# 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.: $\textit{fine} = 0$).
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, $\textit{fine} = 15 \text{ Hackos} \times (\text{the number of days late})$.
3. If the book is returned after the expected return *month* but still within the same calendar year as the expected return date, the $\textit{fine} = 500 \text{ Hackos} \times (\text{the number of months late})$.
4. If the book is returned after the calendar *year* in which it was expected, there is a fixed fine of $10000 \text{ Hackos}$.

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 $10,000 \text{ Hackos}$.

**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**

- $1 \leq d1, d2 \leq 31$
- $1 \leq m1, m2 \leq 12$
- $1 \leq y1, y2 \leq 3000$
- $\text{It is guaranteed that the dates will be valid Gregorian calendar dates.}$

**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.