## **ON CRAMER'S CONJECTURE**

In 1937 the Swedish mathematician Harald Cramer put forth the hypothesis that there always exists a prime number between X and X  $(InX)^2$ , I respons in this way :

That :

$$\left\{ \begin{array}{l} X \text{ and } X \left( \text{In} X \right)^2 <=> Q \\ Q \subset S_1 \land S_2 \\ S_2 \subset S_3 \land S_4 \\ S_4 <=> \Upsilon \\ \Psi = \underbrace{S_3}{\sqrt{S_4}} \end{array} \right.$$

Or that :

 $\left\{ \begin{array}{l} X \text{ and } X \left( \text{In} X \right)^2 <=> \ Q \\ Q \subset S_1 \wedge S_2 \\ S_1 = 0 \\ S_2 <=> S_3 \end{array} \right.$ 

(where Q, is a serie of whole naturals,  $S_1$  is a certain number of even numbers,  $S_2$  is a certain number of odd numbers,  $S_3$  a certain number of odd numbers that are multiples,  $S_4$  a certain number of odd+ non-multiple numbers,  $\Upsilon$ 

 $\Psi$ , the number of prime numbers from a series of natural given whole numbers)

In this case taking into a account the prime numbers distribution (see theory on the particular distribution of prime numbers) Cramer's conjecture is wrong.