Q1 ( 0 Point )

**This is the first gate to be opened! Quickly define the output of this code!**

**function foo(int[] x, int a, int b, int i, int j) returns int  
   int k = j  
   int ct = 0  
   while k > i-1  
       if x[k] <= b and not (x[k] <= a)  
           ct = ct + 1  
       end  
       k = k - 1  
   end  
   return ct  
end  
  
int[] x = [11,12,10,5,17,15,20,10,17,11]  
print(foo(x,8,18,3,6))  
print(foo(x,10,20,0,9))  
print(foo(x,8,18,6,3))  
print(foo(x,20,10,0,9))  
print(foo(x,6,7,8,8))**

Q2 ( 0 Point )

**Now, define the output of this code!**

**function g(string str) returns string**

**int i = 0**

**string new\_str = ""**

**while i < len(str) - 1**

**new\_str = new\_str + str[i + 1]**

**i = i + 1**

**end**

**return new\_str**

**end**

**function f(string str) returns string**

**if len(str) == 0**

**return ""**

**else if len(str) == 1**

**return str**

**else**

**return f(g(str)) + str[0]**

**end**

**end**

**function h(int n, string str) returns string**

**while n != 1**

**if n % 2 == 0**

**n = n/2**

**else**

**n = 3\*n + 1**

**end**

**str = f(str)**

**end**

**return str**

**end**

**function pow(int x, int y) returns int**

**if y == 0**

**return 1**

**else**

**return x\*pow(x, y-1)**

**end**

**end**

**print(h(1, "fruits"))**

**print(h(2, "fruits"))**

**print(h(6, "fruits"))**

**print(h(pow(2,** [**1000000000000000**](tel:1000000000000000)**), "fruits"))**

**print(h(pow(2,** [**9831050005000007**](tel:9831050005000007)**), "fruits"))**