

All problems that require input will read input from the standard input. If you have any questions please ask.

1. Directionally Confused:

Frank has recently built a robot to clean dirt off of the floor, however, Frank's robot needs to be told which direction to travel in order to get to the dirt. Being Frank's friend you have volunteered to write a program to tell the robot which direction to travel.

Input:

Consists of a grid with an 'r' for the robot's location and a 'd' for the location of the dirt. Clean floor spaces have a '-'. Each grid will be a 5x5 grid and there will be 5 test cases.

Output:

The direction, "LEFT", "RIGHT", "UP" or "DOWN" that the robot must travel to get to the dirt.

Example:

Input:

r----

d----

Output:

DOWN

2. Prime Sum:

The sum of the first 5 prime numbers (2, 3, 5, 7 and 11) is 23. What is the sum of the first 10000 prime numbers?

Input:

None

Output:

The sum of the first 10000 prime numbers.

3. Palindromes:

A palindrome is a word that can be read the same forwards as backwards, a famous example is kayak. Your job is to determine whether or not each of the words provided is a palindrome.

Input:

Each test case will consist of one word. Each test case will be on a separate line and there will be ten test cases.

Output:

"PALINDROME" if the word is a palindrome, otherwise "NOT A PALINDROME".

4. Taxi-Cab Distance:

The Red Taxi cab company has hired you to compute the distance in blocks between two points. That is, how many blocks a cab must go in order to get from the first point to the second point.

Input:

Each test case will consist of a starting coordinate and a finish coordinate in the form "AX,AY BX,BY". Each test case will be on its own line and there will be five test cases.

Output:

"n BLOCKS" Where n is the number of blocks that must be traveled to get from point a to point b.

Example:

Input:

2,3 5,5

Output:

5 BLOCKS

5. Even Fibonacci:

A Fibonacci sequence is a sequence where the sum of the two previous terms determines the next number in the series. That is $F(a) = F(a - 1) + F(a - 2)$. The first ten numbers in the Fibonacci sequence are: 0, 1, 1, 2, 3, 5, 8, 13, 21, 34. Your task is to determine the number of even numbers below $F(79)$.

Input:

None

Output:

The number of even terms in the sequence below the 79th term.