20BCE1025_Abhishek_N_N_Exp-7 Statistical Analysis of quantitative data

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Use the newsurvey data obtained by cleaning 'na' values in survey data of MASS package to do the following:

```
#install.packages("MASS")
library(MASS)
newSurvey = na.omit(survey)
```

1. Find the range of students' age participated in the survey.

```
age=newSurvey$Age
range(age)
```

```
## [1] 16.917 70.417
```

2. Break the age range into non-overlapping sub-intervals by defining a sequence of equal distance break points of 10 by rounding the range to nearest integer.

```
breaks = seq(16.917, 70.417, by=10)
breaks
```

```
## [1] 16.917 26.917 36.917 46.917 56.917 66.917
```

3. Find the distribution of the age range according to the sub-intervals with cut with its right boundary opened. Display it in column form.

```
age.cut = cut(age, breaks, right=FALSE)
age.freq = table(age.cut)
age.freq=cbind(age.freq)
```

4. Which age range of students has mostly participated in the survey.

```
age.freq[which.max(age.freq)]
```

```
## [1] 155
```

5. Similarly, find the frequency distribution of Wr.Hnd span and display it in column format.

```r
wrHnd=newSurvey$Wr.Hnd
range(wrHnd)
```

```
## [1] 13.0 23.2
```

```r
breaks = seq(13.0, 23.2, by=2)
breaks
```

```
## [1] 13 15 17 19 21 23
```

```r
wrHnd.cut = cut(wrHnd, breaks, right=FALSE)
wrHnd.freq = table(wrHnd.cut)
wrHnd.freq=cbind(wrHnd.freq)
wrHnd.freq
```

```
##         wrHnd.freq
## [13,15)          2
## [15,17)         16
## [17,19)         82
## [19,21)         41
## [21,23)         22
```

6. Find the relative frequency of Wr.Hnd and display it by correcting to 3 decimal places.

```r
wrHnd.relfreq = wrHnd.freq / nrow(newSurvey)
round(wrHnd.relfreq, 3)
```

```
##         wrHnd.freq
## [13,15)      0.012
## [15,17)      0.095
## [17,19)      0.488
## [19,21)      0.244
## [21,23)      0.131
```