

Some parameterized quantum Simpson's and quantum Newton's integral inequalities via quantum differentiable convex mappings

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Abstract

In this work, two generalized quantum integral identities are proved by using some parameters. By utilizing these equalities we present several parameterized quantum inequalities for convex mappings. These quantum inequalities generalize many of the important inequalities that exist in the literature, such as quantum trapezoid inequalities, quantum Simpson's inequalities and quantum Newton's inequalities. We also give some new midpoint type inequalities as special cases. The results in this work naturally generalize the results for the Riemann integral.

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