

# Day 26: Nested Logic



## Objective

Today's challenge puts your understanding of nested conditional statements to the test. You already have the knowledge to complete this challenge, but check out the [Tutorial](#) tab for a video on testing!

## Task

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.:  $\text{fine} = 0$ ).
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,  $\text{fine} = 15 \text{ Hackos} \times (\text{the number of days late})$ .
3. If the book is returned after the expected return *month* but still within the same calendar year as the expected return date, the  $\text{fine} = 500 \text{ Hackos} \times (\text{the number of months late})$ .
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

- $1 \leq D \leq 31$
- $1 \leq M \leq 12$
- $1 \leq Y \leq 3000$
- 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 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 Hackos**  $\times$  (**# days late**). We then print the result of **15**  $\times$  ( $D_a - D_e$ ) = **15**  $\times$  (**9** - **6**) = **45** as our output.