

Wickhams Vokabular

see <http://adv-r.had.co.nz/Vocabulary.html>

The basics

```
# The first functions to learn
?  
str  
  
# Important operators and assignment  
%in%, match  
=, <-, <<-  
$, [, [[, head, tail, subset  
with  
assign, get  
  
# Comparison  
all.equal, identical  
!=, ==, >, >=, <, <=  
is.na, complete.cases  
is.finite  
  
# Basic math  
*, +, -, /, ^, %%, %/%  
abs, sign  
acos, asin, atan, atan2  
sin, cos, tan  
ceiling, floor, round, trunc, signif  
exp, log, log10, log2, sqrt  
  
max, min, prod, sum  
cummax, cummin, cumprod, cumsum, diff  
pmax, pmin  
range  
mean, median, cor, sd, var  
rle  
  
# Functions to do with functions  
function  
missing  
on.exit  
return, invisible  
  
# Logical & sets  
&, |, !, xor  
all, any  
intersect, union, setdiff, setequal  
which
```

```
# Vectors and matrices  
c, matrix  
# automatic coercion rules character >  
# numeric > logical  
length, dim, ncol, nrow  
cbind, rbind  
names, colnames, rownames  
t  
diag  
sweep  
as.matrix, data.matrix  
  
# Making vectors  
c  
rep, rep_len  
seq, seq_len, seq_along  
rev  
sample  
choose, factorial, combn  
(is/as).(character/numeric/logical/...)  
  
# Lists & data.frames  
list, unlist  
data.frame, as.data.frame  
split  
expand.grid  
  
# Control flow  
if, &&, || (short circuiting)  
for, while  
next, break  
switch  
ifelse  
  
# Apply & friends  
lapply, sapply, vapply  
apply  
tapply  
replicate
```

Common data structures

```
# Date time  
ISOdate, ISOdatetime, strptime,  
strptime, date  
difftime
```

```
julian, months, quarters, weekdays
library(lubridate)
```

Character manipulation

```
grep, agrep
gsub
strsplit
chartr
nchar
tolower, toupper
substr
paste
trimws
library(stringr)
```

Factors

```
factor, levels, nlevels
reorder, relevel
cut, findInterval
interaction
options(stringsAsFactors = FALSE)
```

Array manipulation

```
array
dim
dimnames
aperm
library(abind)
```

Statistics

Ordering and tabulating

```
duplicated, unique
merge
order, rank, quantile
sort
table, ftable
```

Linear models

```
fitted, predict, resid, rstandard
lm, glm
hat, influence.measures
logLik, df, deviance
formula, ~, I
anova, coef, confint, vcov
contrasts
```

Miscellaneous tests

```
apropos("\\.test$")
```

Random variables

```
(q, p, d, r) * (beta, binom, cauchy, chisq,
```

```
exp, f, gamma, geom, hyper, lnorm, logis,
multinom, nbinom, norm, pois, signrank, t,
unif, weibull, wilcox, birthday, tukey)
```

Matrix algebra

```
crossprod, tcrossprod
eigen, qr, svd
%*%, %o%, outer
rcond
solve
```

Working with R

Workspace

```
ls, exists, rm
getwd, setwd
q
source
install.packages, library, require
```

Help

```
help, ?
help.search
apropos
RSiteSearch
citation
demo
example
vignette
```

Debugging

```
traceback
browser
recover
options(error = )
stop, warning, message
tryCatch, try
```

I/O

Output

```
print, cat
message, warning
dput
format
sink, capture.output
sprintf
```

Reading and writing data

```
data
count.fields
```

```
read.csv, write.csv
read.delim, write.delim
read.fwf
readLines, writeLines
readRDS, saveRDS
load, save
library(foreign)

# Files and directories
dir
basename, dirname, tools::file_ext
file.path
path.expand, normalizePath
file.choose
file.copy, file.create, file.remove,
file.rename, dir.create
file.exists, file.info
tempdir, tempfile
download.file, library(downloader)
```