

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.

**Example**

***d1, m1, y1*** = 14, 7, 2018  
***d2, m2, y2*** = 5, 7, 2018

The first values are the return date and the second are the due date. The years are the same and the months are the same. The book is 14 − 5 = 9 days late. Return 9 \* 15 = 135.

**Function Description**

Complete the *libraryFine* function in the editor below.

*libraryFine* has the following parameter(s):

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

**Returns**

- *int*: the amount of the fine or 0 if there is none

**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 ≤ *d1, d2* ≤ 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.

### 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.