

Python Homework 2

In the following multiple choice questions, please circle the correct output of Python code.

1. `for num in range(5,0,-2):`
`print(num)`
5, 3, 1
(a) 1 3 5 (b) 5 4 3 2 1 (c) 5 3 1 (d) 5 3 (e) 5 1
2. `for num1 in range(1,4,1):`
`for num2 in range(0,num1,1):`
`print(num2)`
1, 2, 3
(a) 1 2 3 1 2 3 (b) 1 1 2 1 2 3 (c) 1 2 1 2 1 2 (d) 0 1 2 3 4 (e) 0 0 1 0 1 2
3. `nums=[1,3,5,7,9]`
`count = 0`
`for i in range(0, len(nums),1):`
`if (nums[i] % 3 == 1)`
`count = count + 1`
`print(count)`
(a) 1 (b) 2 (c) 3 (d) 4 (e) 5
4. `nums=[1,3,5,7,9]`
`sum = 0`
`for i in range(0, len(nums),1):`
`if (i % 3 == 0):`
`sum = sum + nums[i]`
`print(sum)`
?
(a) 6 (b) 7 (c) 8 (d) 9 (e) 10
5. `nums = [4,3,6,2,4]`
`for i in range(1, len(nums), 1):`
`if (nums[i] > nums[i-1]):`
`temp = nums[i]`
`nums[i] = nums[i-1]`
`nums[i-1]=temp`
`print(nums)`
(a) [4,6,3,2,4] (b) [6,4,4,3,2] (c) [2,3,4,4,6] (d) [4,6,3,4,2] (e) [4,4,2,3,4]
6. `nums1 = [1,2,3,4,5,6]`
`nums2 = [6,5,4,3,2,1]`
`sum = 0`
`for i in range(0, len(nums1), 2):`
`sum = sum + nums1[i] + nums2[i + 1]`
`print(sum)`
(a) 30 (b) 18 (c) 45 (d) 15 (e) 27

Coding question 1: Make a function `remove_zeros(nums)` to remove all 0s from a list. Call the function with `remove_zeros([0,4,2,0,2,4,0])` and result should be `[4,2,2,4]`

Coding question 2: Make a function `reverse_list(nums)` to reverse a list. Call the function with `reverse_list([1,2,3,4,5])` and result should be `[5,4,3,2,1]`

Coding question 3: Make a function `merge_lists(nums1, nums2)` to merge 2 lists. Call the function with `merge_lists([1,2,3,4,5], [6,7,8,9,10])` and result should be `[1,2,3,4,5,6,7,8,9,10]`