1. (a) Histogram of players and their salaries.

Salaries of all players in the American league

Salaries in millions of dollars.
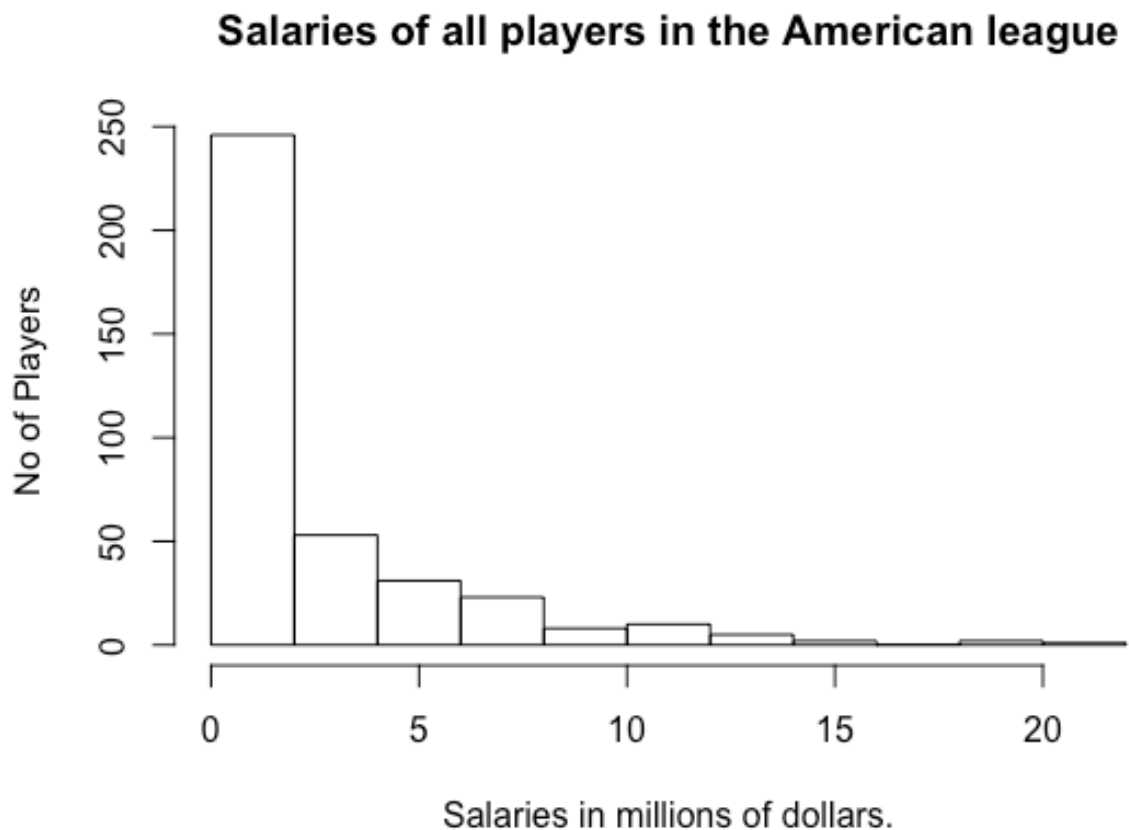
2. (b) Players with minimum salary.

```
> low_salary = min(x)
> data_low_salary=data[data$Salary<=low_salary*1000000,]
> title=paste("There are",nrow(data_low_salary),"players who have minimum salary of
",low_salary,"million.")
> title
```
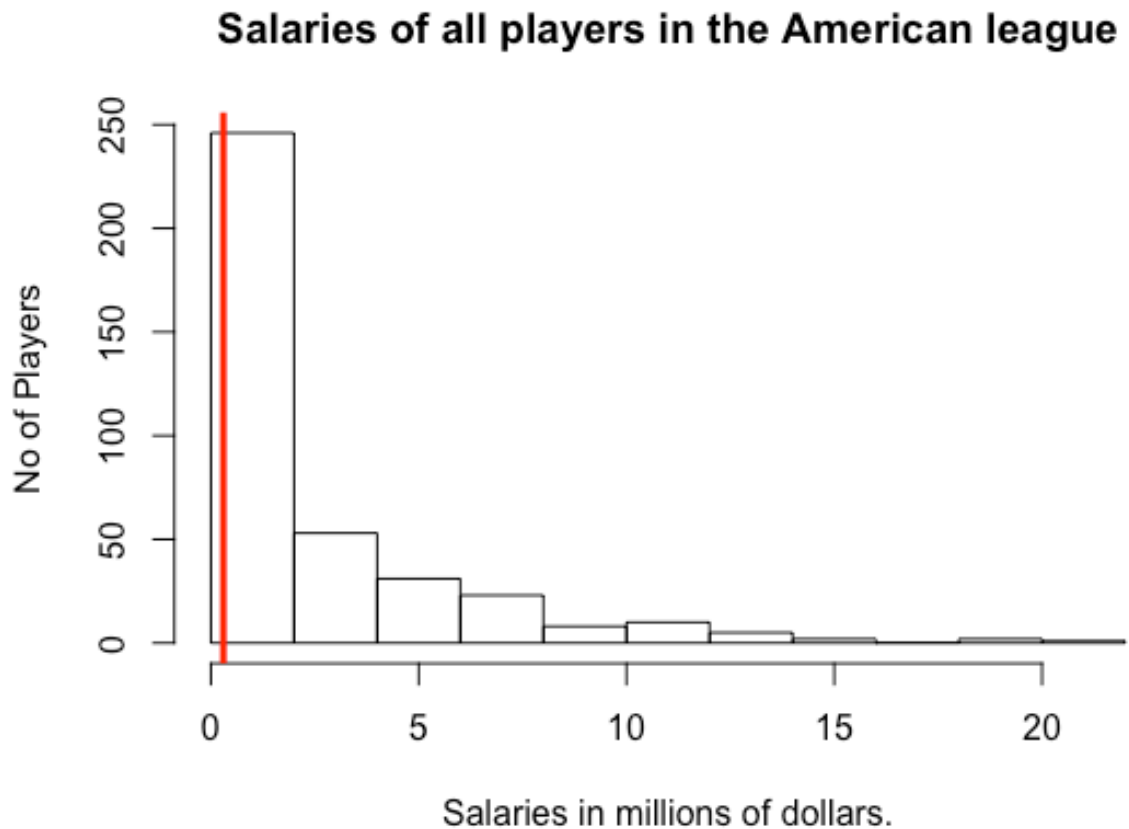
[1] "There are 44 players who have minimum salary of 0.3 million."

```
> data_low_salary
            Team          Player Salary      Position
2      New York Yankees   Anderson, Jason 300000      Pitcher
45      Anaheim Angels    Ramirez, Julio 300000    Outfielder
63      Boston Red Sox    Gonzalez, Dicky 300000      Pitcher
76      Boston Red Sox    Person, Robert 300000      Pitcher
82      Boston Red Sox     White, Matt 300000       Pitcher
109    Cleveland Indians    Traber, Billy 300000     Pitcher
128    Toronto Blue Jays   Lopez, Aquilino 300000      Pitcher
138    Toronto Blue Jays    Werth, Jayson 300000      Catcher
143    Baltimore Orioles     Bedard, Erik 300000      Pitcher
164    Baltimore Orioles     Morban, Jose 300000     Shortstop
170 Tampa Bay Devil Rays   Abernathy, Brent 300000 Second Baseman
172 Tampa Bay Devil Rays    Baldelli, Rocco 300000     Outfielder
173 Tampa Bay Devil Rays    Bierbrodt, Nick 300000      Pitcher
174 Tampa Bay Devil Rays    Carter, Lance 300000      Pitcher
175 Tampa Bay Devil Rays    Colome, Jesus 300000      Pitcher
176 Tampa Bay Devil Rays    Crawford, Carl 300000     Outfielder
