	36.0000	0	0	7.4958	S
## 664	Lower	Yes male	6.0000	0	1	12.4750	S
## 665	Lower	No female	20.0000	1	0	9.8250	S
## 666	Lower	No male	21.0000	0	0	7.7750	S
## 667	Lower	No female	37.0000	0	0	7.7500	Q

## 668	Lower	No	male	45.0000	0	0	6.9750	S
## 669	Lower	Yes	male	27.0000	0	0	7.7958	S
## 670	Lower	Yes	female	14.0000	1	0	11.2417	C
## 671	Lower	Yes	male	25.0000	0	0	7.6500	S
## 672	Upper	Yes	female	33.0000	1	0	53.1000	S
## 673	Upper	Yes	female	26.0000	0	0	78.8500	S
## 674	Middle	Yes	female	50.0000	0	1	26.0000	S
## 678	Lower	No	male	17.0000	0	0	8.6625	S
## 679	Lower	No	male	21.0000	0	0	7.7500	Q
## 680	Lower	No	male	21.0000	0	0	7.8958	S
## 681	Lower	Yes	male	18.0000	0	0	8.0500	S
## 682	Lower	No	male	18.0000	0	0	7.7500	S
## 683	Lower	No	female	18.0000	2	0	18.0000	S
## 685	Lower	No	female	24.0000	0	0	7.7500	Q
## 687	Middle	Yes	male	22.0000	0	0	10.5000	S
## 688	Lower	Yes	female	24.0000	0	2	16.7000	S
## 689	Lower	Yes	female	16.0000	0	0	7.7333	Q
## 690	Lower	No	male	26.0000	0	0	7.8875	S
## 691	Middle	Yes	female	1.0000	1	2	41.5792	C
## 692	Lower	Yes	female	1.0000	1	1	16.7000	S
## 693	Lower	No	male	30.0000	0	0	8.0500	S
## 694	Upper	Yes	female	45.0000	1	0	52.5542	S
## 695	Lower	Yes	female	5.0000	2	1	19.2583	C
## 696	Upper	No	male	31.0000	1	0	52.0000	S
## 697	Lower	Yes	female	26.0000	1	1	22.0250	S
## 698	Lower	No	male	28.0000	0	0	7.8958	S
## 699	Lower	No	male	22.0000	0	0	7.8958	S
## 705	Upper	Yes	female	36.0000	1	2	120.0000	S
## 706	Upper	Yes	female	17.0000	1	0	57.0000	S
## 707	Upper	Yes	female	35.0000	0	0	211.5000	C
## 708	Lower	No	female	9.0000	4	2	31.2750	S
## 710	Lower	No	male	24.0000	0	0	9.3250	S
## 711	Middle	No	male	22.0000	2	0	31.5000	S
## 713	Upper	Yes	female	22.0000	0	1	59.4000	C
## 714	Lower	No	male	18.0000	0	0	7.7500	S
## 715	Upper	No	male	24.0000	0	0	79.2000	C
## 716	Middle	No	male	44.0000	1	0	26.0000	S
## 718	Lower	No	female	28.0000	0	0	7.8958	S
## 719	Middle	No	male	30.0000	1	0	21.0000	S
## 720	Lower	No	female	45.0000	0	0	7.7500	S
## 721	Lower	Yes	female	38.0000	1	5	31.3875	S
## 722	Middle	Yes	female	24.0000	1	0	26.0000	S
## 723	Lower	Yes	male	9.0000	0	2	20.5250	S
## 724	Lower	No	male	1.0000	4	1	39.6875	S
## 725	Lower	No	female	26.0000	0	2	13.7750	S
## 726	Lower	No	male	13.0000	4	2	31.3875	S
## 727	Lower	Yes	female	9.0000	1	1	15.2458	C
## 728	Middle	No	male	44.0000	0	0	13.0000	S
## 731	Middle	No	male	21.0000	0	0	11.5000	S
## 732	Middle	Yes	male	62.0000	0	0	10.5000	S

## 733	Lower	No male	24.0000	0	0	7.8542	S
## 734	Middle	Yes female	3.0000	1	2	41.5792	C
## 735	Lower	No female	29.0000	1	1	10.4625	S
## 736	Middle	Yes female	20.0000	2	1	23.0000	S
## 737	Lower	No female	28.0000	0	0	7.7750	S
## 738	Middle	No male	25.0000	0	0	13.0000	S
## 740	Middle	No male	28.0000	0	0	13.0000	S
## 741	Middle	No male	24.0000	2	0	31.5000	S
## 742	Upper	Yes female	26.0000	1	0	136.7792	C
## 743	Middle	No male	54.0000	1	0	26.0000	S
## 744	Upper	Yes female	17.0000	1	0	108.9000	C
## 745	Lower	Yes female	22.0000	1	0	13.9000	S
## 746	