Lab4.R

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```
5 + 3
```

```
## [1] 8
```

```
5 - 3
```

```
## [1] 2
```

```
5 * 3
```

```
## [1] 15
```

```
5/3
```

```
## [1] 1.666667
```

```
x <- 3 * 4
x
```

```
## [1] 12
```

```
this_is_a_really_long_name <- 2.5
r_rocks <- 2^3

# Inspect rrocks
#rrocks; will not create PDF w/o #

# Inspect R_rocks
#R_rocks; will not create PDF w/o #

# Calling Functions
seq(1, 10)
```

```
##  [1]  1  2  3  4  5  6  7  8  9 10
```

```
help("seq")
```

```
## starting httpd help server ... done
```

```r
seq(1, 10, by = 2)
```

```
## [1] 1 3 5 7 9
```

```r
example("seq")
```

```
##
## seq> seq(0, 1, length.out = 11)
##  [1] 0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0
##
## seq> seq(stats::rnorm(20)) # effectively 'along'
##  [1]  1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20
##
## seq> seq(1, 9, by = 2)     # matches 'end'
## [1] 1 3 5 7 9
##
## seq> seq(1, 9, by = pi)    # stays below 'end'
## [1] 1.000000 4.141593 7.283185
##
## seq> seq(1, 6, by = 3)
## [1] 1 4
##
## seq> seq(1.575, 5.125, by = 0.05)
##  [1] 1.575 1.625 1.675 1.725 1.775 1.825 1.875 1.925 1.975 2.025 2.075 2.125
## [13] 2.175 2.225 2.275 2.325 2.375 2.425 2.475 2.525 2.575 2.625 2.675 2.725
## [25] 2.775 2.825 2.875 2.925 2.975 3.025 3.075 3.125 3.175 3.225 3.275 3.325
## [37] 3.375 3.425 3.475 3.525 3.575 3.625 3.675 3.725 3.775 3.825 3.875 3.925
## [49] 3.975 4.025 4.075 4.125 4.175 4.225 4.275 4.325 4.375 4.425 4.475 4.525
## [61] 4.575 4.625 4.675 4.725 4.775 4.825 4.875 4.925 4.975 5.025 5.075 5.125
##
## seq> seq(17) # same as 1:17, or even better seq_len(17)
##  [1]  1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17
```

```r
date()
```

```
## [1] "Thu Oct 06 10:50:56 2022"
```

```r
# Getting Help in R
help("log")
?log
help.search('cross tabulate')
??"cross tabulate"

# Vectors, Vectorization, Indexing
length(3.1)
```

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

```r
x <- c(56, 95.3, 0.4)
x
```

```
## [1] 56.0 95.3  0.4
```

```
y <- c(3.2, 1.1, 0.2)
y
```

```
## [1] 3.2 1.1 0.2
```

```
x + y
```

```
## [1] 59.2 96.4  0.6
```

```
x - y
```

```
## [1] 52.8 94.2  0.2
```

```
x/y
```

```
## [1] 17.50000 86.63636  2.00000
```

```
sqrt(x)
```

```
## [1] 7.4833148 9.7621719 0.6324555
```

```
round(sqrt(x), 3)
```

```
## [1] 7.483 9.762 0.632
```

```
log(x)/2 + 1
```

```
## [1] 3.0126758 3.2785149 0.5418546
```

```
x[2]
```

```
## [1] 95.3
```

```
x[1]
```

```
## [1] 56
```

```
x[4]
```

```
## [1] NA
```

```
x[3] <- 0.5
x
```

```
## [1] 56.0 95.3  0.5
```