

List-1

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1 Q1) first_last6

Given an array of ints, return True if 6 appears as either the first or last element in the array. The array will be length 1 or more.

first_last6([1, 2, 6]) True first_last6([6, 1, 2, 3]) True first_last6([13, 6, 1, 2, 3]) False

```
[3]: def first_last6(nums):  
      return (nums[0] == 6 or nums[-1] == 6)
```

2 Q2) same_first_last

Given an array of ints, return True if the array is length 1 or more, and the first element and the last element are equal.

same_first_last([1, 2, 3]) False same_first_last([1, 2, 3, 1]) True same_first_last([1, 2, 1]) True

```
[4]: def same_first_last(nums):  
      return ( len(nums) >= 1 and nums[-1] == nums[0] )
```

3 Q3)make_pi

Return an int array length 3 containing the first 3 digits of pi, {3, 1, 4}.

make_pi() [3, 1, 4]

```
[13]: def make_pi():  
       return ([3,1,4])
```

4 Q4) common_end

Given 2 arrays of ints, a and b, return True if they have the same first element or they have the same last element. Both arrays will be length 1 or more.

common_end([1, 2, 3], [7, 3]) True common_end([1, 2, 3], [7, 3, 2]) False common_end([1, 2, 3], [1, 3]) True

```
[15]: def common_end(a, b):  
       return ((a[0] == b[0]) or (a[-1] == b[-1]))
```

5 Q5) sum3

Given an array of ints length 3, return the sum of all the elements.

sum3([1, 2, 3]) 6 sum3([5, 11, 2]) 18 sum3([7, 0, 0]) 7

```
[17]: def sum3(nums):  
    total = 0  
    for num in nums:  
        total += num  
    return total
```

6 Q6) rotate_left3

Given an array of ints length 3, return an array with the elements “rotated left” so {1, 2, 3} yields {2, 3, 1}.

rotate_left3([1, 2, 3]) [2, 3, 1] rotate_left3([5, 11, 9]) [11, 9, 5] rotate_left3([7, 0, 0]) [0, 0, 7]

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```
[33]: def rotate_left3(nums):  
    new_list = []  
    nums[0] , nums[-1] = nums[-1] , nums[0]  
    nums[0] , nums[1] = nums[1] , nums[0]  
  
    for num in nums :  
        new_list.append(num)  
    return new_list
```

7 Q7) reverse3

Given an array of ints length 3, return a new array with the elements in reverse order, so {1, 2, 3} becomes {3, 2, 1}.

reverse3([1, 2, 3]) [3, 2, 1] reverse3([5, 11, 9]) [9, 11, 5] reverse3([7, 0, 0]) [0, 0, 7]

```
[37]: def reverse3(nums):  
    new_list = []  
    nums[0] , nums[-1] = nums[-1] , nums[0]  
    for num in nums :  
        new_list.append(num)  
    return new_list
```

8 Q8)

max_end3 Given an array of ints length 3, figure out which is larger, the first or last element in the array, and set all the other elements to be that value. Return the changed array.

max_end3([1, 2, 3]) [3, 3, 3] max_end3([11, 5, 9]) [11, 11, 11] max_end3([2, 11, 3]) [3, 3, 3]

```
[2]: def max_end3(nums):
    first_item = nums[0]
    last_item = nums[-1]
    highest_num = []
    if first_item > last_item:
        highest_num.append(first_item)
    elif first_item < last_item:
        highest_num.append(last_item)
    elif first_item == last_item:
        highest_num.append(first_item)

    return highest_num * 3
```

9 Q9) sum2

Given an array of ints, return the sum of the first 2 elements in the array. If the array length is less than 2, just sum up the elements that exist, returning 0 if the array is length 0.

sum2([1, 2, 3]) 3 sum2([1, 1]) 2 sum2([1, 1, 1, 1]) 2

```
[3]: def sum2(nums):
    total = 0
    if len(nums) < 2:
        for num in nums:
            total += num
    else:
        for num in nums[:2]:
            total += num
    return total
```

10 Q10) middle_way

Given 2 int arrays, a and b, each length 3, return a new array length 2 containing their middle elements.

middle_way([1, 2, 3], [4, 5, 6]) [2, 5] middle_way([7, 7, 7], [3, 8, 0]) [7, 8] middle_way([5, 2, 9], [1, 4, 5]) [2, 4]

```
[4]: def middle_way(a, b):
    tups = list(zip(a,b))
    middle = []
    for tup in tups[1]:
        middle.append(tup)
    return middle
```

11 Q11) make_ends

Given an array of ints, return a new array length 2 containing the first and last elements from the original array. The original array will be length 1 or more.

make_ends([1, 2, 3]) [1, 3] make_ends([1, 2, 3, 4]) [1, 4] make_ends([7, 4, 6, 2]) [7, 2]

```
[5]: def make_ends(nums):  
      first , last = nums[0] , nums[-1]  
      return [first,last]
```

12 Q12)

has23 Given an int array length 2, return True if it contains a 2 or a 3.

has23([2, 5]) True has23([4, 3]) True has23([4, 5]) False Go

```
[6]: def has23(nums):  
      return ((2 in nums) or (3 in nums))
```

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[ ]:
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