

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.

Example

$d1, m1, y1 = 12312014$ returned date

$d2, m2, y2 = 112015$ due date

The book is returned on time, so no fine is applied.

$d1, m1, y1 = 112015$ returned date

$d2, m2, y2 = 12312014$ due date

The book is returned in the following year, so the fine is a fixed 10000.

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

STDIN	Function
-----	-----
9 6 2015	day = 9, month = 6, year = 2015 (date returned)
6 6 2015	day = 6, month = 6, year = 2015 (date due)

Sample Output

45

Explanation

Given the following return dates:

Returned: $D_1 = 9, M_1 = 6, Y_1 = 2015$

Due: $D_2 = 6, M_2 = 6, Y_2 = 2015$

Because $Y_2 \equiv Y_1$, it is less than a year late.

Because $M_2 \equiv M_1$, it is less than a month late.

Because $D_2 < D_1$, 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 $15 \times (D_1 - D_2) = 15 \times (9 - 6) = 45$ as our output.