

Math 455 Class 34 April 20

Midterm 2: Wednesday April 22.

Questions about R coding for the midterm

I will look through the code and try to ask "reasonable" questions about what it does. Many code examples in textbook.

Examples of "reasonable":

$\text{lmod} \leftarrow \text{lm}(Y \sim X)$

`plot(X, Y)`

`abline(0, 1)`

`abline(lmod, lty = 2)`.

Q: `abline` is a function: what kind of argument does it take?

Q: what does `lty = 2` do?

Answers (above code explained):

`abline` can take multiple types of arguments.

it can take numbers: a slope and intercept for a line. $y = a + bx$ can be plotted with `abline(a, b)`.

It can also take a linear model object which has a `coef` method that produces the a and b .

Also `lty` stands for "line type" and plots the line in a visually different way (dotted vs solid, for example.)

Also `plot(X, Y)` produces a scatter plot.

Other examples: R's matrix notation:

missing arguments and use of `-` signs.

If A is a matrix and we write

A [-1,] (negative; missing argument).

What does this do?

More detail than I will test:

"What is the `dstest` function and what does it do?"

One way to prepare: have your LLM look at the code in the book and make up SIMPLE questions that test understanding of the code.

Another approach: the number of points assigned to these problems is small: you can get an A in this course even if you IGNORE all these problems.