Middle	No male	54.0000	0	0	26.0000	S
## 747	Upper	Yes female	35.0000	1	0	57.7500	C
## 748	Lower	No male	36.0000	0	0	9.5000	S
## 749	Upper	No male	19.0000	3	2	263.0000	S
## 750	Middle	No male	30.0000	0	0	13.0000	S
## 751	Lower	No male	16.0000	4	1	39.6875	S
## 752	Lower	Yes male	36.5000	1	0	17.4000	S
## 753	Lower	No male	35.0000	0	0	7.1250	S
## 755	Lower	No male	31.0000	3	0	18.0000	S
## 757	Upper	Yes female	23.0000	1	0	113.2750	C
## 758	Middle	Yes male	29.0000	0	0	13.8583	C
## 759	Lower	Yes male	3.0000	1	1	15.9000	S
## 760	Upper	No male	48.0000	0	0	50.4958	C
## 762	Upper	No male	55.0000	1	0	59.4000	C
## 763	Lower	No male	20.0000	0	0	4.0125	C
## 764	Lower	Yes male	26.0000	0	0	56.4958	S
## 765	Lower	Yes female	0.7500	2	1	19.2583	C
## 767	Lower	No male	21.0000	0	0	7.8000	S
## 770	Middle	No male	14.0000	0	0	65.0000	S
## 771	Lower	No male	32.0000	1	0	15.8500	S
## 772	Upper	Yes male	31.0000	0	0	28.5375	C
## 773	Upper	Yes female	25.0000	1	0	55.4417	C
## 776	Upper	Yes female	21.0000	2	2	262.3750	C
## 777	Middle	Yes female	29.0000	1	0	26.0000	S
## 778	Middle	No male	40.0000	0	0	16.0000	S
## 779	Upper	Yes female	19.0000	0	0	30.0000	S
## 780	Middle	No male	41.0000	0	0	13.0000	S
## 781	Upper	No male	37.0000	1	1	83.1583	C
## 783	Lower	No male	28.0000	0	0	56.4958	S
## 784	Lower	No female	41.0000	0	5	39.6875	S
## 785	Lower	Yes male	27.0000	0	0	8.6625	S
## 786	Lower	No male	36.0000	1	1	24.1500	S
## 787	Middle	Yes female	24.0000	0	0	13.0000	S
## 788	Upper	No female	63.0000	1	0	221.7792	S
## 789	Lower	No male	16.0000	0	0	8.0500	S
## 791	Lower	Yes female	33.0000	3	0	15.8500	S
## 792	Lower	Yes female	5.0000	4	2	31.3875	S
## 793	Upper	No male	54.0000	0	0	51.8625	S

## 794	Upper	Yes female	38.0000	1	0	71.2833	C
## 796	Lower	Yes female	26.0000	0	0	7.9250	S
## 798	Middle	No male	34.0000	1	0	26.0000	S
## 799	Lower	Yes female	0.7500	2	1	19.2583	C
## 803	Lower	No male	16.0000	1	3	34.3750	S
## 804	Middle	No male	35.0000	0	0	12.3500	Q
## 805	Middle	No male	33.0000	0	0	12.2750	S
## 806	Upper	No male	47.0000	1	0	227.5250	C
## 807	Lower	No male	65.0000	0	0	7.7500	Q
## 808	Upper	No male	61.0000	0	0	32.3208	S
## 809	Upper	Yes female	32.0000	0	0	76.2917	C
## 810	Upper	Yes male	49.0000	0	0	0.0000	S
## 811	Upper	No male	32.5000	0	0	211.5000	C
## 812	Lower	No male	18.0000	0	0	7.7750	S
## 813	Middle	No male	49.0000	1	2	65.0000	S
## 814	Middle	Yes male	8.0000	0	2	32.5000	S
## 815	Lower	No female	2.0000	1	1	20.2125	S
## 816	Lower	No male	10.0000	3	2	27.9000	S
## 817	Middle	Yes female	17.0000	0	0	10.5000	S
## 822	Middle	Yes female	50.0000	0	0	10.5000	S
## 824	Lower	No male	26.0000	0	0	7.8958	S
## 825	Lower	Yes female	22.0000	1	1	12.2875	S
## 826	Lower	No female	29.0000	0	4	21.0750	S
## 828	Lower	No male	33.0000	0	0	7.8958	C
## 829	Upper	Yes female	33.0000	0	0	151.5500	S
## 830	Lower	No male	28.0000	0	0	9.5000	S
## 831	Middle	No male	18.5000	0	0	13.0000	S
## 832	Lower	No male	20.0000	0	0	8.6625	S
## 833	Lower	No female	9.0000	1	1	15.2458	C
