R CHEAT SHEET (INTRO & GGPLOT)

OPERATORS/SYMBOLS

+ - * / (Math operators; - is also "exclude" in indexing; + is used in ggplot to add new elements)

? (Help operator)

(Comments/annotation operator)

> (Ready prompt, but also "greater than")

<- and = (Assignment operators for creating objects; = also to associate input w/ arguments)

NA (Missing value)

: (Create a simple sequence)

, (Dimension and argument separator)

! (Negates things--"not that")

$ (Shortcut for indexing a data frame column)

%>% (Pipe for funneling output from one function to be input in another)

%in% (Matching operator--keeps things from left object that are also in right object)

~ (Separator in "formula notation")

CORE CONCEPTS

ASSIGNMENT (creating objects and storing data)

name.of.object <- (or =) *values to store*

FUNCTION CALLS (using functions)

function.name(required.argument1, optional.argument2, …)

INDEXING

object.name[*value(s) to extract*] (or object.name[*row value(s)*, *column values(s)*])

TURNING ON PACKAGES

library(*package name*)

USEFUL FUNCTIONS (Key arguments)

- log(x, base)
- sqrt(x)
- round(x, digits)
- read.csv(path, stringsAsFactors)
- download.file(url, destfile)

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- head(x); tail(x)
- dim(x); nrow(x); ncol(x)
- names(x); rownames(x)
- str(x)
- summary(x)
- seq(from, to, by)
- c(values to combine separated by commas)
- mean(x, trim, na.rm)
- range(x, na.rm)
- is.na(x)
- na.omit(x)
- factor(x, levels)
- table(x)
- plot(x)
- ggplot(data, mapping = aes(…))
- geom_point(); geom_line(); geom_histogram(bins); geom_boxplot(); geom_jitter()
- aes(size, alpha, color, group, …)
- scale_x(or y)_... (functions to adjust x and y axes)
- n()
- facet_wrap(~) and facet_grid (*rows* ~ *columns*)
- theme()
- ggsave(filename, plot, height, width)