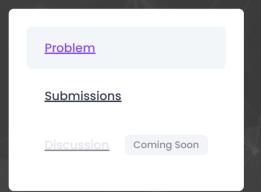


# $\equiv \mathbb{Z}$

## Melih's Chocolates

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Melih has run out of creativity and can only write questions about chocolate. Since Merve loves chocolates, Melih wants to send her **inzva** chocolates.

There are x of red and y of white chocolates. Melih wants to send these chocolates by packing them in a fancy way. Each pack contains either a red chocolates and b white chocolates or a white chocolates and b red chocolates. Any chocolate can belong to at most one pack.

For example, if x=11, y=13, a=5, and b=3, then Melih can make three packs:

In the first set there will be 5 red candies and 3 white candies; In the second set there will be 5 white candies and 3 red candies; In the third set will be 5 white candies and 3 red candies.

Help Melih to find the largest number of chocolate packs he can create.

#### **Input Format**

The first line contains an integer t. Then t test cases follow.

Each test case consists of four integers x, y, a, and b.

#### **Output Format**

For each test case, output one number — maximum number of packs Melih can make.

#### **Constraints**

 $1 \le t \le 10^4$ 

 $1 \leq x,y,a,b \leq 10^9$ 

## Sample Input 1 🔲

3 10 12 2 5

11 13 3 5

9 7 1 1

## Sample Output 1 🔲

3

7

## Sample Input 2 🔲

6336 91 60 1

8485 1419 379 37

5060 2429 4 63

7695 6801 293 86

5127 7968 146 379

8623 2609 467 51 5506 6811 123 138

1812 1501 19 34

6037 5352 381 69

## Sample Output 2 🔲

91 23

111

38

24

21

44 62

24

```
C++ (GCC 9.2.0)
                              Bright 🗸
                                                          Memory Limit (kB): 256000 Time Limit (s):1
   1 #include <bits/stdc++.h>
   2 #include <math.h>
   3 using namespace std;
   6 * int main() {
   7
          int x, y, a, b;
   8
          int q;
          cin >> q;
   9
          for(int i = 0; i < q; i++)
  10
  11 -
              int x, y, a, b;
  12
  13
              cin >> x >> y >> a >> b;
  14
              int cnt = 0;
  15 🔻
              while(x >0 && y > 0){
                  int tmp1, tmp2;
  16
  17
                 tmp1 = max(x, y) - max(a, b);
  18
                 tmp2 = min(x, y) - min(a, b);
  19
                 x = tmp1;
  20
                  y = tmp2;
                  if(x < 0 | | y < 0)
  21
  22
                  break;
  23
                  cnt++;
  24
  25
              cout << cnt << endl;</pre>
  26
  27
          return 0;
  28 }
29
                              Test against custom test case
                                                                                      Submit
    1 Upload File
                                                                        Run Code
                                Accepted
     ✓ <u>Sample Test Case 0</u>
                                Input(stdin)
    ✓ <u>Sample Test Case 1</u>
                                  1 3
                                   2 10 12 2 5
                                   3 11 13 3 5
                                 4 9 7 1 1
                                Output(stdin)
                                   1 3
                                   2 3
3 7
                                   4
                                Expected Output
                                   1 3
                                   2
                                   3 7
```