

Bi-local exponentiation

July 27, 2016 3:14 PM

Under $[u, w] = b$

$$e^{\alpha u + \beta w + \gamma uv} // M^{wu} = e^{\beta w} \left(\sum_{k=0}^{\infty} \frac{\gamma^k}{k!} w^k u^k \right) e^{\alpha u}$$

I first need to understand the middle term,

$$M := \sum_{k=0}^{\infty} \frac{\gamma^k}{k!} w^k u^k$$

$$\text{Let } M_1 = wM$$

$$M_2 = \sum_{k=0}^{\infty} \frac{\gamma^k}{k!} w^k \cdot w \cdot u^k$$

$$M_3 = M_w$$

Then $M_1 = M_2$ while

$$M_2 = M_3 \pm$$