1.Problem Statement

Write a python program which finds the maximum number from num1 to num2 (num2 inclusive) based on the following rules.

1. Always num1 should be less than num2

2. Consider each number from num1 to num2 (num2 inclusive). Populate the number into a list, if the below conditions are satisfied

 a. Sum of the digits of the number is a multiple of 3

 b. Number has only two digits

 c. Number is a multiple of 5

3. Display the maximum element from the list

In case of any invalid data or if the list is empty, display -1.

2. Problem Statement

Write a python program to solve a classic ancient Chinese puzzle.

We count 35 heads and 94 legs among the chickens and rabbits in a farm. How many rabbits and how many chickens do we have?

Sample Input	Expected Output
heads-150 legs-400	100 50
heads-3 legs-11	No solution
heads-3 legs-12	0 3
heads-5 legs-10	5 0

3. Problem Statement

The Metro Bank provides various types of loans such as car loans, business loans and house loans to its account holders. Write a python program to implement the following requirements:

- Initialize the following variables with appropriate input values:account_number, account_balance, salary, loan_type, loan_amount_expected and customer_emi_expected.

- The account number should be of 4 digits and its first digit should be 1.

- The customer should have a minimum balance of Rupees 1 Lakh in the account.

- If the above rules are valid, determine the eligible loan amount and the EMI that the bank can provide to its customers based on their salary and the loan type they expect to avail.

- The bank would provide the loan, only if the loan amount and the number of EMI's requested by the customer is less than or equal to the loan amount and the number of EMI's decided by the bank respectively.

Display appropriate error messages for all invalid data. If all the business rules are satisfied ,then display account number, eligible and requested loan amount and EMI's.

Test your code by providing different values for the input variables.

Salary	Loan type	Eligible loan amount	No. of EMI's required to repay
> 25000	Car	500000	36
> 50000	House	6000000	60

> 75000	Business	7500000	84

4. Problem Statement

Write a python program to find and display the product of three positive integer values based on the rule mentioned below:

It should display the product of the three values except when one of the integer value is 7. In that case, 7 should not be included in the product and the values to its left also should not be included.
If there is only one value to be considered, display that value itself. If no values can be included in the product, display -1.

Note: Assume that if 7 is one of the positive integer values, then it will occur only once. Refer the sample I/O given below.

Sample Input	Expected Output
1, 5, 3	15
3, 7, 8	8
7, 4, 3	12
1, 5, 7	-1

Note: Assignment should be done in Eclipse Plug-in

5. Write a python function to check whether three given numbers can form the sides of a triangle.
Hint
: Three numbers can be the sides of a triangle if none of the numbers are greater than or equal to the sum of the other two numbers.

6. Problem Statement

You have x no. of 5 rupee coins and y no. of 1 rupee coins. You want to purchase an item for amount z. The shopkeeper wants you to provide exact change. You want to pay using minimum number of coins. How many 5 rupee coins and 1 rupee coins will you use? If exact change is not possible then display -1.

Sample Input			Expected Output	
Available Rs. 1 coins	Available Rs. 5 notes	Amount to be made	Rs. 1 coins needed	Rs. 5 notes needed
2	4	21	1	4
11	2	11	1	2
3	3	19	-1	