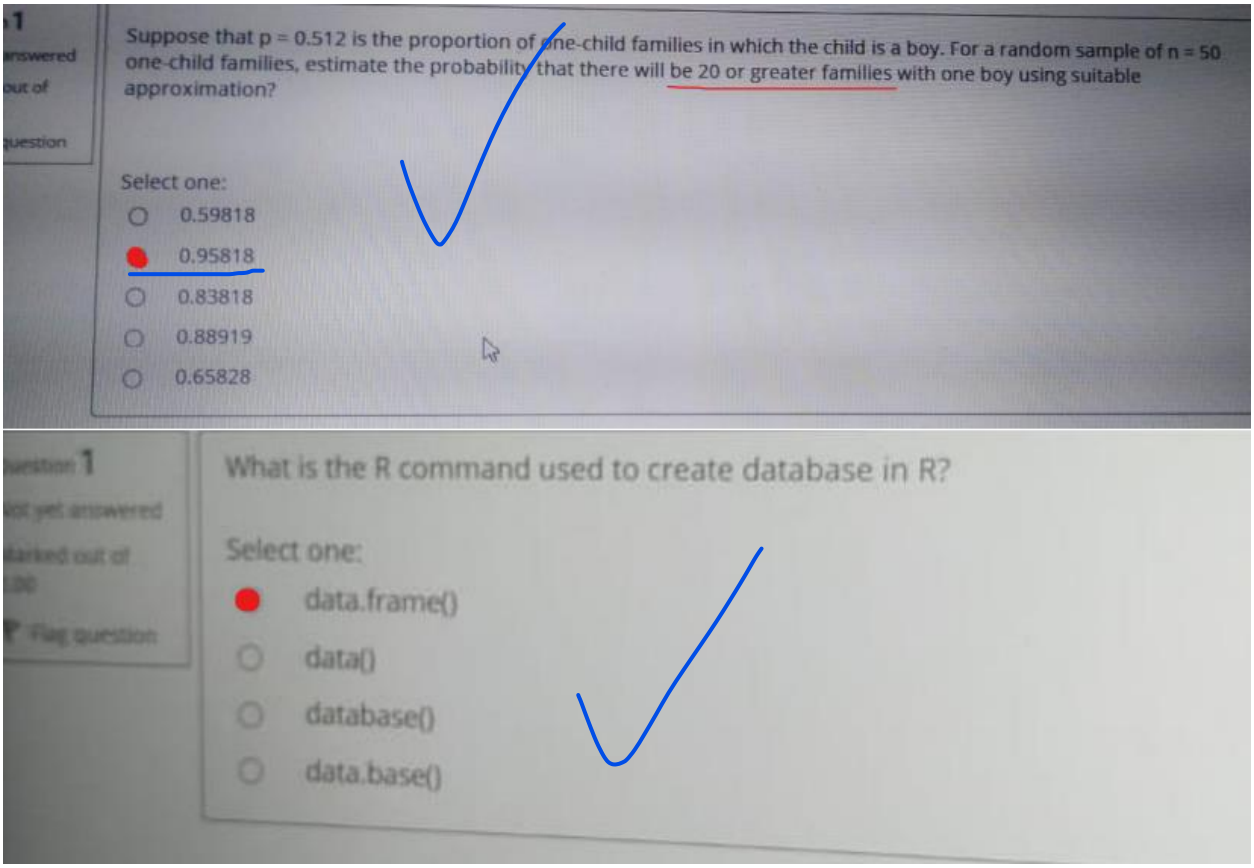

Suppose that p = 0.512 is the proportion of one-child families in which the child is a boy. For a random sample of n = 50 one-child families, estimate the probability that there will be 20 or greater families with one boy using suitable approximation?
Select one:
0.59818
0.95818
0.83818
0.88919
0.65828
What is the R command used to create database in R?
Select one:
data.frame()
data()
database()
data.base()

Suppose that an airline runs a commuter flight that holds 40 people. The airline knows that the weights of passenger plus luggage for typical customers on this flight has a mean of 210 pounds and a standard deviation of 8 pounds. What is the probability that the sample mean weight of passenger plus luggage is less than 208 pounds for a random sample of 40 customers?

