

## Lab 3.3.5 Converting fuel consumption

### Objectives

- improve the student's skills in defining, using and testing functions.

### Scenario

A car's fuel consumption may be expressed in many different ways. For example, in Europe, it is shown as the amount of fuel consumed per 100 kilometers. In the USA, it is shown as the number of miles travelled by car using one gallon of fuel.

Your task is to write a pair of functions converting l/100km into mpg, and vice versa.

The functions:

- are named `l100kmtompg` and `mpgtol100km` respectively;
- take one argument (the value corresponding to their names)

Complete the code presented below.

Run your code and check whether your output is the same as ours.

Well, you will surely need this:

- 1 American mile = 1609.344 metres;
- 1 American gallon = 3.785411784 litres.

```
def l100kmtompg(litres):  
#  
# put your code here  
#  
def mpgtol100km(miles):  
#  
# put your code here  
#  
print(l100kmtompg(3.9))  
print(l100kmtompg(7.5))  
print(l100kmtompg(10.))  
print(mpgtol100km(60.3))  
print(mpgtol100km(31.4))  
print(mpgtol100km(23.5))
```

## Example output

```
60.31143162393162  
31.361944444444444  
23.521458333333333  
3.9007393587617467  
7.490910297239916  
10.009131205673757
```