Python Exercises

Write a Python program to find a list of integers with exactly two occurrences of nineteen and at least three occurrences of five. Return True otherwise False.  
Input:  
[19, 19, 15, 5, 3, 5, 5, 2]  
Output:  
True  
Input:  
[19, 15, 15, 5, 3, 3, 5, 2]  
Output:  
False  
Input:  
[19, 19, 5, 5, 5, 5, 5]  
Output:  
True

Write a Python program that accepts a list of integers and calculates the length and the fifth element. Return true if the length of the list is 8 and the fifth element occurs thrice in the said list.  
Input:  
[19, 19, 15, 5, 5, 5, 1, 2]  
Output:  
True  
Input:  
[19, 15, 5, 7, 5, 5, 2]  
Output:  
False  
Input:  
[11, 12, 14, 13, 14, 13, 15, 14]  
Output:  
True  
Input:  
[19, 15, 11, 7, 5, 6, 2]  
Output:  
False

Write a Python program that accepts an integer and determines whether it is greater than 4^4 and which is 4 mod 34.  
Input:  
922  
Output:  
True  
Input:  
914  
Output:  
False  
Input:  
854  
Output:  
True  
Input:  
854  
Output:  
True

We are making n stone piles! The first pile has n stones. If n is even, then all piles have an even number of stones. If n is odd, all piles have an odd number of stones. Each pile must more stones than the previous pile but as few as possible. Write a Python program to find the number of stones in each pile.  
Input: 2  
Output:  
[2, 4]  
Input: 10  
Output:  
[10, 12, 14, 16, 18, 20, 22, 24, 26, 28]  
Input: 3  
Output:  
[3, 5, 7]  
Input: 17  
Output:  
[17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41, 43, 45, 47, 49]

Write a Python program to check the nth-1 string is a proper substring of the nth string in a given list of strings.  
Input:  
['a', 'abb', 'sfs', 'oo', 'de', 'sfde']  
Output:  
True  
Input:  
['a', 'abb', 'sfs', 'oo', 'ee', 'sfde']  
Output:  
False  
Input:  
['a', 'abb', 'sad', 'ooaaesdfe', 'sfsdfde', 'sfsd', 'sfsdf', 'qwrew']  
Output:  
False  
Input:  
['a', 'abb', 'sad', 'ooaaesdfe', 'sfsdfde', 'sfsd', 'sfsdf', 'qwsfsdfrew']  
Output:  
True

Write a Python program to find a list of integers containing exactly four distinct values, such that no integer repeats twice consecutively among the first twenty entries.  
Input:  
[1, 2, 3, 4, 1, 2, 3, 4, 1, 2, 3, 4, 1, 2, 3, 4]  
Output:  
True  
Input:  
[1, 2, 3, 3, 1, 2, 3, 3, 1, 2, 3, 3, 1, 2, 3, 3]  
Output:  
False  
Input:  
[1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3]  
Output:  
False