

Write Python programs for the following tasks:

1. Given the amount in rupees , convert it into ruble
1 rupee = 1.11 ruble
2. Normalize the input data (an integer x) using z-score normalization whose equation is provided below
 $z = (x - \text{mean}) / \text{std}$
Accept mean and standard deviation(std) from the user and compute the normalized value
3. Compute BMI(Body Mass Index) of a person
Accept mass in kg and height in meters
 $\text{BMI} = (\text{mass}) / (\text{height} * \text{height})$
4. Accept preferred name for mail account from the user and create a mail id by appending the domain information
Consider domain as @google.com
Ex: if user name is 'all' , mail id is all@google.com
5. Consider the following books are bought by the user through Amazon web portal. The rate and quantity of the items are provided below.
The user is also entitled for a discount of 15% for the purchase. Find the total cost of purchase in rupees.

Item	Quantity	Cost
The Alchemist	2	\$50
Rich dad and poor dad	3	\$67
Harry Potter	1	\$100

6. Find the final velocity(v) given the initial velocity(u), acceleration(a) and time(t).
 $v = u + at$
7. A truck is lifted two meters above the ground in 15 seconds. Find the power delivered to the truck. Given 100 kg as mass of the truck.
Power = Work done / time
Work done = Force * distance
Force = mass * gravity
gravity = 9.81 m/sec^2
8. Given the chemical compound , find the molecular mass.
Get the number of carbon, hydrogen and oxygen atoms in the compound.
Find mass as the sum of product of number of occurrences of the atoms with their individual weight
Carbon – 12, Hydrogen – 1 , Oxygen – 16 Ex: $\text{CO}_2 = 12 + 2 * 16 = 44$