

EML3035: Sample Test#2 Problem

Generally, two problems are asked to be solved in a test

Friday Night Prime Time

A prime number is a positive whole number which has exactly two distinct number divisors. In other words, a prime number is only divisible by itself and 1. For example, 2, 3, 5, 7, 11, 13 are prime numbers, note that the number 1 is not a prime number and that 2 is the only even prime number. Using your knowledge of loops (for-end and while-end) and conditional statements write a MATLAB program that determines if any input number is a prime number.

The program inputs are:

- 1) Any number, n . ($n > 0$)

The program outputs are:

- 2) Brief description on whether or not the input number is considered prime.

Test your program from the number, 97, which **is** a prime number.

In a single worksheet, write the following program in MATLAB. Use the *fprintf* and/or *disp* command(s) to display the output(s) and any other relevant details. All variables must be suppressed with a semicolon.

Hint: To check if a number, n is a prime number, divide the number by all positive whole numbers from 1 to n and check the remainder.