

# **Arithmetic Progressions**

An arithmetic progression is a sequence of the form a, a+b, a+2b, ..., a+nb where n=0, 1, 2, 3, .... For this problem, a is a non-negative integer and b is a positive integer.

Write a program that finds all arithmetic progressions of length n in the set S of bisquares. The set of bisquares is defined as the set of all integers of the form  $p^2 + q^2$  (where p and q are non-negative integers).

TIME LIMIT: 5 secs

**PROGRAM NAME: ariprog** 

### **INPUT FORMAT**

Line 1: $N = N \le 25$ , the length of progressions for which to search	
Line 2: $M$ (1 <= M <= 250), an upper bound to limit the search to the bisquares with 0 <= p,q <	$\equiv$ M.

## **SAMPLE INPUT (file ariprog.in)**

7

#### **OUTPUT FORMAT**

If no sequence is found, a single line reading 'NONE'. Otherwise, output one or more lines, each with two integers: the first element in a found sequence and the difference between consecutive elements in the same sequence. The lines should be ordered with smallest-difference sequences first and smallest starting number within those sequences first.

There will be no more than 10,000 sequences.

## **SAMPLE OUTPUT** (file ariprog.out)

1 4 37 4

2 8

29 8

1 12

5 12

13 12 17 12

5 20

2 24

## Submit a solution:

Choose File No file chosen

Send it in!

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