Introduction to R

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1 The R Language

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Try on your own

Use R as a calculator:
Do the “Basic Math” tutorial

Tips

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- ⇑ and ⇓ cycle through your command history
- Page Up and Page Down control your screen
- > prompt means R is ready for a command
  \+ means your last command wasn't complete

Questions so far?

R Language Basics

- Everything in R is an "object"

Try on your own

Create variables:
Do the “Variables” tutorial

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- We execute functions on objects
  - Functions work differently (or not at all) on different classes

Try on your own

Understand R data structures:

- "Vectors"
- "Vector indexing"
- "Matrices"
- "Lists"
- "Dataframes"

Questions so far?

It's time for a five-minute break

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  - Functions work differently (or not at all) on different classes
- Functions return objects *and* print to the console
- We can then do further things with those objects

Try on your own

Understand objects and printing:
Do the “Objects” tutorial

When things go wrong...

When things go wrong...

1. Don't panic
2. Parsing errors versus syntax errors:
   - `Error:  unexpected ')' in "lm(y ~)"`
   - `Error in eval(expr, envir, enclos) : object 'y' not found`
3. Google the error or warning
4. Use StackOverflow

A script editor makes your life easier...

- Helps you understand code more easily
- Work interactively to build a script
  - R script is like a Stata do file
  - File extension: `.R` or `.r`
- Write down all of your code
- Use comments (`#`) liberally

. . . so let's install one

```
install.packages("devtools")
library("devtools")
install_github("rite", "leeper")

library("rite")
rite()
```

Questions so far?