## 834	Upper	Yes male	4.0000	0	2	81.8583	S
## 835	Upper	No male	37.0000	1	0	53.1000	S
## 837	Lower	No male	14.0000	4	1	39.6875	S
## 838	Middle	No female	44.0000	1	0	26.0000	S
## 839	Lower	No female	11.0000	4	2	31.2750	S
## 840	Lower	No male	32.0000	0	0	7.8958	S
## 841	Lower	No male	26.0000	2	0	8.6625	S
## 842	Middle	No male	52.0000	0	0	13.5000	S
## 843	Upper	No female	25.0000	1	2	151.5500	S
## 844	Middle	No male	18.0000	0	0	10.5000	S
## 845	Upper	Yes male	51.0000	0	0	26.5500	S
## 846	Middle	No male	19.0000	0	0	10.5000	S
## 847	Lower	Yes female	31.0000	1	1	20.5250	S
## 848	Middle	Yes male	42.0000	0	0	13.0000	S
## 849	Upper	Yes female	35.0000	1	0	52.0000	S
## 852	Lower	No male	41.0000	0	0	7.1250	S
## 853	Lower	Yes male	20.0000	0	0	7.9250	S
## 854	Lower	No male	28.0000	0	0	7.8542	S
## 855	Lower	No male	31.0000	0	0	7.7750	S
## 856	Lower	Yes male	23.0000	0	0	7.7958	S
## 858	Upper	Yes female	52.0000	1	0	78.2667	C

## 859	Middle	No	male	25.0000	0	0	10.5000	S
## 861	Lower	No	male	38.5000	0	0	7.2500	S
## 862	Lower	Yes	female	15.0000	0	0	7.2250	C
## 863	Upper	No	male	23.0000	0	0	93.5000	S
## 864	Lower	No	male	27.0000	0	0	8.6625	S
## 865	Lower	Yes	male	32.0000	0	0	7.5792	S
## 866	Upper	No	male	51.0000	0	1	61.3792	C
## 867	Lower	No	female	22.0000	0	0	9.8375	S
## 868	Upper	Yes	female	43.0000	0	1	211.3375	S
## 870	Middle	No	male	27.0000	0	0	26.0000	S
## 872	Lower	No	male	35.0000	0	0	8.0500	S
## 873	Upper	Yes	male	31.0000	1	0	57.0000	S
## 874	Upper	Yes	female	24.0000	0	0	69.3000	C
## 875	Middle	No	male	23.0000	0	0	13.0000	S
## 876	Middle	No	male	36.0000	0	0	12.8750	C
## 877	Lower	No	male	61.0000	0	0	6.2375	S
## 878	Lower	No	male	23.5000	0	0	7.2292	C
## 879	Upper	No	male	41.0000	1	0	51.8625	S
## 881	Lower	Yes	male	24.0000	0	0	7.1417	S
## 882	Upper	Yes	female	38.0000	0	0	227.5250	C
## 883	Upper	No	male	46.0000	1	0	61.1750	S
## 885	Middle	No	male	37.0000	1	0	26.0000	S
## 887	Lower	No	female	14.0000	0	0	7.8542	S
## 888	Middle	Yes	female	8.0000	0	2	26.2500	S
## 889	Lower	No	male	59.0000	0	0	7.2500	S
## 890	Upper	Yes	female	22.0000	1	0	66.6000	S
## 891	Lower	Yes	male	22.0000	0	0	7.2250	C
## 893	Lower	No	male	28.0000	0	0	7.8958	S
## 894	Upper	Yes	male	27.0000	0	0	30.5000	S
## 895	Lower	No	male	17.0000	0	0	8.6625	S
## 896	Middle	No	male	19.0000	0	0	13.0000	S
## 897	Lower	No	male	1.0000	5	2	46.9000	S
## 898	Upper	Yes	male	52.0000	0	0	30.5000	S
## 899	Middle	Yes	female	21.0000	0	1	21.0000	S
## 900	Middle	No	male	17.0000	0	0	73.5000	S
## 901	Lower	No	male	22.0000	0	0	9.0000	S
## 902	Upper	Yes	male	36.0000	0	0	26.3875	S
## 903	Lower	Yes	female	18.0000	0	0	7.4958	S
## 904	Lower	Yes	male	25.0000	1	0	7.7750	S
## 905	Upper	Yes	male	21.0000	0	1	61.3792	C
## 906	Middle	No	male	41.0000	0	0	15.0458	C
## 907	Lower	Yes	female	36.0000	1	0	17.4000	S
## 908	Lower	No	male	23.0000	1	0	13.9000	S
## 909	Upper	Yes	female	23.0000	1	0	82.2667	S
## 910	Upper	Yes	female	22.0000	0	1	61.9792	C
## 911	Lower	No	male	22.0000	0	0	7.2500	S
## 914	Lower	