

## Day 63 coding Statement : Balancing Weight

No play and eating all day makes your belly fat. This happened to Manish during the lockdown. His weight before the lockdown was  $w_1$  kg (measured on the most accurate hospital machine) and after  $M$  months of lockdown, when he measured his weight at home (on a regular scale, which can be inaccurate), he got the result that his weight was  $w_2$  kg ( $w_2 > w_1$ ).

Scientific research in all growing kids shows that their weights increase by a value between  $x_1$  and  $x_2$  kg (inclusive) per month, but not necessarily the same value each month. Manish assumes that he is a growing kid. Tell him whether his home scale could be giving correct results.

### Input

The first line of the input contains a single integer  $T$  denoting the number of test cases. The description of  $T$  test cases follows. The first and only line of each test case contains five space-separated integers  $w_1$ ,  $w_2$ ,  $x_1$ ,  $x_2$  and  $M$ .

### Output

For each test case, print a single line containing the integer 1 if the result shown by the scale can be correct or 0 if it cannot.

### Sample Input 1

```
5
1 2 1 2 2
2 4 1 2 2
4 8 1 2 2
5 8 1 2 2
1 100 1 2 2
```

### Sample Output 1

```
0
1
1
1
0
```

```
import java.util.Scanner;

public class RatanPrajapati_day63 {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        int T = sc.nextInt();
        while (T-- > 0) {
            int w1 = sc.nextInt();
            int w2 = sc.nextInt();
            int x1 = sc.nextInt();
            int x2 = sc.nextInt();
            int M = sc.nextInt();

            x1 *= M;
            x2 *= M;

            int wmin = w1 + x1;
            int wmax = w1 + x2;

            if (w2 >= wmin && w2 <= wmax) {
                System.out.println("1");
            } else {
                System.out.println("0");
            }
        }
    }
}
```