

MA 151: Homework #10

due Friday December 15 (optional)

If you decide to hand in this assignment, please submit it in the usual way and also send me an email to let me know that you did it.

- Write a function called `randomLine` that takes a file name and prints out one line of the file chosen at random.
- Rewrite the function `secretNumber` from Homework #4, but have the function choose the secret number at random between 1 and 100. After saying “too big” or “too small” or “right!”, your function should tell us what the secret number was. Something like:

`secretNumber 42` might say `Too big! The secret number was 12`

- Write a function called `takeR` which takes a number n and a list ℓ , and produces a list of n random elements taken from ℓ . (Some elements may be repeated in the answer.) The output will be random, but for example:

`takeR 4 [1..100]` might be `[30,78,39,81]`

- Write a function called `dropR` which similarly drops n elements out of a list ℓ . (Use `delete` from `Data.List`. Make the function polymorphic. (The elements of the list must be in `Eq`.)
- Make a function `password` which works like the one from class on 12/5, but forces the password always to include at least one number. (Hint: Use the function from class to generate a password at random, and check if it has a number in it. Keep on generating them until you get one with a number.)