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# UNIFIED INTEGRALS INVOLVING FAMILIES OF GENERALIZED MITTAG–LEFFLER TYPE FUNCTIONS

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**ABSTRACT**

Mittag–Leffler limits are expected to play a fundamental role in wrapping schemes of fragmented differentials and critical conditions related to a wide variety of issues in various fields of mathematics and mathematical truth science. Furthermore, with the exceptional method for managing the acting, the divergence of the actual characteristics can likewise be viewed through the Mittag–Leffler limits. Appropriately, the motivations driving the Mittag–Leffler limits are increasing, especially in proven science. For additional experiences related to new evaluations in the fields of dynamical systems speculation, stochastic plans, non-conformant explicit mechanics and quantum mechanics, readers can propose new work of trained professionals and references therein.Various experts have spread the significance and extraordinary consideration of Mittag Leffler's limits in estimating remarkable abilities to test hypotheses and certain objectives.

## INTRODUCTION

Fractional mathematics is an area of applied science that deals with conflicting sales terms with imprecise partners and fractional integrals. During the recent few different years, various researchers have applied segmented evaluation to all areas of science such as planning and number rearrangement. Researchers have empowered a major commitments in the field of segmented numerical such as the halfway subordinate of explicit and variable orders, the overall appearance scheme of differential conditions; An alternative strategy for arranging the summed differential states of the segmented notation, another type of segmented associative prescription that has a normalized sine limit without a common part.

The proposed technique is to use a Riemann–Liouville (RL) smooth mixture for the major boss for the most part and some other fragmented bosses. Meanwhile, some hypotheses are looked at to show the required combinations, including a social set of positive cutoff points n ($n \in N$) for the proposed split head. To request and show the limitation of the depicted method, we destroy the existing segmented focal bosses with respect to the customary reduction mention. During this, some rare cases come to the fore and new results also come to the fore. The results show that it is easy to estimate the future, all-around adjustment, suitable, and especially the method for managing non-straight differential states of fragmented deals emerging in related fields of science. is accurate in its assessment.

A review was introduced in Newton's time, although more recently, it has attracted the prospect of other specialists due to its baffling nature, known as fragmentary mathematics. For over thirty years, the most attractive cutoff marks in showing and multiplying have been tracked down in the packaging of segmented evaluations. Given the complexities associated with a heterogeneous nature, the possibility of fragmented owners has been mechanized. Inadequate differential pioneers are ready to receive directly of the confused media as they spread the processes. It was seen as an important tool, and could show individual issues much more appropriately and, surprisingly, more decisively with conflicting deals in different circumstances. Mathematics with partial mention is linked to fundamental endeavors and is widely used in various fields like nanotechnology, optics, suffering, chaos hypothesis and so on.

In the proposed model, we used q as disease measure, p as participation level
Ψ considered to be disease controlling check, j as difference in the checks , t was duration of the procedure , n is number of samples collected

$$\lambda_{m,n} = \binom{m}{n}(-1)^{m-n}\Delta^{m-n}\mu_n$$

$$\lim_{m\to\infty}\binom{m}{n}\int_0^1 t^n(1-t)^{m-n}d\alpha(t)=0$$

$$\lim_{m\to\infty}\int_0^1 d\alpha(t)=1$$

$$\lim_{m\to\infty}\binom{m}{n}\int_0^1 t^n(1-t)^{m-n}d\alpha(t)=0$$

$$\lim_{m\to\infty}\int_0^1(1-t)^m d\alpha(t)=\alpha(0+),$$

$$\mu_n=\frac{1}{n+1}=\int_0^1 t^n dt$$

$$\frac{1}{(n+1)^p}=\frac{1}{(p-1)!}\int_0^1 t^n\left[\log\frac{1}{t}\right]^{p-1}dt$$

$$\alpha(t)=\frac{1}{(p-1)!}\int_0^1\left[\log\frac{1}{u}\right]^{p-1}du$$

$$\tau=\rho\mu\rho^{-1}\rho(\mu')^{-1}\rho^{-1}\tau'=\rho\mu(\mu')^{-1}\rho^{-1}\tau'$$

$$\frac{\mu_n}{\mu'_n}=\int_0^1 t^n d\alpha(t)$$

Halfway mates, for a variety of situations, show that these models do a monster job in illustrating the possibility of mathematical issues that are associated with science and progress.