178 Tampa Bay Devil Rays     Hall, Toby 300000       Catcher
181 Tampa Bay Devil Rays    Kennedy, Joe 300000      Pitcher
183 Tampa Bay Devil Rays     Martin, Al 300000     Outfielder
184 Tampa Bay Devil Rays    McClung, Seth 300000      Pitcher
188 Tampa Bay Devil Rays    Rolls, Damian 300000  Third Baseman
189 Tampa Bay Devil Rays    Seay, Bobby 300000      Pitcher
190 Tampa Bay Devil Rays   Shumpert, Terry 300000 Second Baseman
191 Tampa Bay Devil Rays     Sosa, Jorge 300000      Pitcher
192 Tampa Bay Devil Rays   Valentin, Javier 300000      Catcher
193 Tampa Bay Devil Rays    Venafro, Mike 300000      Pitcher
194 Tampa Bay Devil Rays   Zambrano, Victor 300000       Pitcher
202    Kansas City Royals    Carrasco, DJ 300000      Pitcher
207    Kansas City Royals     Harvey, Ken 300000  First Baseman
210    Kansas City Royals  Johnson, Rontrez 300000     Outfielder
212    Kansas City Royals    Lopez, Mendy 300000     Shortstop
262    Chicago White Sox    Olivo, Miguel 300000      Catcher
267    Chicago White Sox    Stewart, Josh 300000      Pitcher
276      Detroit Tigers  Bonderman, Jeremy 300000      Pitcher
278      Detroit Tigers   German, Franklyn 300000      Pitcher
281      Detroit Tigers     Infante, Omar 300000     Shortstop
285      Detroit Tigers  Ledezma, Wilfredo 300000      Pitcher
292      Detroit Tigers      Roney, Matt 300000      Pitcher
299     Seattle Mariners Bloomquist, Willie 300000 Second Baseman
322     Seattle Mariners    Snelling, Chris 300000     Outfielder
328     Oakland Athletics     Byrnes, Eric 300000     Outfielder
346     Oakland Athletics       Neu, Mike 300000       Pitcher
```

