

In page 36 it is stated that "the no of prime nos less than $x = \int_2^x \frac{dt}{\log t} + P(x)$ where the precise order of $P(x)$ has not yet been determined."

The precise order itself is not sufficient to find the value of $P(x)$. Even if it is known that $\frac{P(x)}{\phi(x)} = 1$ when x becomes infinite, $\phi(x)$ being a known function of x , $P(x)$ cannot be supposed to have been found with sufficient accuracy; for example $(x + \frac{x}{\log \log x})/x = 1$ when x become infinite, yet the difference between $x + \frac{x}{\log \log x}$ and x is very great.

From the forms of $P(x)$ given in page 53, viz.

$O\left\{\frac{x}{(\log x)^\Delta}\right\}$, $O(xe^{-a\sqrt{\log x}})$, $O(\sqrt{x})$, &c it appears that from particular numerical values the forms have been guessed.

Even in regular functions it is difficult to have an idea of the form from the numerical values. In such a complicated function as $P(x)$ it is difficult to have an idea even for large values of $\log x$; for example even if we give billion for x , $P(x)$ is very difficult to be found.

I have observed that $P(e^{2\pi x})$ is of such a nature that its value is very small when x lies between 0 and 3 (its value is less than a few hundreds when $x = 3$) and rapidly increases when x is greater than 3.

I have found a function which exactly represents the no. of prime nos less than x , 'exactly' in the sense that the difference between the function and the actual no. of primes is generally 0 or some small finite value even when x becomes infinite.