

Problem 5.4 Livebold's Lapse: A Powerful Predicament (page 1 of 1)

Overview: Print out all the powerful numbers within a range of integers.

Description: Voting machine company Livebold has discovered a security hole in their machines! In 2008, a few nefarious individuals discovered that certain numeric passcodes would allow access to vote counts for districts all across the country. As it turns out, these special numbers, called powerful numbers, all have a certain property.

A powerful number is a positive integer m , such that for every prime number p dividing m , p^2 also divides m . In order to fix this breach, Livebold needs to be able to find all the powerful numbers in a certain range, and they have enlisted you to help. The fate of American democracy lies in your capable hands!

Time Allocation: 1 second

Input: The first line contains an integer a , representing the lower bound of the range. The second line contains an integer b , representing the upper bound of the range.

Output: The output should be a listing of all the powerful numbers between a and b , inclusive. Each powerful number should be on a separate line.

The output is to be formatted exactly like the sample output given below.

Assumptions: a will be an integer between 1 and 100,000, inclusive.
 b will be an integer between a and 100,000, inclusive.
All input will be valid.

Sample Input #1: 30
80

Sample Output #1: 32
36
49
64
72

Sample Input #2: 110
190

Sample Output #2: 121
125
128
144
169