

# Summary

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```
data1 <- read.csv("pulse.csv")
```

```
active <- data1[, 1]
rest <- data1[, 2]
smoke <- data1[, 3]
gender <- data1[, 4]
exercise <- data1[, 5]
hgt <- data1[, 6]
wgt <- data1[, 7]
```

*#1a*

```
height <- by(hgt, gender, summary)
print(height)
```

```
## gender: 0
##      Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##      64.00  70.00   71.00   70.91  72.00   78.00
## -----
## gender: 1
##      Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##      60.00  64.00   65.00   65.29  67.00   71.00
```

```
weight <- by(wgt, gender, summary)
print(weight)
```

```
## gender: 0
##      Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##      110.0  160.0   175.0   178.7  193.8   260.0
## -----
## gender: 1
##      Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##      102.0  123.2   135.0   134.9  145.0   175.0
```

*#2a*

```
activeS <- by(active, smoke, summary)
activeG <- by(active, gender, summary)
activeE <- by(active, exercise, summary)
print(activeS)
```

```
## smoke: 0
```

```
##      Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    51.00   78.25   88.00   90.52  101.75   154.00
## -----
## smoke: 1
##      Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    65.00   83.00   94.00   97.46  110.00   139.00
```

```
print(activeG)
```

```
## gender: 0
##      Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    51.00   76.50   85.50   88.12   98.00   154.00
## -----
## gender: 1
##      Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    56.00   80.25   95.00   94.82  106.75   144.00
```

```
print(activeE)
```

```
## exercise: 1
##      Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    68.0    85.0    97.0   101.1   110.0   154.0
## -----
## exercise: 2
##      Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    65.00   83.50   95.00   94.92  105.50   150.00
## -----
## exercise: 3
##      Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    51.00   69.75   81.50   83.97   92.75   140.00
```

```
restS <- by(rest, smoke, summary)
restG <- by(rest, gender, summary)
restE <- by(rest, exercise, summary)
print(restS)
```

```
## smoke: 0
##      Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    43.00   61.00   67.00   67.79   74.00   106.00
## -----
## smoke: 1
##      Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    58.00   67.00   70.00   72.77   77.75   95.00
```

```
print(restG)
```

```
## gender: 0
##      Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    48.00   61.00   66.00   66.78   72.00   95.00
## -----
## gender: 1
##      Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    43.00   63.00   70.00   70.09   75.75   106.00
```

```
print(restE)
```

```
## exercise: 1
##      Min. 1st Qu.  Median      Mean 3rd Qu.      Max.
##  60.00   71.00   74.00   77.27   83.00  106.00
## -----
## exercise: 2
##      Min. 1st Qu.  Median      Mean 3rd Qu.      Max.
##  53.00   65.50   70.00   70.42   75.00   90.00
## -----
## exercise: 3
##      Min. 1st Qu.  Median      Mean 3rd Qu.      Max.
##  43.00   57.00   63.00   62.81   68.00   82.00
```