

## **FACTORIAL AND THE COMPUTER PROBLEM – P VERSUS NP**

This problem can be solved by using a function that is related to the Riemann Hypothesis, as this same function also deals with prime numbers. It is the simple function of reducing numbers to a single integer by addition.

NP completeness are problems that could not be solved effectively on a computer, whereas P problems are polynomial-time processes with which a computer can deal effectively.

In “Pure Math Theory” we showed that a large group of prime numbers (starting with our count of numbers) when reduced to single integers by addition, produced one of these 6 time integers: 1, 2, 4, 5, 7, or 8, that totaled 27, 3 Cubed. We showed that these time integers were related to an infinite time procedure of the repeating decimals  $1/7$  and  $6/7$  that contained repeating sets of the 6 integers above.

We then showed that by dropping the repeating sets we would have an application of finite time. We called this renormalization, taking infinity out of our calculations. We then found a number of repeating sets of integers in whole numbers that represent infinite time, that we show in “Pure Math Theory.” See [www.puremaththeory.com](http://www.puremaththeory.com) where we also show evolution to be impossible and how biology is related to the structure of the universe. Then, we show the geometry of the Poincare Conjecture, the real solution.

We then show that we have both positive and negative time according to our time illustrations. Negative time is  $1/7$  and positive time is  $6/7$  as both have application to the structure of the universe. When we add infinite repeating sets of  $1/7$  and  $6/7$  together, we have the result of a decimal point and infinite repeating sets of nines to represent infinity. This is true also of  $2/7$  and  $5/7$ , and  $3/7$  and  $4/7$ . Our whole number results of repeating nines represent an infinite process, as our universe was created in a finite time that is infinite in duration.

We will now show how they show up in whole numbers with our application of factorial to prove that P is not equal to NP, giving us a division between finite and infinite time applications.

### FACTORIAL AND OUR RIEMANN HYPOTHESIS APPLICATION

Our Riemann Hypothesis is to reduce numbers to a single integer by addition.

Factorial is the multiplication of our countable numbers:

1 x 2 x 3 x 4 and so on, so that 1 x 2 = 2, then 2 x 3 = 6, then 6 x 4 = 24 and so on.

These are our results applying our Riemann Hypothesis:

Factorial	2	6	24	120	720	5040
Our R. H.	=2	=6	=6	=3	=9	=9
	40320	362880	3628800	39916800	479001600	6227020800
	=9	=9	=9	=9	=9	=9

Our repeating whole integer 9 starts under 5040 showing that some NP problems can go to infinity, whereas P problems are solvable, related to finite time, results under 5040.

Seeing that we only have two basic operations, we can get results from extending our factorial process that produces our infinite repeating nines.

Another one, if you reduce our countable numbers to single integers by addition, we get infinite repeating sets of the integers 1, 2, 3, 4, 5, 6, 7, 8, and 9, where we are extracting the zeroes of the Riemann Hypothesis. In "Pure Math Theory," we show how to produce them.

Problems using factorials can vary depending upon the formation of the problem. However, we can apply our results to the traveling salesman problem.

Thanks,  
Richard A. Eicholtz