Question 1: What are the outputs for the following codes?

a

```
odd=lambda x: bool(x%2)
numbers=[n for n in range(10)]
print(numbers)
n=list()
for i in numbers:
    if odd(i):
        continue
    else:
        break
```

b

```
l=[n for n in range(5)]
f=lambda x:bool(x%2)
print(f(3), f(1))
for i in range(len(l)):
    if f(l[i]):
        del l[i]
        print(i)
```

c

```
f=lambda x:bool(x%2)
print(f(20), f(21))
```

d

```
import functools
l=[1,2,3,4]
print(functools.reduce(lambda x,y:x*y,l))
```

e

```
l=[1, -2, -3, 4, 5]
def f1(x):
    return x<2
m1=filter(f1, l)
print(list(m1))
```

f

```
l=[1, -2, -3, 4, 5]
def f1(x):
    return x<-1
m1=map(f1, l)
print(list(m1))
```

g

```
import functools
l=[1, 2, 3, 4, 5]
m=functools.reduce(lambda x, y:x if x>y else y, l)
print(m)
```

h

```
m=reduce(lambda x: x-3 in range(4, 10))
print(list(m))
```

Question 2: The single line equivalent of the following Python code?

```
l=[1, 2, 3, 4, 5]
def f1(x):
    return x<0
m1=filter(f1, l)
print(list(m1))
```

Question 3: Which numbers will be a part of the output list of the following Python code?

```
def sf(a):
    return a%3!=0 and a%5!=0
m=filter(sf, range(1, 31))
print(list(m))
```

Question 4: Implement a python program to check if a number is an Armstrong number by using lambda, map, and filter.

An Armstrong number of three digits is an integer such that the sum of the cubes of its digits is equal to the number itself. For example, 371 is an Armstrong number since 3**3 + 7**3 + 1**3 = 371.

Deliverable:

1) Create one zip file, containing the necessary source-code files (python)

You must name your file using the following convention:
A#_studentID, where # is the number of the assignment. studentID is your student ID number.

2) Assignments must be submitted in the assignment section (Léa) by 28– Oct– 2023 at 23:55.