Select one:

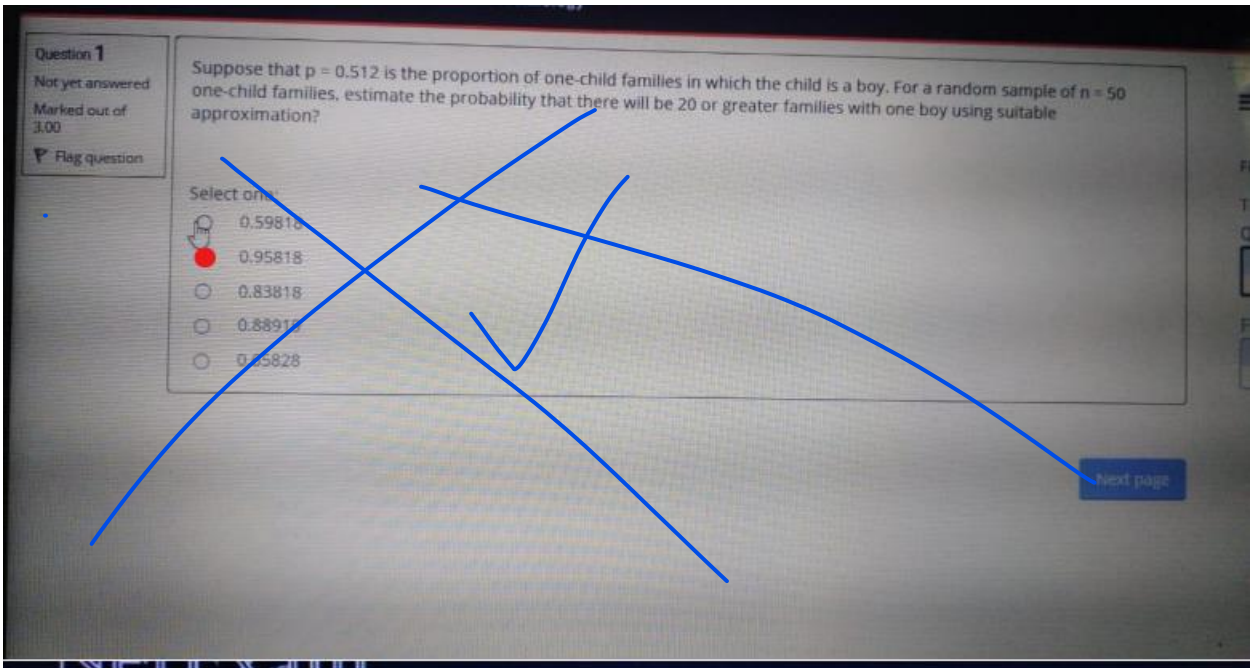
- 0.05576
- 0.35075
- 0.05705
- 0.95705
- 0.07505

What is the output of the following function?

```
X<-c(2,5,6,3,3,2,1,1,0,9,1,0,5,4,9,4,9,9)
get.f1<-function(y){
        u1<-table(X)
        names(u1[u1==min(u1)])
}
get.f1(X)
```

Select one:

- 2
- 1
- 6
- 9
- 3



Sri Lanka Institute of Information Technology

Suppose the yearly rainfall for a city in southern California follows a normal distribution, with a mean of 18 in standard deviation of 6 inches. For a randomly selected year, what is the probability that rainfall will be less t inches?

Select one:

- 0.90456
- 0.09176
- 0.29176
- 0.87176
- 0.90176

Suppose that p = 0.512 is the proportion of one-child families in which the child is a boy. For a random sample of n = 50 one-child families, estimate the probability that no of families will be in between 15 and 24 with one boy using suitable approximation? [P(15<X<24)]

Select one:

- 0.82547
- 0.27548
- 0.72548
- 0.77548
- 0.57248

Suppose that the amount of money that students at a college spend on textbooks this semester have a normal distribution with mean $360 and standard deviation $120. What is the probability that a randomly selected student spends between $250 and $480 on textbooks this semester?