No	female	10.0000	5	2	46.9000	S
## 916	Lower	No	male	49.0000	0	0	0.0000	S
## 918	Lower	No	female	23.0000	0	0	8.6625	S
## 921	Lower	No	male	18.0000	0	0	8.6625	S

## 922	Middle	Yes female	45.0000	1	1	26.2500	S
## 923	Upper	Yes male	43.0000	1	0	27.7208	C
## 924	Lower	No female	9.0000	2	2	34.3750	S
## 925	Upper	No male	30.0000	0	0	26.0000	S
## 926	Middle	Yes female	36.0000	0	0	13.0000	S
## 927	Lower	No female	18.0000	1	0	17.8000	S
## 928	Lower	No female	30.5000	0	0	7.7500	Q
## 929	Lower	Yes female	45.0000	1	0	14.1083	S
## 930	Lower	No male	10.0000	4	1	29.1250	Q
## 932	Upper	Yes male	45.0000	0	0	26.5500	S
## 933	Middle	No male	43.0000	1	1	26.2500	S
## 935	Upper	Yes male	40.0000	0	0	31.0000	C
## 936	Upper	No male	70.0000	1	1	71.0000	S
## 938	Lower	Yes female	29.0000	0	2	15.2458	C
## 941	Lower	No male	74.0000	0	0	7.7750	S
## 942	Middle	Yes female	24.0000	2	1	27.0000	S
## 943	Lower	No male	32.0000	0	0	7.9250	S
## 944	Lower	No male	42.0000	0	1	8.4042	S
## 947	Lower	Yes female	21.0000	0	0	7.6500	S
## 949	Middle	No male	30.0000	0	0	13.0000	S
## 950	Upper	Yes female	27.0000	1	1	247.5208	C
## 951	Lower	No male	25.0000	0	0	7.6500	S
## 952	Upper	Yes female	39.0000	1	1	83.1583	C
## 953	Upper	Yes female	16.0000	0	1	39.4000	S
## 954	Upper	Yes female	29.0000	0	0	221.7792	S
## 955	Lower	Yes male	29.0000	0	0	7.8958	C
## 956	Lower	Yes male	29.0000	3	1	22.0250	S
## 957	Lower	Yes female	26.0000	0	0	7.8542	S
## 958	Lower	No male	33.0000	0	0	8.0500	S
## 959	Lower	No female	25.0000	1	0	7.9250	S
## 961	Middle	Yes male	0.8333	0	2	29.0000	S
## 962	Upper	Yes male	42.0000	0	0	26.2875	S
## 963	Middle	No male	23.0000	0	0	13.0000	S
## 966	Middle	Yes female	36.0000	0	0	13.0000	S
## 967	Lower	No female	41.0000	0	2	20.2125	S
## 968	Upper	Yes male	26.0000	0	0	30.0000	C
## 972	Lower	No male	16.0000	0	0	7.7750	S
## 973	Middle	No male	21.0000	0	0	13.0000	S
## 974	Middle	Yes female	34.0000	0	1	23.0000	S
## 975	Middle	No male	57.0000	0	0	12.3500	Q
## 976	Lower	No male	16.0000	2	0	18.0000	S
## 977	Upper	Yes male	49.0000	1	0	89.1042	C
## 978	Lower	No male	18.0000	1	1	7.8542	S
## 979	Middle	Yes female	18.0000	0	2	13.0000	S
## 982	Upper	Yes female	58.0000	0	1	512.3292	C
## 983	Upper	No male	55.0000	1	1	93.5000	S
## 984	Lower	No male	17.0000	0	0	7.8958	S
## 986	Middle	No male	30.0000	0	0	13.0000	S
## 987	Lower	No female	35.0000	0	0	7.7500	Q
## 988	Middle	Yes male	30.0000	0	0	12.7375	C

## 989	Middle	No female	24.0000	0	0	13.0000	S
## 991	Middle	No male	30.0000	0	0	13.0000	S
## 994	Lower	No female	39.0000	0	5	29.1250	Q
## 996	Lower	No male	18.0000	0	0	8.3000	S
## 997	Lower	No female	2.0000	4	2	31.2750	S
## 998	Upper	No male	27.0000	0	2	211.5000	C
## 1000	Lower	No male	22.0000	0	0	7.2500	S
## 1001	Lower	No male	22.0000	0	0	8.0500	S
## 1002	Middle	No male	59.0000	0	0	13.5000	S
## 1003	Upper	Yes female	42.0000	0	0	227.5250	C
## 1004	Lower	No female	19.0000	1	0	16.1000	S
## 1005	Upper	No male	42.0000	0	0	26.5500	S
## 1006	Lower	No male	25.0000	0	0	