

## Problem J3: Sumac Sequences

### Problem Description

In a sumac sequence,  $t_1, t_2, \dots, t_m$ , each term is an integer greater than or equal 0. Also, each term, starting with the third, is the difference of the preceding two terms (that is,  $t_{n+2} = t_n - t_{n+1}$  for  $n \geq 1$ ). The sequence terminates at  $t_m$  if  $t_{m-1} < t_m$ .

For example, if we have 120 and 71, then the sumac sequence generated is as follows:

120, 71, 49, 22, 27.

This is a sumac sequence of length 5.

### Input Specification

The input will be two positive numbers  $t_1$  and  $t_2$ , with  $0 < t_2 < t_1 < 10000$ .

### Output Specification

The output will be the length of the sumac sequence given by the starting numbers  $t_1$  and  $t_2$ .

### Sample Input

120  
71

### Output for Sample Input

5