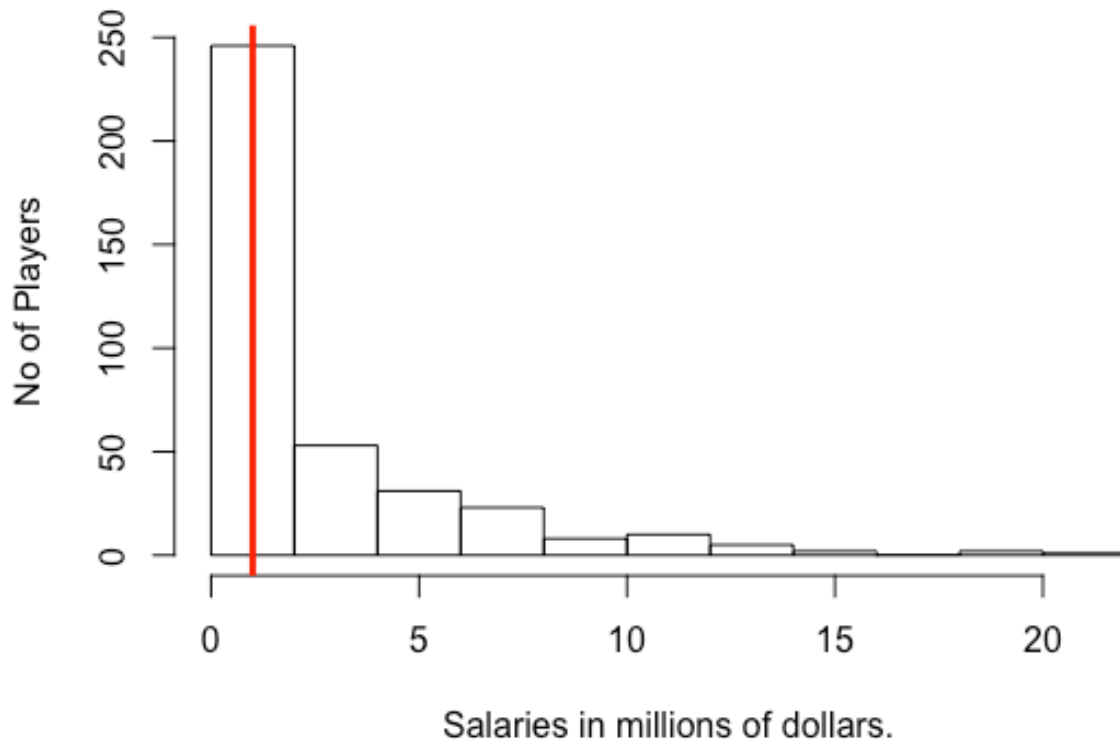| 353 | Texas Rangers | Clark, Jermaine 300000 Second Baseman |
| 358 | Texas Rangers | Garcia, Reynaldo 300000 | Pitcher |