7.9250	S
## 1009	Lower	No female	3.0000	3	1	21.0750	S
## 1010	Lower	No male	21.0000	0	0	8.0500	S
## 1011	Lower	No male	32.0000	0	0	7.7500	Q
## 1012	Lower	No male	28.0000	0	0	22.5250	S
## 1013	Upper	Yes female	22.0000	0	1	55.0000	S
## 1014	Upper	No male	28.0000	0	0	47.1000	S
## 1015	Middle	Yes female	14.0000	1	0	30.0708	C
## 1016	Upper	No female	2.0000	1	2	151.5500	S
## 1017	Lower	No male	33.0000	1	1	20.5250	S
## 1018	Lower	Yes male	21.0000	0	0	7.7958	S
## 1020	Middle	Yes female	33.0000	1	2	27.7500	S
## 1021	Lower	No male	21.0000	0	0	8.0500	S
## 1022	Lower	Yes male	32.0000	0	0	56.4958	S
## 1024	Upper	Yes female	39.0000	1	0	55.9000	S
## 1026	Middle	Yes male	20.0000	0	0	13.8625	C
## 1028	Lower	No male	41.0000	2	0	14.1083	S
## 1029	Lower	No male	43.0000	0	0	7.8958	S
## 1030	Lower	No female	2.0000	3	2	27.9000	S
## 1031	Upper	Yes male	30.0000	1	0	57.7500	C
## 1032	Upper	Yes female	33.0000	0	0	86.5000	S
## 1033	Upper	No male	24.0000	0	1	247.5208	C
## 1034	Middle	Yes female	24.0000	1	2	65.0000	S
## 1035	Lower	No male	22.5000	0	0	7.2250	C
## 1036	Upper	No male	50.0000	1	1	211.5000	C
## 1037	Upper	Yes female	52.0000	1	1	93.5000	S
## 1038	Lower	No male	4.0000	4	1	29.1250	Q
## 1039	Upper	Yes female	39.0000	0	0	211.3375	S
## 1040	Lower	No male	24.0000	0	0	7.2500	Q
## 1041	Lower	No male	22.0000	0	0	7.2292	C
## 1042	Lower	No male	32.5000	0	0	9.5000	S
## 1045	Middle	Yes female	55.0000	0	0	16.0000	S
## 1046	Upper	Yes female	40.0000	0	0	153.4625	S
## 1048	Lower	No male	30.0000	0	0	7.2292	C
## 1049	Lower	No male	23.0000	0	0	9.2250	S
## 1050	Middle	Yes female	28.0000	0	0	13.0000	S
## 1052	Lower	No male	28.0000	0	0	9.5000	S
## 1054	Lower	No male	27.0000	0	0	7.8542	S

## 1055	Lower	No	male	40.5000	0	0	7.7500	Q
## 1056	Middle	No	male	36.5000	0	2	26.0000	S
## 1058	Lower	No	male	28.0000	0	0	22.5250	S
## 1062	Middle	Yes	female	48.0000	0	2	36.7500	S
## 1063	Lower	No	male	21.0000	0	0	7.2500	S
## 1064	Lower	Yes	male	1.0000	1	2	20.5750	S
## 1065	Lower	No	male	26.0000	0	0	8.0500	S
## 1066	Upper	Yes	female	18.0000	1	0	60.0000	S
## 1067	Lower	No	female	17.0000	0	0	14.4583	C
## 1069	Lower	No	female	38.0000	4	2	7.7750	S
## 1072	Middle	No	female	38.0000	0	0	13.0000	S
## 1073	Middle	Yes	male	3.0000	1	1	18.7500	S
## 1074	Lower	No	female	1.0000	1	1	12.1833	S
## 1075	Lower	No	male	43.0000	0	0	8.0500	S
## 1079	Upper	No	male	56.0000	0	0	30.6958	C
## 1080	Lower	No	male	11.5000	1	1	14.5000	S
## 1082	Middle	Yes	female	29.0000	1	0	26.0000	S
## 1085	Lower	No	male	47.0000	0	0	7.2500	S
## 1086	Middle	Yes	male	19.0000	0	0	10.5000	S
## 1087	Middle	No	male	40.0000	0	0	13.0000	S
## 1089	Lower	No	male	47.0000	0	0	9.0000	S
## 1090	Upper	Yes	male	48.0000	0	0	26.5500	S
## 1091	Lower	Yes	female	24.0000	0	3	19.2583	C
## 1092	Lower	Yes	male	31.0000	0	0	7.9250	S
## 1093	Lower	No	male	21.0000	0	0	7.9250	S
## 1094	Lower	No	male	44.0000	0	0	8.0500	S
## 1095	Upper	No	male	45.5000	0	0	28.5000	S
## 1096	Upper	No	male	50.0000	0	0	26.0000	S
## 1097	Lower	Yes	female	4.0000	