Homework 4

Part 1:

Test 1: pollutantmean("data", "sulfate", 1:10)

Output: `[1] 4.064128`

Test 2: pollutantmean("data", "nitrate", 70:72)

Output: `[1] 1.706047`

Test 3: pollutantmean("data", "sulfate", 34)

Output: `[1] 1.477143`

Test 4: pollutantmean("data", "nitrate")

Output: `[1] 1.702932`

Part 2:

Test 1: cc <- complete("data", c(6, 10, 20, 34, 100, 200, 310))

print(cc$nobs)

Output: `[1] 228 148 124 165 104 460 232`

Test 2: cc <- complete("data", 54)

print(cc$nobs)

Output: `[1] 219`

Test 3: RNGversion("3.5.1")

set.seed(42)

cc <- complete("data", 332:1)

use <- sample(332, 10)

print(cc[use, "nobs"])

Output: `[1] 711 135  74 445 178  73  49   0 687 237`

Homework 4

Part 3:

Test 1: cr <- corr("data")

```
cr <- sort(cr)
RNGversion("3.5.1")
set.seed(868)
out <- round(cr[sample(length(cr), 5)], 4)
print(out)
```

Output: `[1]  0.2688  0.1127 -0.0085  0.4586  0.0447`

Test 2: cr <- corr("data", 129)

```
cr <- sort(cr)
n <- length(cr)
RNGversion("3.5.1")
set.seed(197)
out <- c(n, round(cr[sample(n, 5)], 4))
print(out)
```

Output: `[1] 243.0000   0.2540   0.0504  -0.1462  -0.1680   0.5969`

Test 3: cr <- corr("data", 2000)

```
n <- length(cr)
cr <- corr("data", 1000)
cr <- sort(cr)
print(c(n, round(cr, 4)))
```

Output: `[1]  0.0000 -0.0190  0.0419  0.1901`