Problem B. The Largest Brother

Time limit 1000 ms
Mem limit 262144 kB

Shivam aims to become the biggest person, or at least larger than his brother Chirayu.

At present, Shivam and Chirayu weigh a and b respectively, with Shivam's weight being less than or equal to Chirayu's.

To achieve his goal, Shivam increases his weight thrice each year, while Chirayu's weight doubles each year.

After how many full years will Shivam become strictly larger (strictly heavier) than Chirayu?

Input

The only line of the input contains two integers a and b ($1 \leq a \leq b \leq 10$) — the weight of Shivam and the weight of Chirayu respectively.

Output

Print one integer, denoting the integer number of years after which Shivam will become strictly larger than Chirayu.

Sample 1

Input	Output
4 7	2

Sample 2

Input	Output
4 9	3

Sample 3

Input	Output
1 1	1

Note

In the first sample, Shivam weighs 4 and Chirayu weighs 7 initially. After one year their weights are $4{\cdot}3 = 12$ and $7{\cdot}2 = 14$ respectively (one weight is tripled while the other one is doubled). Shivam isn't larger than Chirayu yet. After the second year weights are 36 and 28, so the first

weight is greater than the second one. Shivam became larger than Chirayu after two years so you should print 2.

In the second sample, Shivam's and Chirayu's weights in next years are: 12 and 18, then 36 and 36, and finally 108 and 72 (after three years). The answer is 3. Remember that Shivam wants to be larger than Chirayu and he won't be satisfied with equal weights.

In the third sample, Shivam becomes larger than Chirayu after the first year. Their weights will be 3 and 2 then.