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.: $\boldsymbol{fine} = 0$).
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, $\boldsymbol{fine} = 15 \text{ Hackos} \times (\text{the number of days late})$.
3. If the book is returned after the expected return *month* but still within the same calendar year as the expected return date, the $\boldsymbol{fine} = 500 \text{ Hackos} \times (\text{the number of months late})$.
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 $\boldsymbol{day}$, $\boldsymbol{month}$, and $\boldsymbol{year}$ on which the book was *actually* returned.
The second line contains 3 space-separated integers denoting the respective $\boldsymbol{day}$, $\boldsymbol{month}$, and $\boldsymbol{year}$ on which the book was *expected* to be returned (due date).

Constraints

- $1 \leq D \leq 31$
- $1 \leq M \leq 12$
- $1 \leq Y \leq 3000$
- $\text{It is guaranteed that the dates will be valid Gregorian calendar dates.}$

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 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 $15\ \textbf{Hackos} \times (\#\ \textbf{days late})$. We then print the result of $15 \times (D_a - D_e) = 15 \times (9 - 6) = 45$ as our output.