

The Jackson integral is

$$\int_0^a f(t) d_q t = a(1-q) \sum_{n=0}^{\infty} f(aq^n) q^n$$

where at 0. These are Riemann sums for $f(t)$ corresponding to the partition of the interval of integration by points of the geometric progression aq^n .
~~Then~~ If f is a holomorphic function then, in the limit as $q \rightarrow 1$ with $0 < q < 1$, the Jackson integral converges to the usual integral over $[0, a]$.
Define

$$(D_q f)(x) = \frac{f(qx) - f(x)}{(q-1)x}$$

If $D_q F = f$ and F is continuous at 0 then

$$\int_0^a f(t) d_q t = F(a) - F(0) \text{ and } D_q \int_0^x f(t) d_q t = f(x)$$

The product rule for D_q is

$$D_q(f(x)g(x)) = g(x)D_q f(x) + f(qx)D_q(g(x))$$

How to prepare a talk

- ① Timing
- ② Audience

Script what will be written on the board.

- (a) Talking without writing loses the audience.
- (b) What's on the board must suffice for catching back up after a space out.

Tighten/tighten/tighten. (cut/cut/cut)

Rewrite the pages over and over, each a bit tighter and more practiced than the previous iteration.

Format Good spacing. The board must "look good from a distance".

Good, deep content, interesting and informative.

One main point, all roads lead to the center city square.