The unusual and the Mittag–Leffler limit are used by some experts to find pieces as new as halfway through, which provides assistance to various investigators, subordinating non-local parts due to the presence of non-singular packages. Advises and helps subordinate to demystify non-direct finding of response to various classes of complex issues.

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Taking in fact the given signal for the design, we frame the significance of the sharp fragmented head and the transitivity diagram, we currently consider, at the turn of events, the Mittag–Leffler limit, which delineates the possibility of weak media Expects an extraordinary thing to do. As such spreading some hypotheses were included in his pieces with Mittag-

Leffler more generally leading the way. Mathematical classifications were seen as a vast tool in the accumulated fields of science and reform, among others; In particular we take up the issue of critical value, the power of direct change, key differential conditions and motivation conditions. Generally the varieties belonging to the central heads use prominent animal techniques and are additionally executed seamlessly in regular and humanistic structures to portray the main problems.

The various utilities of halfway essential controllers forced us to show the speculation using a social phenomenon of n positive cutoff points, including summated fragmented integral primes, another limit in his piece also known as the fantastic limit.

The main argument of this article is that by introducing the Mittag-Leffler limit in our piece we show the documentation of the summarized fragment fundamental of our actually introduced Boss related to another limit. Furthermore, we present the results pushed for a class of innovative positive minimization limits n (n ∈ N) on [υ1, υ2] using the summed halfway fundamental controller .

The idea is exceptionally new and seems to open new gateways of evaluation towards various sensible areas of evaluation including event, fluid parts, underlying science, noise, meteorology, vibration evaluation, natural science, smooth parts and a few more went. The makers contended that fractional critical summing up in the Hilfer sense can on the one hand yield a certain number of confusing issues and on the different hand it can yield a variety of complications, so combining these two ideas gives us an idea of the complexities of the existing Can help explore nature in a surprisingly major way.

$$\frac{1}{(q-p-1)!}\int_0^1\left[\log\frac{1}{t}\right]^{q-p-1}dt=1$$

$$\psi(t)=e^{-t}\,\frac{d^p}{dt^p}\left[e^t\left(1-e^{-t}\right)p\right]$$

$$=\sum_{j=0}^{p}\binom{p}{j}(-1)^{j+p}(j-1)^p e^{-jt}$$

$$\int_0^\infty e^{-nt}d\psi(t)=n(n+1)^p\int_0^\infty e^{-nt}\left[1-e^{-t}\right]^p dt$$

$$=\frac{(n+1)^p p!}{(n+1)(n+2)\ldots(n+p)}$$

$$\lim_{t\to 0+}\frac{d^j}{dt^j}\left[e'\left(1-e^{-t}\right)^p\right]=0$$

Another idea of coordination is presented in this paper known as the summed fractional fundamental principal in the sense of Hilfer which has the Mittag–Leffler limit in the piece. This new solving being surrenders as explicit chances of the integral of the halfway point and the RL-fragmented critical primes. The new settlement is the establishment of the Mittag–Leffler boundary and fractured mixing. New components are introduced and some new approximations are made for the class of N positive constants and decreasing cutoff points over the stretch [η1, η2]. Closed results are hypotheses of results.

In mathematics, limits and symmetric cutoff points are unusually conventional both at the fundamental level and in applications. They have been applied in a variety of fields, including pack speculation, confusion algebra, and logarithmic mathematics, regardless of the pair to choose from. In applied mathematics, differentiable limits are characterized by means of integrals or series (or larger things), which are generally recommended as unusual cutoff points.

