Задание 1

12 чисел, которые являются степенями двойки (от 1 до x)Δ

Код программы:

```
# Online Python - IDE, Editor, Compiler, Interpreter
import math

def sum(a):
    mas=[]
    a=a+1
    for i in range(1,a):
     mas.append(math.pow(2,i))
    print(mas)
a = int(input('Enter x: '))
sum(a)


```

Результат работы:

```
Enter x:
5
[2.0, 4.0, 8.0, 16.0, 32.0]
```

Задание 2

12функция, которая возвращает разницу между мин и макс элементом списка, и NONE если разница =0. Найти количество списков из 40, в которых разница = NONE

Код программы:

```
import random

def findelem(array):
   raz=max(array)-min(array)
   if raz!=0:
    return raz
   else:
    return None

count=0
array=[]
for i in range(40):
 array.append([])
 for j in range(5):
    array[i].append(random.randint(0,20))
print(array)
for i in range(0,40):
  a=findelem(array[i])
  if a==None:
    count=count+1

print("Количество списков с разницей None",count)

```

Результат работы:

```
[[16, 5, 4, 2, 15], [9, 6, 9, 20, 18], [8, 7, 19, 0, 6], [4, 16, 2, 13, 11], [5, 15, 16, 11, 18], [9, 12, 0, 12, 17], [12, 18, 13, 17, 8], [8, 18, 3, 12, 11], [14, 9, 8, 4, 18], [15, 20, 0, 11, 18], [15, 4, 6, 7, 2], [4, 19, 0, 2, 15], [6, 7, 3, 8, 1], [17, 13, 6, 17, 11], [16, 9, 1, 15, 19], [16, 5, 18, 9, 12], [3, 8, 12, 2, 15], [7, 6, 13, 8, 3], [12, 16, 9, 2, 0], [14, 16, 0, 5, 2], [15, 2, 19, 13, 7], [7, 1, 17, 11, 17], [18, 17, 6, 16, 18], [2, 19, 4, 3, 17], [20, 5, 20, 17, 1], [4, 10, 11, 0, 20], [16, 10, 15, 6, 11], [12, 2, 11, 20, 20], [18, 7, 2, 17, 5], [13, 1, 6, 1, 6], [3, 1, 20, 13, 16], [13, 16, 15, 6, 14], [8, 5, 9, 19, 10], [19, 9, 16, 1, 15], [0, 12, 3, 12, 2], [17, 14, 1, 11, 2], [18, 17, 20, 7, 17], [16, 8, 11, 12, 20], [12, 20, 11, 17, 6], [15, 3, 15, 8, 19]]
Количество списков с разницей None 0
```