Problem 1: Prime Number (10 points)

(Cyber Security) A number is considered prime if its only divisible by itself and 1. Note that 1 is not prime. Prime numbers are commonly used in many current encryption techniques. So it's very important to be able to identify whether a number is prime or not. Write a program that if given an integer number, will determine if it is prime.

Facts
- You must check the given number to every possible smaller number
- If no smaller factor divides wholly then that number must be prime
- if a smaller factor divides wholly then that number is not prime

Input
The first line will be the number of test cases. Each line afterwards, is a single integer input.

Output
Your program must print boolean result whether the number is prime or not

Sample Input	Sample Output
4 2 17 30 131101	true true false true