NATIONAL UNIVERSITY
OF COMPUTER & EMERGING SCIENCES
PESHAWAR CAMPUS

Problem Set:	Semester Project	**Semester**:	Fall 2020
Points:	*See autograder*		
Date Set:	*See autograder*	**Due Date**:	*See autograder*
Course:	CS118 Programming Fundamentals	**Instructor**:	Waqas Ali

1   Basketball Match

FAST University is organizing a basketball match for its students. This match will be attended by a lot of families, the organizing team consisting of Bashir and Ali. They have decided to buy chocolates and sell them to the kids present there. Various types of chocolates can be bought at different range of prices.

However, some constraints have been applied on Bashir and Ali while they go buy chocolates.

1. The first constraint is to spend all their money in buying chocolates so no change is left.
2. The second constraint on them is that each one of them has to buy the same chocolate. This will ensure that both Ali and Bashir will pay the same price for 1 chocolate.
3. The last of these constraints is that both have to buy the chocolate with the maximum price.

So for example, if the university gives $12 to Ali and $30 to Bashir, they will have to buy the same type of chocolate, in this case it can be a chocolate which has a cost of $6. Hence Ali will end up buying **two** chocolates from his $12 and Bashir will end up buying **five** chocolates from his $30.

After buying their chocolates and coming back to the match, one of the guys who has more chocolates takes the less populated area of the court to sell chocolates and the other person with less chocolates takes the more populated area. The person who has less chocolates will sell each piece at double the price he bought it for (the price you calculated in part 1) and the person with more chocolates will sell each piece at the price he bought it for initially and multiplied with a factor of 3/2 .
.

1.1 Tasks to do

There are two main tasks to complete:

1. You have to implement this scenario using a function named "chocolatePrice()", which takes two input parameters i.e ali_budget and bashir_budget that returns the price of a single chocolate Bashir and Ali will decide to buy.
2. Your job now, is to write the code which calculates the profit Ali and Bashir will make separately by selling all of their chocolates. You need to write the program named "calculateProfit()", which takes two input parameters i.e ali_budget and bashir_budget. It will calculate the profit that Bashir and Ali made and then return the maximum profit among the two.
    a. If the input parameters are float you have to round it, else everything is "Not Possible".

Note: Built-in and library functions are not allowed.