

Additive and Quantum Derivatives

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Question 1 - Quantum Derivative Properties

Prove each of the following analogous properties for quantum derivatives:

- a) Power rule: $D_q(x^n)$
- b) Product rule: $D_q(f(x)g(x))$
- c) Exponential rule: $D_q(e^x)$
- d) Chain rule: $D_q(f(g(x)))$