**Homework: Math for Developers**

This document defines homework assignments from the [“C# HYPERLINK "http://softuni.bg/courses/csharp-basics/" HYPERLINK "http://softuni.bg/courses/csharp-basics/" HYPERLINK "http://softuni.bg/courses/csharp-basics/" HYPERLINK "http://softuni.bg/courses/csharp-basics/" HYPERLINK "http://softuni.bg/courses/csharp-basics/" HYPERLINK "http://softuni.bg/courses/csharp-basics/" HYPERLINK "http://softuni.bg/courses/csharp-basics/"Basics HYPERLINK "http://softuni.bg/courses/csharp-basics/" HYPERLINK "http://softuni.bg/courses/csharp-basics/" HYPERLINK "http://softuni.bg/courses/csharp-basics/" HYPERLINK "http://softuni.bg/courses/csharp-basics/" HYPERLINK "http://softuni.bg/courses/csharp-basics/" HYPERLINK "http://softuni.bg/courses/csharp-basics/" HYPERLINK "http://softuni.bg/courses/csharp-basics/"“ Course @ Software University](http://softuni.bg/courses/csharp-basics/). Please submit as homework a single **txt/doc/docx** file holding the answers of all below described problems.

* **Some Primes**

Find the 24th, 101st and 251st prime number.

**83 , 541, 1583**

* **Some Fibonacci Primes**

Check if the 24th, 101st and 251st prime numbers are part of the base Fibonacci number set. What is their position?

**False, False, False**

* **Some Factorials**

Find 100!, 171! and 250! Give all digits.

**100! = 93326215443944152681699238856266700490715968264381621468592963895217599993229915608941463976156518286253697920827223758251185210916864000000000000000000000000**

**171! = 1241018070217667823424840524103103992616605577501693185388951803611996075221691752992751978120487585576464959501670387052809889858690710767331242032218484364310473577889968548278290754541561964852153468318044293239598173696899657235903947616152278558180061176365108428800000000000000000000000000000000000000000**

**250! = 3232856260909107732320814552024368470994843717673780666747942427112823747555111209488817915371028199450928507353189432926730931712808990822791030279071281921676527240189264733218041186261006832925365133678939089569935713530175040513178760077247933065402339006164825552248819436572586057399222641254832982204849137721776650641276858807153128978777672951913990844377478702589172973255150283241787320658188482062478582659808848825548800000000000000000000000000000000000000000000000000000000000000**

* **Calculate Hypotenuse**

You are given three right angled triangles. Find the length of their hypotenuses.

* Catheti: 3 and 4 **c = 5**
* Catheti: 10 and 12 **c = 15,620499351813308788259445471518**
* Catheti 100 and 250 **c = 269,25824035672520156253552457702**
* **Numeral System Conversions**

Convert 1234d to binary and hexadecimal numeral systems.

**0000010011010010 , 0x4D2**

Convert 1100101b to decimal and hexadecimal numeral systems.

**101d, 0x65**

Convert ABChex to decimal and binary numeral systems.

**2748d, 0000101010111100**

* **Least Common Multiple**

Find LCM(1234, 3456).

**The LCM of (1234, 3456) is: 2132352**