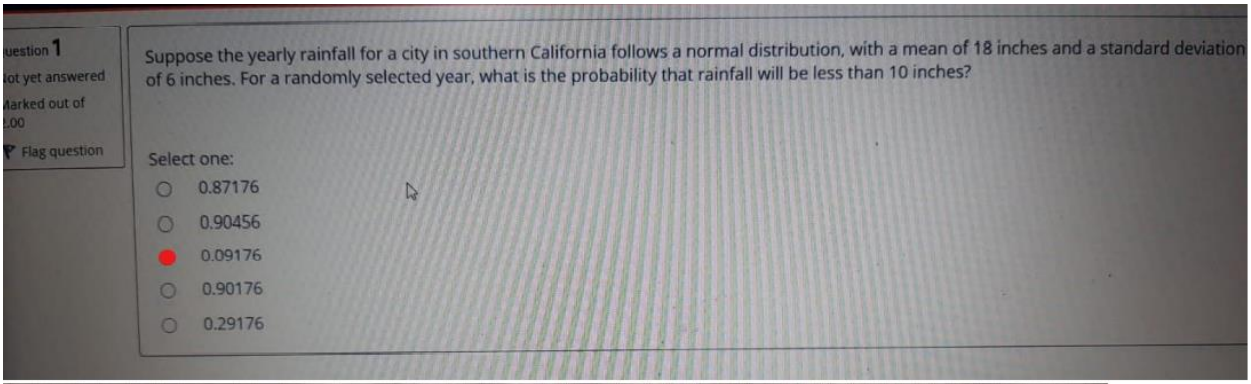
Select one:

- 0.66255
- 0.22255
- 0.66388
- 0.55266
- 0.88255

What is the R command used to create database in R?

Select one:

- data.frame()
- data.base()
- database()
- data()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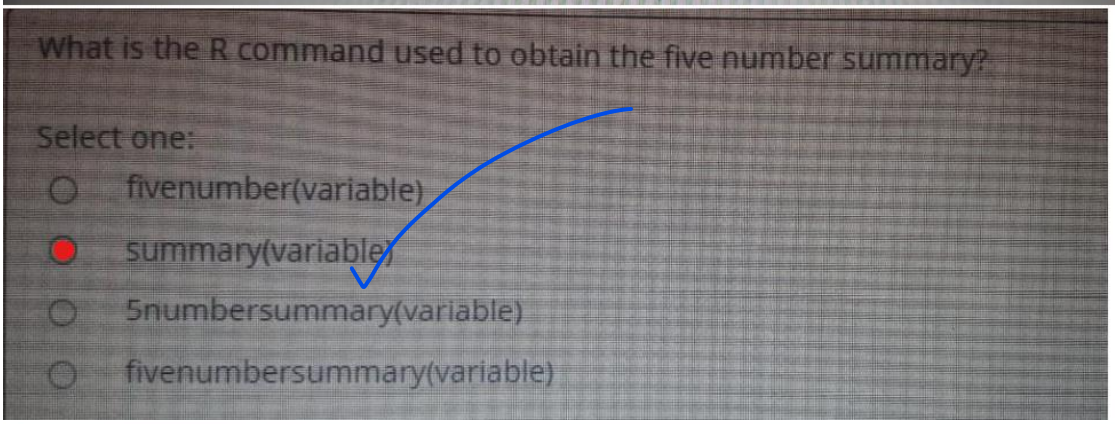
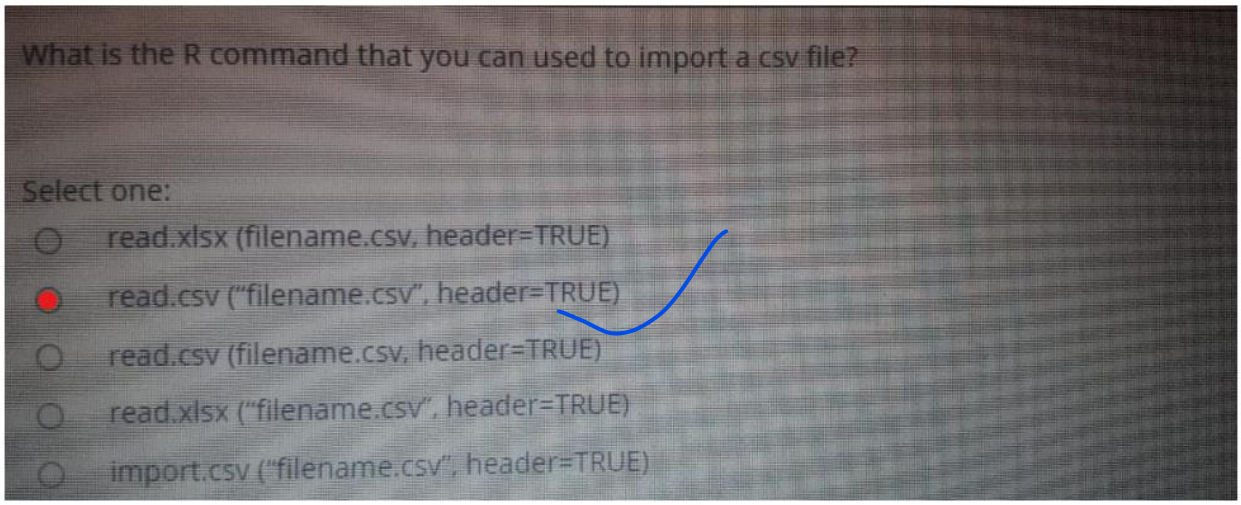
Flag question
Suppose the yearly rainfall for a city in southern California follows a normal distribution, with a mean of 18 inches and a standard deviation of 6 inches. For a randomly selected year, what is the probability that rainfall will be less than 10 inches?
Select one:
0.87176
0.90456
0.09176
0.90176
0.29176


