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**34th Annual High School Programming Contest**

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##### April 8, 2022

###### Gold Problem #7: Postage Stamps

Background Information: Suppose you can purchase a total of *n* postage stamps, but can only have them in two distinct integer denominations, *a1* and *a2*. What is the highest postage amount, *h*, such that you can represent every positive integer amount 1 through *h* using a total of at most *n* stamps of denominations *a1* and *a2*? Well, it definitely depends on which values you choose for *a1* and *a2*!

###### Your program will take as input the value *n*, and it will output the highest number *h*, such that the optimal choices for stamp values *a1* and *a2* will produce combinations of at most *n* stamps that add up to all integers on the interval [1, *h*]. You will also output the stamp values *a1* and *a2*, where *a1* < *a2*, which can be used to produce those postage values on the interval [1, *h*].

###### Programming Problem:

Input:  The maximum number of stamps that can be used, *n <= 75*.

Output: The highest number, *h*, such that each total of stamp values [1, *h*] can be produced. The stamp values *a1* and *a2*, both integers are also outputted on the next line.

###### Example 1: Input: 1

######  Output: 2

 1 2

###### Example 2: Input: 3

######  Output:  7

 1 3

###### Example 3: Input: 5

Output: 14

 1 4

###### Example 4: Input: 7

######  Output: 23

######   1 5