abline (v=low_salary , col ="red ", lwd =3)

Salaries of all players in the American league

Salaries in millions of dollars.

2. (c) Players who are millionaires.

```
> data_million=data[data$Salary>=1000000,]
> title=paste("There are",nrow(data_million),"players who are millionaires.")
> title
[1] "There are 176 players who are millionaires."
```
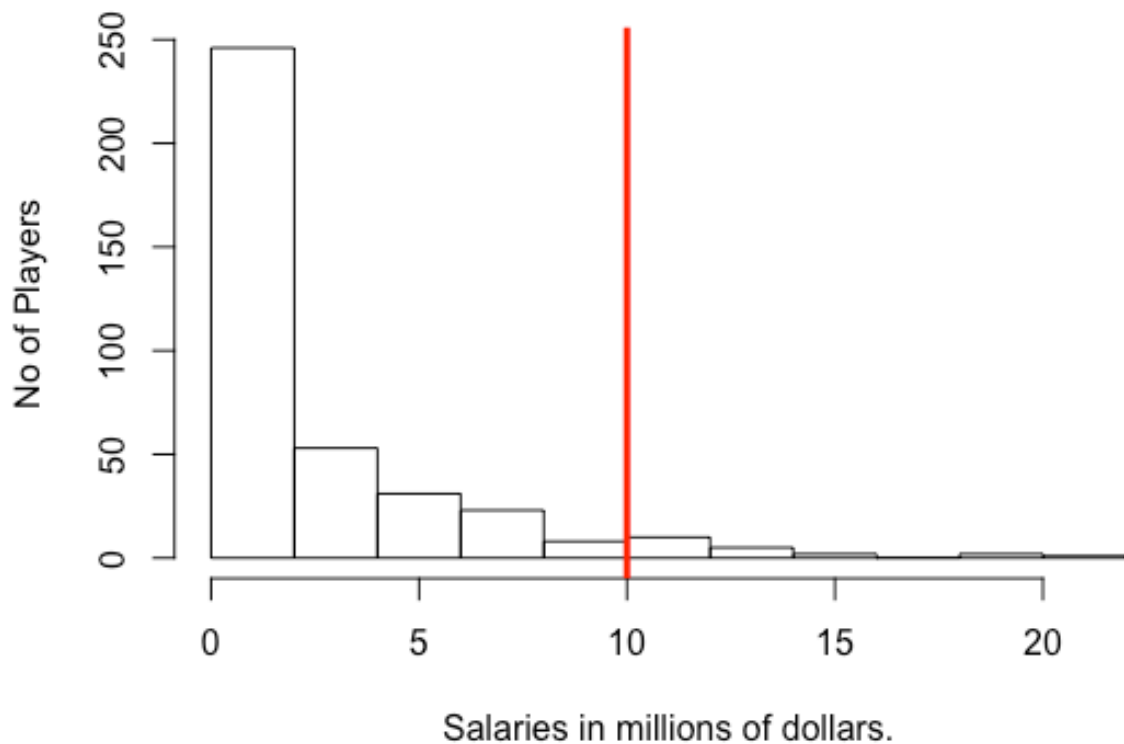
Salaries of all players in the American league

Salaries in millions of dollars.