What is the R command used to obtain the five number summary?
Select one:
fivenumber(variable)
summary(variable)
5numbersummary(variable)
fivenumbersummary(variable)


What is the R command that you can used to import a csv file?
Select one:
read.xlsx (filename.csv, header=TRUE)
read.csv ("filename.csv", header=TRUE)
read.csv (filename.csv, header=TRUE)
read.xlsx ("filename.csv", header=TRUE)
import.csv ("filename.csv", header=TRUE)

What is the output of the following function?

```
X<-c(2,5,6,3,3,2,1,1,0,9,1,0,5,4,9,4,9,9)
get.f1<-function(y){
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        names(u1[u1==min(u1)])
}
get.f1(X)
```

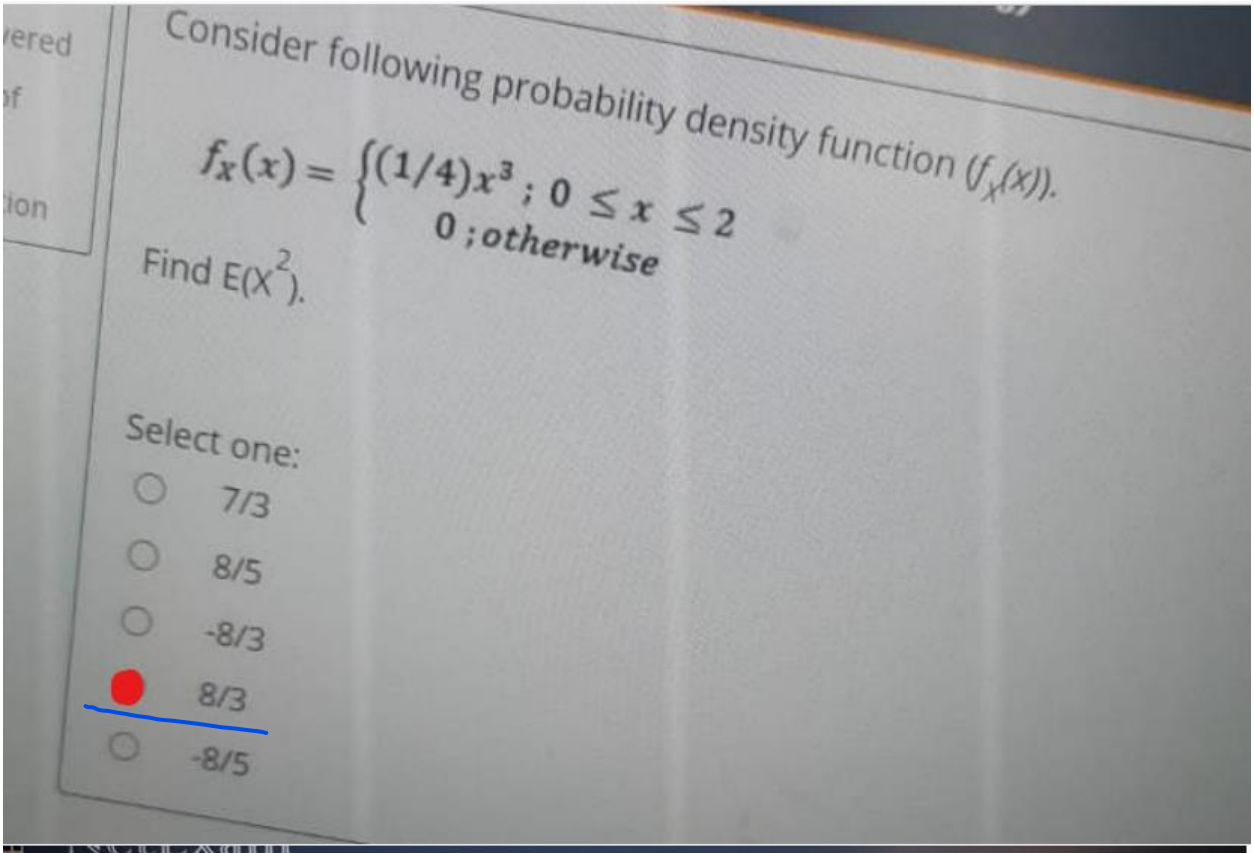
Select one:

