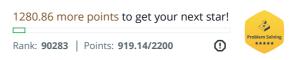






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# Taum and B'day 🖈



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## 公公公公公

Taum is planning to celebrate the birthday of his friend, Diksha. There are two types of gifts that Diksha wants from Taum: one is black and the other is white. To make her happy, Taum has to buy  $m{b}$  black gifts and  $m{w}$  white gifts.

- The cost of each black gift is **bc** units.
- The cost of every white gift is **wc** units.
- The cost of converting each black gift into white gift or vice versa is z units.

Help Taum by deducing the minimum amount he needs to spend on Diksha's gifts.

For example, if Taum wants to buy b=3 black gifts and w=5 white gifts at a cost of bc=3, wc=4 and conversion cost z=1, we see that he can buy a black gift for 3 and convert it to a white gift for 1, making the total cost of each white gift 4. That matches the cost of a white gift, so he can do that or just buy black gifts and white gifts. Either way, the overall cost is 3\*3+5\*4=29.

## **Function Description**

Complete the function taumBday in the editor below. It should return the minimal cost of obtaining the desired gifts.

taumBday has the following parameter(s):

- b: the number of black gifts
- w: the number of white gifts
- bc: the cost of a black gift
- wc: the cost of a white gift
- z: the cost to convert one color gift to the other color

## **Input Format**

The first line will contain an integer t, the number of test cases.

The next **t** pairs of lines are as follows:

- The first line contains the values of integers  $m{b}$  and  $m{w}$ .
- The next line contains the values of integers bc, wc, and z.

#### Constraints

$$1 \le t \le 10$$

$$0 \leq b, w, bc, wc, z \leq 10^9$$

#### **Output Format**



 $m{t}$  lines, each containing an integer: the minimum amount of units Taum needs to spend on gifts.

### Sample Input

5

10 10

1 1 1

5 9

2 3 4

3 6

9 1 1

7 7

4 2 1

3 3

1 9 2

#### **Sample Output**

20

37

12

35 12

# **Explanation**

• Test Case #01:

Since black gifts cost the same as white, there is no benefit to converting the gifts. Taum will have to buy each gift for 1 unit. The cost of buying all gifts will be: b \* bc + w \* wc = 10 \* 1 + 10 \* 1 = 20.

• Test Case #02:

Again, we can't decrease the cost of black or white gifts by converting colors. z is too high. We will buy gifts at their original prices, so the cost of buying all gifts will be: b \* bc + w \* wc = 5 \* 2 + 9 \* 3 = 10 + 27 = 37.

• Test Case #03:

Since bc > wc + z, we will buy b + w = 3 + 6 = 9 white gifts at their original price of 1.b = 3 of the gifts must be black, and the cost per conversion, z = 1. Total cost is 9 \* 1 + 3 \* 1 = 12.

• Test Case #04:

Similarly, we will buy w=7 white gifts at their original price, wc=2. For black gifts, we will first buy white ones and color them to black, so that their cost will be reduced to wc + z = 2 + 1 = 3. So cost of buying all gifts will be: 7 \* 3 + 7 \* 2 = 35.

• Test Case #05: We will buy black gifts at their original price, bc=1. For white gifts, we will first black gifts worth bc=1 unit and color them to white for z=2 units. The cost for white gifts is reduced to wc=bc+z=2+1=3 units. The cost of buying all gifts will be: 3 \* 1 + 3 \* 3 = 3 + 9 = 12.

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- #include <ctype.h> 2
- #include <limits.h>
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