# Laboratory 11

(1) Write a function that takes as sole argument a string. It returns a string subject to the following list of substitutions (that you should implement as a dictionary). The substitutions are taken from leet-speak that at one point was used by hackers, but now is only used by "script-kiddies".

| Letter | Substitution |
|---|---|
| a | 4 |
| b | \|3 |
| c | [ |
| d | \|) |
| e | 3 |
| k | x |
| l | 1 |
| o | 0 |
| w | \/\/ |

(2) The effective interest rate of an investment that invests a capital c in year 0, receives a payment of a in year 1 and a payment of b in year 2 is given by

$$\frac{a-2c+\sqrt{a^2+4bc}}{2c}.$$

Implement a function that insists on named arguments, using capital for c, first_year_return for a, and second_year_return for b and that has a doc string (with triple quotation marks) explaining the function. Check the help of your function.

(3) Write a function that counts the number of letters in a file. The return value of the function is a dictionary, and the argument of the function is the name of the file. Your function only counts letters, not digits or symbols.