

1 - Fibonacci

The fibonacci sequence is a sequence of numbers in which the previous two numbers add to form the next number. The first two elements of the sequence are 0 and 1, generate the first 100 elements of this sequence.

For example, the first 5 elements would be: 0, 1, 1, 2, 3.

2 - Pythagorean primitive triples

Given 3 integers, determine whether or not the 3 integers are a pythagorean triple. A pythagorean triple is a set of 3 numbers in which all of the elements are co-prime (has a highest common factor of 1).

The input is on a single line, with each integer separated by a space.
Output a single integer, 0 if it's not a pythagorean triple and 1 if it is.

For example:

Input:

>2 3 5

Output:

>1

3 - Password!

Oh no! You forgot your password to your safe. Luckily, your safe has no limit to password attempts, and you vaguely remember the digits of your password. The values that you remember are adjacent to the correct value, or could be the correct value itself (e.g. if you remember 2, the correct value can be 1,2,3 or 5).

Given a string of 3 integers separated by a spaces, return an array or list of all the possible combinations(in string format) of passwords, # and * are not included. The keypad used can be found at the bottom right.

For example:

Input:

>1 2 3

The first 3 elements on the array or list may be:

>['1 2 3', '1 2 2', '1 2 6']

