1. Develop PYTHON COE for generating the pay slip of an employee working in XYZ Company. Input for the process will be the basic pay for the employee and the number of days leave taken. Gross salary is calculated as Basic Pay + HRA + DA. HRA is fixed as 30% of Basic pay and DA as 80% of Basic pay. Net salary includes deduction for PF and leave on loss of pay. An employee is eligible to take 1 day leave per month, leave taken more than a day in a month is considered as loss of pay and PF 1800 fixed. Calculate the gross and net salary.

2. Develop PYTHON CODE to depict the steps for withdrawing money from an ATM machine. Allow the users to withdraw cash only in Thousands and Hundreds. Eg. 1400 is a valid and 1350 is invalid.

3. Body Mass Index (BMI) is a measure of health on weight. It can be calculated by taking your weight in kilograms and dividing by the square of your height in meters. The interpretation of BMI for people 16 years or older is as follows:

BMI	Interpretation
below 16	serious underweight
16-18	underweight
18-24	normal weight
24-29	overweight
29-35	seriously overweight
above 35	gravely overweight

4. Houseflies have approximately age of four weeks. Give the number of days a housefly lived, design an algorithm and write the Python code to determine its approximate age in seconds. Check for boundary conditions and print 'Invalid input' if condition is not satisfied. For example, if a housefly lived for 21 days then its approximate age in seconds is 24*21*60*60 is 1814400.

Input Format

Number of days, n

Output Format

Number of seconds

Boundary Conditions

n>0 and n <40

5. The numeric system represented by Roman numerals originated in ancient Rome and remained the usual way of writing numbers throughout Europe well into the Late Middle Ages. Numbers in this system are represented by combinations of letters as shown below:

Roman Numeral	I	V	X	L	C	D	M
Value	1	5	10	50	100	500	1000

Given a letter in Roman numeral, develop a Python code to print the value of it. If some other letter other than Roman numeral is given as input then print ‘Enter a roman numeral’ and terminate.

Input Format

A Roman Letter

Output Format

Value equivalent to the letter

6. Calculation of amount in a Piggy bank

A Kid has a hobby of collecting coins and rupee notes (Assume the denominations to be one rupee, two rupees, five rupees and ten rupees) in a piggy bank. Once in a year, he calculates and writes down the total amount collected by him in a sheet and use the amount to get a comic book. (Assume that the collected amount is always greater than the price of comic book.) Write a program to automate the process of counting the total amount collected. Also, display the extra amount to be returned to piggy bank. Print 'Invalid input' for input outside the boundary conditions mentioned in the problem.

Input Format:

The first input value read is the number of one rupee coins in the piggy bank.

The second input value read is the number of two rupees coins in the piggy bank.

The third input value read is the number of five rupees coins in the piggy bank.

The fourth input value read is the number of ten rupees coins in the piggy bank.

The fifth input value read is the money required to purchase the comic book.

Output Format:

The total amount of money saved by the kid can be calculated using the formula, number of one rupee coins + (number of two rupees coins * 2) + (number of five rupees coins * 5) + (number of ten rupees coins* 10)

The amount to be kept again in piggy bank can be calculated using by subtracting the money required for purchasing the comic book from the total amount saved.

Boundary Conditions:

>=0

Example Input/Output 1:

Input:

5

4

3

5

75

Output:

78

03

Explanation:

In the input, there are five one rupee, 4 two rupees, 3 five rupees and 5 ten rupees coins. Hence the total amount is calculated as

(5*1) + (4*2) +(3*5) + (5*10)

Money to be returned to piggy bank = 78 – 75 = 03

Example Input/Output 2:

Input:

10

0

4

10

120

Output:

130

10

Explanation:

(10*1) + (0*2) +(4*5) + (10*10)

130-120 = 10

Test cases

Input (Each input is separated by a comma)

10 -3 5 6, 20 30 5 3, 34 35 12 5

Output (Each input is separated by $END)

Invalid input$END

135$END

214$END