Programming assignment 1 (week 2)

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1. What value is returned by the following call to pollutantmean()? You should round your output to 3 digits.

```
pollutantmean("specdata", "sulfate", 1:10)
```

```
## [1] 4.064128
```

[ ] 3.782 [ ] 6.545 [ ] 4.868 [ ] 6.026 [ ] 3.666 [x] 4.064

2. What value is returned by the following call to pollutantmean()? You should round your output to 3 digits.

```
pollutantmean("specdata", "nitrate", 70:72)
```

```
## [1] 1.706047
```

[ ] 2.394 [ ] 2.604 [ ] 1.182 [ ] 2.752 [x] 1.706 [ ] 0.914

3. What value is returned by the following call to pollutantmean()? You should round your output to 3 digits.

```
pollutantmean("specdata", "sulfate", 34)
```

```
## [1] 1.477143
```

[x] 1.477 [ ] 1.300 [ ] 1.573 [ ] 0.680 [ ] 0.591 [ ] 0.450

4. What value is returned by the following call to pollutantmean()? You should round your output to 3 digits.

```
pollutantmean("specdata", "nitrate")
```

```
## [1] 1.702932
```

[x] 1.703 [ ] 2.493 [ ] 1.774 [ ] 2.363 [ ] 2.233 [ ] 1.842

5. What value is printed at end of the following code?

```
cc <- complete("specdata", c(6, 10, 20, 34, 100, 200, 310))
print(cc$nobs)
```

```
## [1] 228 148 124 165 104 460 232
```

[ ] 215 201 188 204 193 213 206 [ ] 201 214 235 183 198 210 210 [ ] 204 222 200 212 213 198 196 [ ] 227 184 189 196 232 224 189 [x] 228 148 124 165 104 460 232 [ ] 217 210 206 214 211 203 211

6. What value is printed at end of the following code?

```
cc <- complete("specdata", 54)
print(cc$nobs)
```

```
## [1] 219
```

[ ] 213 [x] 219 [ ] 248 [ ] 228 [ ] 220 [ ] 205

7. What value is printed at end of the following code?

```
set.seed(42)
cc <- complete("specdata", 332:1)
use <- sample(332, 10)
print(cc[use, "nobs"])
```

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

[ ] 608 885 684 510 765 171 244 745 624 216 [ ] 643 99 703 673 59 366 277 644 318 594 [ ] 524 577 276 487 3 592 5 148 645 435 [ ] 270 310 27 692 307 681 631 455 690 440 [x] 711 135 74 445 178 73 49 0 687 237

8. What value is printed at end of the following code?

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

```
## [1]  0.2688  0.1127 -0.0085  0.4586  0.0447
```

[ ] -0.0351 0.2736 -0.0176 0.5520 0.1828 [ ] 0.3792 0.5118 0.3620 0.4726 0.5782 [ ] 0.1539 -0.0056 0.3023 0.4158 0.2558 [ ] -0.0203 0.5856 0.0983 0.3840 0.1137 [ ] 0.4474 0.4720 0.1239 0.5220 0.2538 [x] 0.2688 0.1127 -0.0085 0.4586 0.0447

9. What value is printed at end of the following code?

```
cr <- corr("specdata", 129)
cr <- sort(cr)
n <- length(cr)
set.seed(197)
out <- c(n, round(cr[sample(n, 5)], 4))
print(out)
```

```
## [1] 243.0000   0.2540   0.0504  -0.1462  -0.1680   0.5969
```

[ ] 247.0000 0.1958 0.9304 -0.4851 -0.8229 -0.0679 [x] 243.0000 0.2540 0.0504 -0.1462 -0.1680 0.5969 [ ] 242.0000 0.8233 0.3443 -0.2242 -0.7703 0.8735 [ ] 233.0000 -0.6377 0.3773 -0.0759 0.7335 0.2879 [ ] 225.0000 0.4216 0.4207 -0.0507 0.9377 0.0277 [ ] 229.0000 -0.2418 0.4496 0.8748 -0.3924 -0.5713

10. What value is printed at end of the following code?

```
cr <- corr("specdata", 2000)
n <- length(cr)
cr <- corr("specdata", 1000)
```

```r
cr <- sort(cr)
print(c(n, round(cr, 4)))
```

```
## [1]  0.0000 -0.0190  0.0419  0.1901
```

[ ] 3.0000 0.5342 -0.6713 0.3684 [ ] 3.0000 -0.0206 -0.5881 0.5135 [ ] 3.0000 -0.8907 0.4755 -0.0175 [ ] 0.0000 -0.8974 0.8278 0.4519 [x] 0.0000 -0.0190 0.0419 0.1901 [ ] 2.0000 0.5596 -0.5655 -0.1241