0	2	22.0250	S
## 1098	Lower	No	female	26.0000	1	0	16.1000	S
## 1099	Lower	No	male	37.0000	2	0	7.9250	S
## 1100	Lower	No	male	16.0000	1	1	20.2500	S
## 1101	Upper	Yes	female	48.0000	1	0	106.4250	C
## 1102	Upper	No	male	50.0000	1	0	55.9000	S
## 1104	Lower	No	female	21.0000	0	0	8.6625	S
## 1105	Middle	Yes	female	12.0000	0	0	15.7500	S
## 1106	Upper	Yes	female	60.0000	1	4	263.0000	S
## 1107	Lower	No	male	39.0000	0	2	7.2292	C
## 1108	Lower	No	female	37.0000	0	0	9.5875	S
## 1110	Lower	No	female	31.0000	0	0	7.8542	S
## 1111	Upper	Yes	female	30.0000	0	0	31.0000	C
## 1112	Middle	No	male	36.0000	0	0	13.0000	S
## 1113	Middle	No	male	61.0000	0	0	12.3500	Q
## 1114	Upper	No	male	58.0000	0	0	29.7000	C
## 1115	Lower	Yes	female	30.0000	0	0	12.4750	S
## 1116	Middle	Yes	male	31.0000	0	0	13.0000	S
## 1117	Middle	Yes	female	30.0000	0	0	12.3500	Q
## 1118	Lower	No	male	26.0000	1	0	7.8542	S
## 1119	Upper	No	male	33.0000	0	0	5.0000	S
## 1120	Upper	No	male	71.0000	0	0	49.5042	C

## 1121	Lower	Yes	male	32.0000	0	0	8.0500	S
## 1122	Lower	Yes	male	21.0000	0	0	7.7958	S
## 1123	Lower	No	male	50.0000	0	0	8.0500	S
## 1124	Lower	No	male	32.0000	0	0	22.5250	S
## 1125	Lower	No	female	17.0000	0	0	7.7333	Q
## 1126	Lower	Yes	male	20.0000	1	0	7.9250	S
## 1127	Lower	No	male	27.0000	0	0	8.6625	S
## 1128	Lower	No	male	22.0000	0	0	7.7958	S
## 1129	Upper	Yes	male	49.0000	1	0	56.9292	C
## 1130	Lower	No	male	33.0000	0	0	8.6625	C
## 1131	Middle	Yes	male	32.0000	1	0	26.0000	S
## 1133	Lower	Yes	male	39.0000	0	0	7.9250	S
## 1134	Upper	Yes	female	14.0000	1	2	120.0000	S
## 1135	Lower	Yes	female	16.0000	1	1	8.5167	C
## 1136	Lower	Yes	female	16.0000	0	0	7.7500	Q
## 1138	Middle	Yes	female	48.0000	1	2	65.0000	S
## 1139	Lower	No	male	21.0000	0	0	7.7333	Q
## 1140	Lower	No	female	30.0000	0	0	8.6625	S
## 1142	Middle	Yes	female	30.0000	1	0	13.8583	C
## 1143	Upper	No	male	40.0000	0	0	27.7208	C
## 1144	Middle	Yes	female	6.0000	0	1	33.0000	S
## 1146	Upper	Yes	female	31.0000	1	0	113.2750	C
## 1147	Upper	Yes	female	64.0000	0	2	83.1583	C
## 1150	Middle	No	male	28.0000	0	0	26.0000	S
## 1154	Middle	Yes	female	31.0000	0	0	21.0000	S
## 1155	Middle	Yes	female	24.0000	1	2	65.0000	S
## 1156	Middle	Yes	female	41.0000	0	1	19.5000	S
## 1157	Lower	No	male	45.5000	0	0	7.2250	C
## 1159	Lower	No	male	40.5000	0	0	15.1000	S
## 1160	Lower	Yes	female	22.0000	0	0	7.2500	S
## 1161	Lower	No	male	14.0000	5	2	46.9000	S
## 1162	Lower	No	male	20.0000	0	0	7.9250	S
## 1164	Middle	Yes	female	50.0000	0	0	10.5000	S
## 1165	Middle	No	male	43.0000	0	1	21.0000	S
## 1166	Lower	Yes	male	32.0000	0	0	7.9250	S
## 1167	Lower	No	male	41.0000	0	0	7.8500	S
## 1168	Lower	No	female	27.0000	1	0	7.9250	S
## 1169	Middle	No	male	32.0000	0	0	10.5000	S
## 1170	Lower	Yes	male	32.0000	0	0	56.4958	S
## 1171	Lower	No	male	20.5000	0	0	7.2500	S
## 1172	Middle	No	male	27.0000	0	0	13.0000	S
## 1173	Lower	No	male	2.0000	3	1	21.0750	S
## 1174	Upper	Yes	female	44.0000	0	0	27.7208	C
## 1175	Middle	Yes	female	34.0000	0	0	