- 1
- 9
- 3
- 2
- 6

Verbal SAT test scores X, for which the mean is 500 and the standard deviation is 100, assume to have a normal distribution. Find the probability that verbal SAT test score is less than 650.

Select one:

- 0.93319
- 0.76319
- 0.88319
- 0.98819
- 0.92576



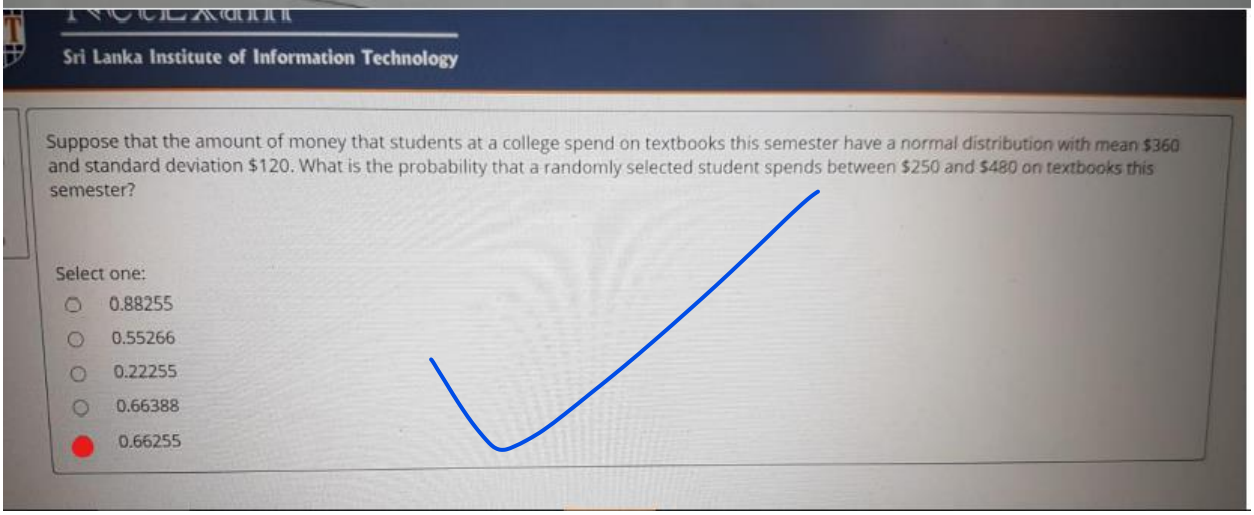
Consider following probability density function ($f_X(x)$).

$$f_x(x) = \begin{cases} (1/4)x^3 ; 0 \le x \le 2 \\ 0 ; otherwise \end{cases}$$

Find $E(X^2)$.