2. (d) Players whose salary is greater that 10 million.

```
data_high_salary=data[data$Salary>=10000000,]
> title=paste("There are",nrow(data_high_salary),"players who earn more than 10
million.")
> title
[1] "There are 20 players who earn more than 10 million."

> data_high_salary
           Team            Player  Salary     Position
3    New York Yankees    Clemens, Roger 10100000     Pitcher
6    New York Yankees     Giambi, Jason 11428571 First Baseman
9    New York Yankees      Jeter, Derek 15600000    Shortstop
15   New York Yankees     Mondesi, Raul 13000000   Outfielder
16   New York Yankees     Mussina, Mike 12000000     Pitcher
18   New York Yankees    Pettitte, Andy 11500000     Pitcher
20   New York Yankees   Rivera, Mariano 10500000     Pitcher
26   New York Yankees  Williams, Bernie 12357143   Outfielder
30     Anaheim Angels     Appier, Kevin 11500000     Pitcher
61     Boston Red Sox Garciaparra, Nomar 11000000    Shortstop
69     Boston Red Sox   Martinez, Pedro 15500000     Pitcher
```
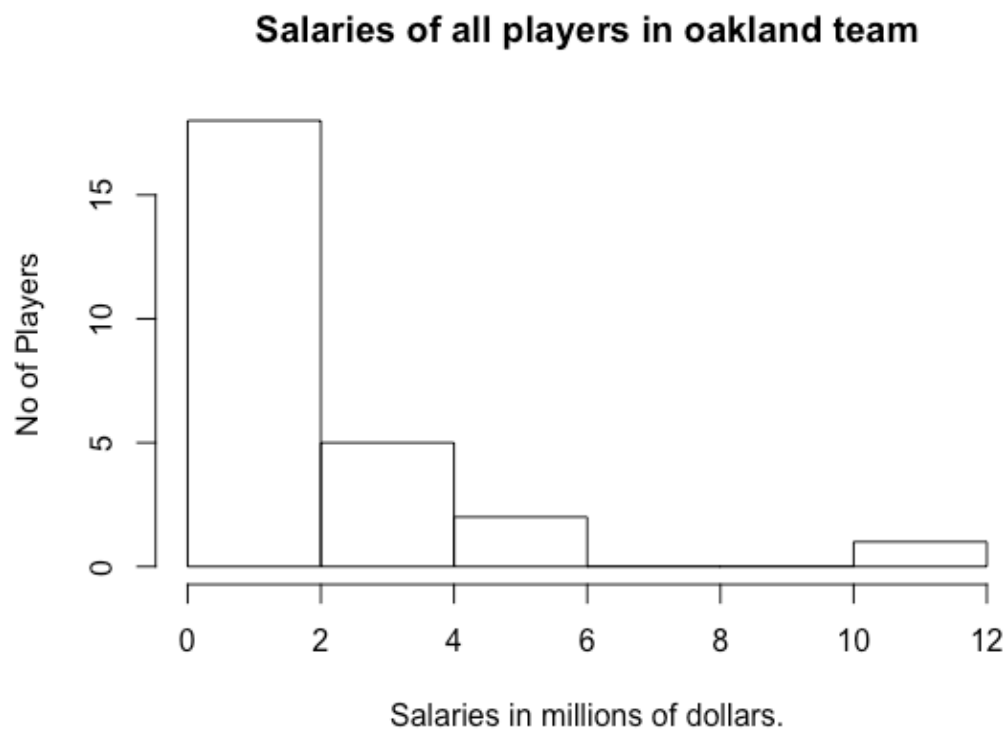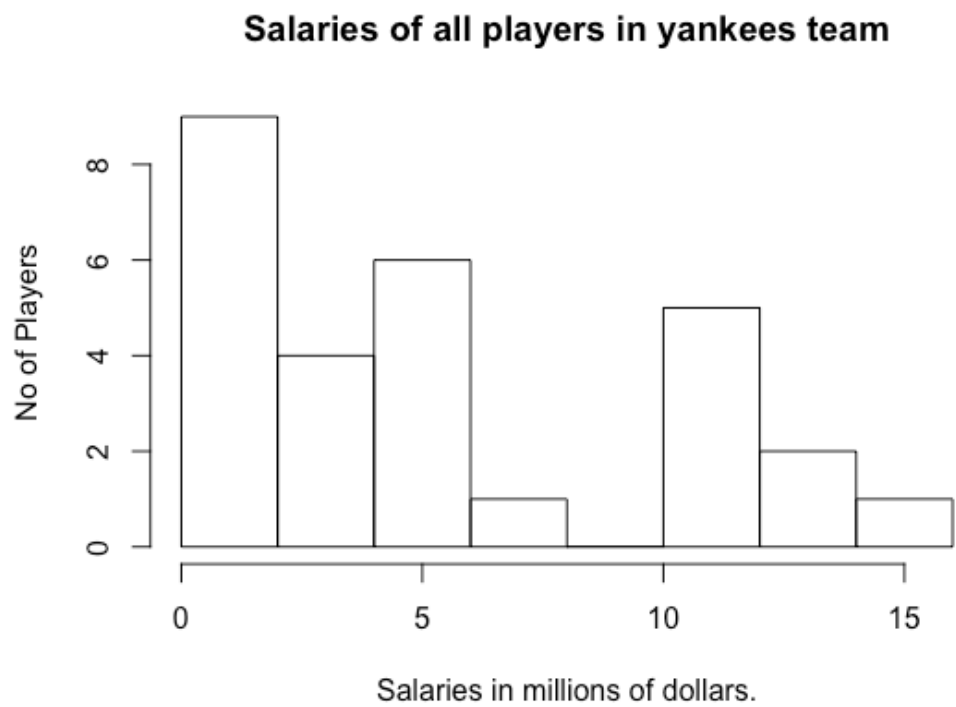
77   Boston Red Sox   Ramirez, Manny 20000000   Outfielder
118 Toronto Blue Jays   Delgado, Carlos 18700000 First Baseman
144 Baltimore Orioles   Belle, Albert 13000000   Outfielder
218 Kansas City Royals   Sweeney, Mike 11000000 First Baseman
280   Detroit Tigers Higginson, Bobby 11850000   Outfielder
331 Oakland Athletics   Dye, Jermaine 11666667   Outfielder
360   Texas Rangers   Gonzalez, Juan 13000000   Outfielder
369   Texas Rangers   Park, Chan Ho 13000000   Pitcher
372   Texas Rangers   Rodriguez, Alex 22000000   Shortstop

