







Jobs



Leaderboard

All Domains > Algorithms > Implementation > Library Fine

# **Library Fine**



Problem

Submissions

Leaderboard

Discussions

Editorial A

Your local library needs your help! Given the expected and actual return dates for a library book, create a program that calculates the fine (if any). The fee structure is as follows:

- 1. If the book is returned on or before the expected return date, no fine will be charged (i.e.: fine = 0).
- 2. If the book is returned after the expected return day but still within the same calendar month and year as the expected return date,  $fine = 15 \text{ Hackos} \times \text{(the number of days late)}.$
- 3. If the book is returned after the expected return month but still within the same calendar year as the expected return date, the  $fine = 500 \text{ Hackos} \times \text{(the number of months late)}$
- 4. If the book is returned after the calendar year in which it was expected, there is a fixed fine of 10000 Hackos.

#### **Input Format**

The first line contains 3 space-separated integers denoting the respective day, month, and year on which the book was actually returned. The second line contains 3 space-separated integers denoting the respective day, month, and year on which the book was expected to be returned (due date).

# **Constraints**

- $1 \le D \le 31$
- $1 \le M \le 12$
- $1 \le Y \le 3000$
- It is guaranteed that the dates will be valid Gregorian calendar dates.

#### **Output Format**

Print a single integer denoting the library fine for the book received as input.

### **Sample Input**

9 6 2015

6 6 2015

# Sample Output

45

## **Explanation**

Given the following return dates:

Actual: 
$$D_a=9, M_a=6, Y_a=2015$$

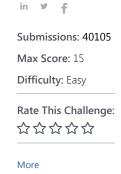
Expected: 
$$D_e=6, M_e=6, Y_e=2015$$

Because  $Y_e \equiv Y_a$ , we know it is less than a year late.

Because  $M_e \equiv M_a$ , we know it's less than a month late.

Because  $D_e < D_a$ , we know that it was returned late (but still within the same month and year).

Per the library's fee structure, we know that our fine will be  $15 \text{ Hackos} \times (\# \text{ days late})$ . We then print the result of  $15 \times (D_a - D_e) = 15 \times (9 - 6) = 45$  as our output.





Join us on IRC at #hackerrank on freenode for hugs or bugs.

Contest Calendar | Blog | Scoring | Environment | FAQ | About Us | Support | Careers | Terms Of Service | Privacy Policy | Request a Feature