This paper develops an approach to the generation and evaluation of PRN as well as PRNG quality, uses a comprehensive interpretation of generated PRN, differentiated probabilities $P_{\text{value}_1}$, $P_{\text{value}_2}$, $P_{\text{value}_0}$, ternary coefficients for the erfc error function and the incomplete gamma function igamc. This approach makes it possible to generate and fundamentally evaluate the generally accepted statistical parameters and patterns of FMT, FTBT, TRT, TTLROB, NTMTT, TOTMT for trit PRN and, accordingly, to evaluate the cryptographic security of trit PRNG and their practical ability for various cryptographic applications.