Salaries of all players in the American league

No of Players — Salaries in millions of dollars.

3.(e.5) Histogram of salaries of New York Yankees and Oakland Athletics

Salaries of all players in yankees team

No of Players

Salaries in millions of dollars.

Salaries of all players in oakland team

No of Players

Salaries in millions of dollars.

4.(e.1) The total team salary of New York Yankees and Oakland Athletics

```
> yankees_salary =sum(yankees$Salary)
> output=paste("The total salary of team yankees is ",yankees_salary)
> output
[1] "The total salary of team yankees is  152749814"
> oakland_salary =sum(oakland$Salary)
> output=paste("The total salary of team oakland is ",oakland_salary)
> output
[1] "The total salary of team oakland is  50260834"
```

4.(e.2) The largest salary of New York Yankees and Oakland Athletics

```
> yankees_high_salary =yankees[which.max(yankees$Salary),]
> output=paste("The highest salary of team yankees is ")
> output
[1] "The highest salary of team yankees is "
> yankees_high_salary
          Team       Player   Salary  Position
9 New York Yankees Jeter, Derek 15600000 Shortstop

> oakland_high_salary =oakland[which.max(oakland$Salary),]
> output=paste("The highest salary of team oakland is ")
> output
[1] "The highest salary of team oakland is "
> oakland_high_salary
            Team        Player   Salary   Position
331 Oakland Athletics Dye, Jermaine 11666667 Outfielder
```

4.(e.3) The average salaries of New York Yankees and Oakland Athletics

```
> yankees_avg_salary =mean(yankees$Salary)
> output=paste("The highest salary of team yankees is ",yankees_avg_salary)
> output
[1] "The highest salary of team yankees is  5455350.5"

> oakland_avg_salary =mean(oakland$Salary)
> output=paste("The highest salary of team oakland is ",oakland_avg_salary)
> output
[1] "The highest salary of team oakland is  1933109"
```

4.(e.4) The no of millionaires in New York Yankees and Oakland Athletics

```
> yankees_million_salary =yankees[yankees$Salary>=1000000,]
```

```
> output=paste("There are ",nrow(yankees_million_salary)," millionaires in
yankees.")
> output
```

	Team	Player	Salary	Position
3	New York Yankees	Clemens, Roger	10100000	Pitcher
4	New York Yankees	Contreras, Jose	5500000	Pitcher
6	New York Yankees	Giambi, Jason	11428571	First Baseman
7	New York Yankees	Hammond, Chris	2200000	Pitcher
8	New York Yankees	Hitchcock, Sterling	6000000	Pitcher
9	New York Yankees	Jeter, Derek	15600000	Shortstop
11	New York Yankees	Karsay, Steve	5000000	Pitcher
14	New York Yankees	Matsui, Hideki	6000000	Outfielder
15	New York Yankees	Mondesi, Raul	13000000	Outfielder
16	New York Yankees	Mussina, Mike	12000000	Pitcher
17	New York Yankees	Osuna, Antonio	2400000	Pitcher
18	New York Yankees	Pettitte, Andy	11500000	Pitcher
19	New York Yankees	Posada, Jorge	8000000	Catcher
20	New York Yankees	Rivera, Mariano	10500000	Pitcher
22	New York Yankees	Trammell, Bubba	2500000	Outfielder
23	New York Yankees	Ventura, Robin	5000000	Third Baseman
24	New York Yankees	Weaver, Jeff	4150000	Pitcher
25	New York Yankees	Wells, David	3250000	Pitcher
26	New York Yankees	Williams, Bernie	12357143	Outfielder
28	New York Yankees	Zeile, Todd	1500000	Third Baseman

```
> oakland_million_salary =oakland[oakland$Salary>=1000000,]
> output=paste("There are ",nrow(oakland_million_salary)," millionaires in
oakland")
> output
```

	Team	Player	Salary	Position
329	Oakland Athletics	Chavez, Eric	3675000	Third Baseman
330	Oakland Athletics	Durazo, Erubiel	1065000	First Baseman
331	Oakland Athletics	Dye, Jermaine	11666667	Outfielder
334	Oakland Athletics	Foulke, Keith	6000000	Pitcher
337	Oakland Athletics	Hatteberg, Scott	1750000	Catcher
338	Oakland Athletics	Hernandez, Ramon	1887500	Catcher
339	Oakland Athletics	Hudson, Tim	2700000	Pitcher
342	Oakland Athletics	Long, Terrence	2175000	Outfielder
343	Oakland Athletics	Mecir, Jim	3216667	Pitcher
345	Oakland Athletics	Mulder, Mark	2650000	Pitcher
348	Oakland Athletics	Rincon, Ricardo	1700000	Pitcher
349	Oakland Athletics	Singleton, Chris	1200000	Outfielder

350 Oakland Athletics   Tejada, Miguel 5125000   Shortstop
351 Oakland Athletics   Zito, Barry 1000000   Pitcher