**Homework: Math for Developers**

**Answers**

1. **Some Primes**

24th prime number is 83

101st prime number is 541

251st prime number is 1583

Източник: <http://primefan.tripod.com/500Primes1.html>

1. **Some Fibonacci Primes**

0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, 233, 377, 610, 987, 1597, 2584 …….

Следователно горните прости числа не са част от редицата на Фибоначи

1. **Some Factorials**

**100! =** 9.332621544 E+157  = 93326215443944152681699238856266700490715968264381621468592963895217599993229915608941463976156518286253697920827223758251185210916864000000000000000000000000

**171! =** 1.24101807 E+309 = 1241018070217667823424840524103103992616605577501693185388951803611996075221691752992751978120487585576464959501670387052809889858690710767331242032218484364310473577889968548278290754541561964852153468318044293239598173696899657235903947616152278558180061176365108428800000000000000000000000000000000000000000

**250! =** 3.23285626 E+492 = 3232856260909107732320814552024368470994843717673780666747942427112823747555111209488817915371028199450928507353189432926730931712808990822791030279071281921676527240189264733218041186261006832925365133678939089569935713530175040513178760077247933065402339006164825552248819436572586057399222641254832982204849137721776650641276858807153128978777672951913990844377478702589172973255150283241787320658188482062478582659808848825548800000000000000000000000000000000000000000000000000000000000000

Източник: http://www.calculatorsoup.com/calculators/discretemathematics/factorials.php

1. **Calculate Hypotenuse**

Според Питагоровата теорема квадрата на хипотенузата е равен на сбора на квадратите на двата катета

При а = 3 и b = 4,

c = 5

При a = 10 и b = 12,

c = 15.62

При a = 100 и b = 250,

c = 269.26

1. **Numeral System Conversions**

1234 d = 00000100 11010010 b =4D2 hex

1100101 b = 101 d = 65 hex

ABC hex = 2748 d = 00001010 10111100 b

1. **Least Common Multiple**

LCM(1234, 3456) = 2 132 352

Източник:

http://stackoverflow.com/questions/13569810/least-common-multiple