

Library Fine



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 Hackos × (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 Hackos × (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**.

Charges are based only on the least precise measure of lateness. For example, whether a book is due January 1, 2017 or December 31, 2017, if it is returned January 1, 2018, that is a year late and the fine would be **10,000 Hackos**.

Function Description

Complete the *libraryFine* function in the editor below. It must return an integer representing the fine due.

libraryFine has the following parameter(s):

- *d1, m1, y1*: returned date day, month and year
- *d2, m2, y2*: due date day, month and year

Input Format

The first line contains **3** space-separated integers, ***d1, m1, y1***, denoting the respective ***day, month,*** and ***year*** on which the book was returned.

The second line contains **3** space-separated integers, ***d2, m2, y2***, denoting the respective ***day, month,*** and ***year*** on which the book was due to be returned.

Constraints

- $1 \leq d1, d2 \leq 31$
- $1 \leq m1, m2 \leq 12$
- $1 \leq y1, y2 \leq 3000$
- 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 dates:

Returned: $d1 = 9, m1 = 6, y1 = 2015$

Due: $d2 = 6, m2 = 6, y2 = 2015$

Because $y2 \equiv y1$, we know it is less than a year late.

Because $m2 \equiv m1$, we know it's less than a month late.

Because $d2 < d1$, 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 $15 \times (d1 - d2) = 15 \times (9 - 6) = 45$ as our output.