10.5000	S
## 1176	Lower	No	male	23.0000	0	0	7.0500	S
## 1177	Middle	No	male	50.0000	0	0	13.0000	S
## 1178	Middle	Yes	female	2.0000	1	1	26.0000	S
## 1179	Upper	Yes	male	60.0000	1	1	79.2000	C
## 1180	Upper	No	male	42.0000	0	0	26.5500	S
## 1181	Lower	No	female	21.0000	2	2	34.3750	S

## 1182	Lower	No	male	22.0000	0	0	9.3500	S
## 1183	Lower	No	male	40.0000	1	5	31.3875	S
## 1184	Middle	No	male	42.0000	0	0	13.0000	S
## 1186	Upper	Yes	female	40.0000	1	1	134.5000	C
## 1187	Middle	No	male	54.0000	0	0	14.0000	S
## 1188	Lower	No	male	32.0000	0	0	8.3625	S
## 1189	Lower	No	male	33.0000	0	0	7.8958	S
## 1190	Middle	No	male	16.0000	0	0	26.0000	S
## 1191	Lower	No	male	18.0000	1	0	6.4958	S
## 1192	Lower	No	female	6.0000	4	2	31.2750	S
## 1193	Lower	No	male	23.0000	0	0	7.8542	S
## 1194	Middle	No	male	21.0000	2	0	73.5000	S
## 1195	Upper	No	male	19.0000	1	0	53.1000	S
## 1196	Lower	Yes	female	5.0000	0	0	12.4750	S
## 1197	Upper	No	male	46.0000	0	0	79.2000	C
## 1199	Upper	No	male	31.0000	0	0	50.4958	S
## 1200	Middle	Yes	male	26.0000	1	1	29.0000	S
## 1202	Middle	No	male	30.0000	1	1	26.0000	S
## 1204	Upper	Yes	female	28.0000	3	2	263.0000	S
## 1205	Lower	No	male	20.0000	0	0	9.8458	S
## 1206	Upper	Yes	female	30.0000	0	0	106.4250	C
## 1207	Upper	Yes	female	24.0000	0	0	49.5042	C
## 1208	Middle	No	male	42.0000	0	0	13.0000	S
## 1209	Middle	No	male	23.0000	2	1	11.5000	S
## 1210	Middle	No	male	39.0000	0	0	13.0000	S
## 1211	Lower	No	male	31.0000	0	0	7.7500	Q
## 1212	Lower	No	male	17.0000	2	0	8.0500	S
## 1213	Upper	Yes	female	64.0000	1	1	26.5500	S
## 1214	Lower	No	female	3.0000	1	1	13.7750	S
## 1216	Upper	No	male	55.0000	0	0	30.5000	S
## 1217	Upper	Yes	female	24.0000	0	0	83.1583	C
## 1222	Lower	Yes	female	19.0000	1	0	7.8542	S
## 1224	Lower	No	male	21.0000	0	0	16.1000	S
## 1225	Middle	No	male	32.0000	2	0	73.5000	S
## 1226	Middle	No	male	36.0000	1	2	27.7500	S
## 1227	Upper	Yes	female	39.0000	1	1	110.8833	C
## 1228	Lower	No	female	45.0000	0	1	14.4542	C
## 1229	Lower	No	female	9.0000	3	2	27.9000	S
## 1230	Middle	Yes	female	30.0000	0	0	13.0000	S
## 1231	Upper	Yes	female	30.0000	0	0	164.8667	S
## 1233	Lower	No	male	26.0000	0	0	7.7750	S
## 1234	Lower	No	female	45.0000	1	4	27.9000	S
## 1235	Upper	No	male	49.0000	0	0	26.0000	S
## 1236	Upper	No	male	64.0000	0	0	26.0000	S
## 1237	Upper	Yes	female	60.0000	1	0	75.2500	C
## 1238	Lower	No	male	28.0000	0	0	8.0500	S
## 1241	Lower	No	male	29.0000	0	0	7.7750	S
## 1242	Middle	Yes	female	12.0000	2	1	39.0000	S
## 1243	Lower	Yes	male	26.0000	0	0	18.7875	C
## 1244	Upper	No	male	55.0000	0	0	50.0000	S

## 1245	Lower	No	male	27.0000	0	0	7.8958	S
## 1246	Upper	No	male	50.0000	1	0	106.4250	C
## 1247	Upper	Yes	female	18.0000	0	2	79.6500	S
## 1248	Upper	No	male	65.0000	0	1	61.9792	C
## 1249	Lower	Yes	female	17.0000	4	2	7.9250	S
## 1250	Upper	Yes	male	35.0000	0	0	26.2875	S
## 1252	Lower	No	male	18.0000	1	0	14.4542	C
## 1253	Middle	Yes	female	13.0000	0	1	19.5000	S
## 1254	Lower	No	male	24.0000	0	0	9.5000	S
## 1255	Upper	