Apples

For the annual meeting of the Jane Austen book club, you are supposed to buy exactly n apples as a snack. The supermarket sells apples in two packaging sizes: You can buy a apples for c_a Euros, or b apples for c_b Euros. How many of each package should you buy to minimize your cost and get exactly n apples?

Input: The input specifies multiple test cases. Each starts with a line containing n. The second line contains at first the costs c_a and then the number of apples a, the third line contains at first the costs c_b and then the number of apples b. All numbers are integers. The file ends with a line containing 0.

Output: For each test case, print a line. If there is a solution, print the number of packages of the first type that you should by first, then print the number of packages of the second type that you should buy. If no solution exists, output `failed`.

Sample Input:
```
24
4 2
6 2
11
4 2
6 2
```

Sample Output:
```
12 0
failed
```