Select one:

- 7/3
- 8/5
- -8/3
- 8/3
- -8/5



Sri Lanka Institute of Information Technology

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Select one:

- 0.72548
- 0.57248
- 0.82547
- 0.77548
- 0.27548

Consider following probability density function ($f_X(x)$).

$$f_X(x) = \begin{cases} (1/4)x^3 \; ; \; 0 \leq x \leq 2 \\ 0 \; ; otherwise \end{cases}$$

Find E(X).

Select one:

- 8/9
- 7/9
- 7/5
- 8/5
- -8/9

Consider following probability density function ($f_x(x)$).

$$f_x(x) = \begin{cases} kx^4 ; -3 \leq x \leq 2 \\ 0 ; otherwise \end{cases}$$

Find k value.

Select one:

- -2/55
- -1/55
- 1/60
- 1/55
- 2/55

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- 7/9
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Sri Lanka Institute of Information Technology

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```
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```

Select one:

- 2
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- 6
- 9
- 3

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Select one:

- -8/5
- 7/3
- 8/5
- -8/3
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Information Technology

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```
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```

Select one:

- 1
- 2
- 6
- 3
- 9

"[13,15)" "[15,17)" "[17,19)" "[19,21)" "[21,23)" "[23,25)" "[25,27)"

Select one:

```
d<-c(13,15,17,19,21,23,25,27)
b <- c()
for(i in 1:8){
b[i] <- paste0("[", d[i], ",", d[i+1], ")")
}
print(b)
```

```
d<-c(13,15,17,19,21,23,25,27)
b <- c()
for(i in 1:7){
b[i] <- paste0("[", d[i+1], ",", d[i], ")")
}
print(b)
```

```
d<-c(13,15,17,19,21,23,25,27)
b <- c()
for(i in 1:8){
b[i] <- paste0("[", d[i-1], ",", d[i], ")")
}
print(b)
```

```
d<-c(13,15,17,19,21,23,25,27)
b <- c()
for(i in 1:7){
b[i] <- paste0("[", d[i], ",", d[i+1], ")")
}
print(b)
```

```
d<-c(13,15,17,19,21,23,25,27)
b <- c()
for(i in 1:6){
b[i] <- paste0("[", d[i], ",", d[i-1], ")")
}
```

Suppose the yearly rainfall for a city in southern California follows a normal distribution, with a mean of 18 inches and a standard deviation of 6 inches. For a randomly selected year, what is the probability that rainfall will be less than 10 inches?

Select one:

- 0.90176
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- 0.29176
- 0.90176
- 0.09176

Vehicle speeds at a certain highway location are assumed to have approximately a normal distribution with mean 60mph and standard deviation 6mph. The speeds for a randomly selected sample of n = 36 vehicles will be recorded. What is the probability that sample mean speed is not more than 58mph?

Select one:

- 0.20275
- 0.92274
- 0.03375
- 0.02275
- 0.82275

Consider following probability density function ($f_X(x)$).

$$f_x(x) = \begin{cases} (1/4)x^3 \; ; \; 0 \leq x \leq 2 \\ 0 \; ; otherwise \end{cases}$$

Find E(X).

Select one:

- 8/5
- 8/9
- -8/9
- 7/5
- 7/9

Suppose that an airline runs a commuter flight that holds 40 people. The airline knows that the weights of passenger plus luggage for typical customers on this flight has a mean of 210 pounds and a standard deviation of 8 pounds. What is the probability that the sample mean weight of passenger plus luggage is in between 206 pounds and 212 pounds for a random sample of 40 customers?

Select one:

- 0.31716
- 0.62416
- 0.94216
- 0.83216
- 0.49216

What is the R command that you can used to import a csv file?

Select one:

- import.csv ("filename.csv", header=TRUE)
- read.xlsx ("filename.csv", header=TRUE)
- read.csv (filename.csv, header=TRUE)
- read.csv ("filename.csv", header=TRUE)
- read.xlsx (filename.csv, header=TRUE)

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Select one:

- 0.87493
- 0.08893
- 0.85593
- 0.70493
- 0.07493

General