Write a program to maximize use the grand fund if a teacher wants to buy three different types of lab equipment. Prompt the user to input all three different prices for the three types of equipment, the total amount of grand and the maximum of the remaining unused grand fund. Your output should be the amount of remaining grand and the numbers of each type of equipment the teacher can buy. Since the teacher wants to maximally use the grand, so the purchase arrangement with remaining grand greater than $0.10 will NOT be output. (***Hint: use nested loop, you need to establish the Math model before you start to programing***)

Your input should look like:

Please enter the prices for the three equipments, grand of fund and limit of remaining fund: 9.95 6.75 12.95 2000 0.25

Your output should be comma separated and look like:

0.15, 11, 54, 37

0.21, 23, 15, 32

0.08, 38, 12, 26

……

This means the teacher can have options purchasing plans:

1) Buy 11 pieces of equipment 1, 54 pieces of equipment 2, 37 pieces of equipment 3, and the remaining unused grand fund is $0.15
2) Buy 23 pieces of equipment 1, 15 pieces of equipment 2, 32 pieces of equipment 3, and the remaining unused grand fund is $0.21
3) Buy 38 pieces of equipment 1, 12 pieces of equipment 2, 26 pieces of equipment 3, and the remaining unused grand fund is $0.08
4) …….

In addition, the teacher wants to maintain the three numbers of equipment purchasing in kind of "balanced" way, not differ too much, such as not differ more than 50. This means, for example, although the purchasing plan:

0.18, 8, 64, 27

Or, Buy 8 pieces of equipment 1, 64 pieces of equipment 2, 27 pieces of equipment 3, and the remaining unused grand fund is $0.18.

meet the requirement of maximum use of grand fund, it should **NOT** be output since the difference of the purchasing equipment 1 and equipment 2 differs 56 pieces.