

Reordering exponentials

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$[x, y] = \frac{B-A}{h}$ $Ax = qxA$ $[x, A] = (q-1)Ax$

$y \xrightarrow{h^{-1}} B$
 $\xrightarrow{-h} A$

$e^{mu x} (y) = y + (B) \frac{1}{\mu(q-1)x} A (e^{\mu(q-1)x} - 1)$

$e^{mu x} y = y e^{mu x} + (B) - A \frac{1}{\mu(q-1)x} (e^{\mu(q-1)x} - 1) e^{mu x}$

$e^{mu x} (y) = y + (B) + AF(\beta, x)$

Question: Rewrite $e^{mu x} e^{nu y}$ as $e^{nu y} \cdot f(\mu, \nu, x, y, A, B)$
 (this means $e^{mu x} e^{nu y} = e^{nu y} f e^{mu x}$, which is what we seek)

Question: Compute

$$\sum \frac{\nu^m}{m!} (y + (B) + F(\beta, x))^m$$