

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.