One of them is the Mittag–Leffler limit, which was familiar with respect to a system for the sum of some exceptional series. The Mittag–Leffler limit has indeed attracted the attention of scientists because of its wide range of applications in pure and applied mathematics. It has been observed that the significance of the Mittag–Leffler limit has been considered during the latest twenty years in view of its hold in proven science, science, orchestrating, and applied science. The Mittag–Leffler limit is usually a response to broken deals referring to different circumstances or partially fundamental circumstances. Issues in Materials Science and Applied Mathematics combines a striking numerical execution of the Mittag–Leffler limit in normal and transformed structures; Thus, it remains an attractive object of applied research. Executions of Mittag–Leffler limits are common in a variety of issues in materials science and mathematics. Sincerely to their main point, various evaluation functions revolve around them, and various illustrations and hypotheses of Mittag–Leffler limits can be found in the design. Among the most notable unreliable restrictions of segmented evaluation is the most complex pψq limit and p = 0, q = 1, as far as possible or called the Bessel–Maitland limit or Wright–Bessel limit. Starting from here, the Mittag–Leffler limit, which can be expressed in terms of the Fox–Wright breaking point limit, is a notable constraint of segmented mathematics. Similarly, the Mittag–Leffler limit is known as the furthest limit of segmented estimation. The results obtained in the required duplicate, related to the abbreviated Mittag=-Leffler limits, will be used to oversee various issues of segmented mathematics, for example, Riemann--Liouville halfway integrals and subordinates, Laplace and Sumudu segmented and principal partners and the Marichev-Sago-Maeda segmented integral and partner, etc.

More recently, half-math evaluation for explicit remarkable cutoff points has become an important tool for applications in many areas, for example, confirmation systems, biomedicine, nonlinear electronic circuits, jumble based cryptography and picture encryption. Planning opportunities can be clearly illustrated by partial deals differential conditions (FODE), in non-shutdown by viscoelastic material models, electrical parts, electronic circuits, scattering waves, flexible continuum, hydro-thinking systems, seismic shaking causes waves. Strong fields for non-linear turns of events, models of world economies, segmented viscoelastic models and permanent flight itineraries and states.

$$f(t) = L^{-1}\{F(s)\} = \frac{1}{2\pi i}\lim_{T\to\infty}\int_{\gamma-iT}^{\gamma+iT} e^{st}F(s)ds,$$

$$f(t) = L^{-1}\{F(s)\} = \frac{1}{2\pi i}\lim_{T\to\infty}\int_{\gamma-iT}^{\gamma+iT} e^{st}F(s)ds,$$

$$\lim_{R\to\infty}\int_0^R f(t)e^{-ts}dt$$

$$\int_0^R f(t)e^{-ts} \mid dt$$

$$F(s) = (s - s_0)\int_0^\infty e^{-(s-s0)t}\beta(t)dt, \beta(u) = \int_0^u e^{-s0t}f(t)dt.$$

We have selected various new results including fundamental transformations of the Mittag–Leffler limit and characterized three structures as the tremendous strangeness of our work. This paper is not entirely permanent and belongs to the generalist and is inclined to find clear applications in the speculation of extraordinary cutoff marks. Furthermore, the results give an integration and development of previously reported results by different observers. We consider possible effects of numerically evaluated integrals with center integrals using the Gaussian quadrature recipe. We argue that the obtained results will provide a fundamental step in the speculation of primeval recipes and may yield some potential applications in the field of old-fashioned and applied mathematics.

This makes it valid to focus on that the concise Mittag–Leffler limit obtained and managed central conditions are attractive for additional hypotheses and future evaluation. We have attempted to exploit the close relationship of the summarized Mittag–Leffler limits with some essential outstanding cutoff points and to record the integral of the limits suggested above in the form of the summarized Mittag–Leffler, which is a set of critical cutoff points between different social groups. narrates the events.

We conclude our evaluation by remarking that the results presented in this article are new and largely new for the class of Mittag–Leffler limits. By choosing different possible increments of endpoints, we can omit some sub-results from our significant results. Further evaluation will focus on the key applications and opportunities of these results for various examinations.

## CONCLUSION

Hilfer, Hilfer–Hadmard, Riemann–Lieuville, Hadmard, Weil and Liouville integrals of explicit halfway points as explicit cases for new fragmented critical latent concordances. A really general arrangement will be used to deal with two or three of the situations in the Darcy scale illustration section. Finally, we can derive clever schemes, including the process of moderate approximation, for some discrete-variance situations by the proposed study. This new strategy will open up new avenues of valuation towards fragmented and fragmented parts.

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