Yes	female	37.0000	1	0	90.0000	Q
## 1256	Middle	No	male	25.0000	0	0	31.5000	S
## 1258	Lower	No	male	40.0000	1	6	46.9000	S
## 1259	Lower	No	male	20.0000	0	0	7.2250	C
## 1260	Lower	No	female	36.0000	0	2	12.1833	S
## 1261	Lower	No	female	8.0000	3	1	21.0750	S
## 1262	Middle	No	male	51.0000	0	0	12.5250	S
## 1263	Upper	No	male	18.0000	1	0	108.9000	C
## 1264	Upper	No	male	60.0000	0	0	26.5500	S
## 1265	Middle	No	male	25.0000	1	2	41.5792	C
## 1266	Middle	No	female	57.0000	0	0	10.5000	S
## 1267	Upper	Yes	male	50.0000	2	0	133.6500	S
## 1268	Lower	Yes	female	22.0000	0	0	7.7500	Q
## 1270	Middle	No	male	24.0000	2	0	73.5000	S
## 1271	Middle	Yes	female	29.0000	1	0	26.0000	S
## 1272	Upper	No	male	38.0000	0	0	0.0000	S
## 1273	Lower	No	female	30.0000	1	1	24.1500	S
## 1274	Middle	No	male	23.0000	0	0	13.0000	S
## 1275	Middle	No	male	18.0000	0	0	73.5000	S
## 1276	Lower	No	male	24.0000	0	0	8.0500	S
## 1277	Upper	No	male	61.0000	0	0	33.5000	S
## 1278	Lower	Yes	female	35.0000	1	1	20.2500	S
## 1279	Lower	No	male	16.0000	0	0	9.5000	S
## 1280	Middle	Yes	female	28.0000	1	0	24.0000	C
## 1281	Upper	Yes	female	54.0000	1	0	59.4000	C
## 1282	Upper	Yes	male	34.0000	0	0	26.5500	S
## 1283	Lower	Yes	male	3.0000	4	2	31.3875	S
## 1285	Middle	No	male	47.0000	0	0	15.0000	S
## 1286	Middle	Yes	female	33.0000	0	2	26.0000	S
## 1288	Lower	No	male	25.0000	0	0	7.8958	S
## 1289	Lower	Yes	male	4.0000	1	1	11.1333	S
## 1291	Upper	Yes	female	29.0000	0	0	211.3375	S
## 1292	Lower	No	male	5.0000	4	2	31.3875	S
## 1293	Lower	No	male	40.0000	1	4	27.9000	S
## 1294	Middle	No	male	21.0000	0	0	73.5000	S
## 1295	Middle	Yes	female	22.0000	0	0	10.5000	S
## 1296	Middle	Yes	female	40.0000	0	0	13.0000	S
## 1297	Upper	No	male	42.0000	1	0	52.0000	S
## 1299	Middle	No	male	28.0000	0	0	10.5000	S
## 1300	Lower	No	male	40.5000	0	2	14.5000	S
## 1302	Middle	Yes	female	36.0000	1	0	26.0000	S

```
## 1303 Lower Yes female 31.0000 0 0 8.6833 S
## 1304 Middle No male 18.0000 0 0 11.5000 S
## 1305 Lower No male 26.0000 1 0 14.4542 C
## 1307 Upper Yes female 55.0000 0 0 27.7208 C
## 1308 Lower Yes male 20.0000 1 1 15.7417 C
## 1309 Lower Yes female 18.0000 0 0 7.2292 C
```

```
# Train, Test dataset split
```

```
train_split = 1:floor(nrow(titanic2) * 0.8)
```

```
data_train = titanic2[train_split, ]
```

```
data_test = titanic2[-train_split, ]
```

```
nrow(data_test)
```

```
## [1] 209
```

```
table(data_test$survived)
```

```
##
```

```
## No Yes
```

```
## 128 81
```

```
prop.table(table(data_test$survived))
```

```
##
```

```
## No Yes
```

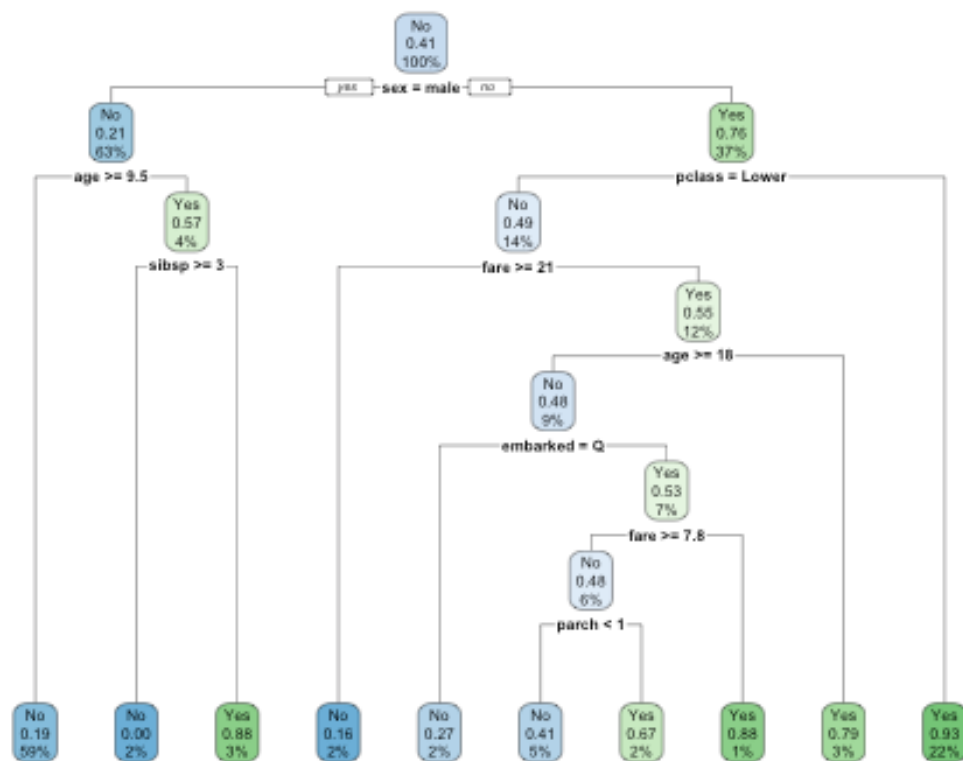
```
## 0.6124402 0.3875598
```

```
library(rpart) # decision tree
```

```
library(rpart.plot) # visualization
```

```
model <- rpart(survived~., data = data_train, method = 'class')
```

```
rpart.plot(model)
```



```

test_output <- predict(model, data_test, type = "class")
table_mat <- table(data_test$survived, test_output)

sum(diag(table_mat)) / sum(table_mat)

## [1] 0.8373206

```