

Part 01

```
source("pollutantmean.R")
pollutantmean("specdata", "sulfate", 1:10)
## [1] 4.064
pollutantmean("specdata", "nitrate", 70:72)
## [1] 1.706
pollutantmean("specdata", "nitrate", 23)
## [1] 1.281
```

Part 02

```
source("complete.R")

complete("specdata", 1)
##   id nobs
## 1  1  117

complete("specdata", c(2, 4, 8, 10, 12))
##   id nobs
## 1  2 1041
## 2  4  474
## 3  8  192
## 4 10  148
## 5 12   96

complete("specdata", 30:25)
##   id nobs
## 1 30  932
## 2 29  711
## 3 28  475
## 4 27  338
## 5 26  586
## 6 25  463

complete("specdata", 3)
##   id nobs
## 1  3  243
```

Part 3

```
source("corr.R")
source("complete.R")
cr <- corr("specdata", 150)
head(cr)
## [1] -0.01896 -0.14051 -0.04390 -0.06816 -0.12351 -0.07589
summary(cr)
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
## -0.2110 -0.0500  0.0946  0.1250  0.2680  0.7630
cr <- corr("specdata", 400)
head(cr)
## [1] -0.01896 -0.04390 -0.06816 -0.07589  0.76313 -0.15783
summary(cr)
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
## -0.1760 -0.0311  0.1000  0.1400  0.2680  0.7630
cr <- corr("specdata", 5000)
summary(cr)
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##
length(cr)
## [1] 0
cr <- corr("specdata")
```

```
summary(cr)
##      Min. 1st Qu.  Median      Mean 3rd Qu.      Max.
## -1.0000 -0.0528  0.1070  0.1370  0.2780  1.0000
length(cr)
## [1] 323
```