Pushforward of Distributions

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Goal: $\Phi_* Z$, where

$Z = W e^{L+Q+P}$ with....

$$\Phi[\eta_1 + \eta_2 e^{-\gamma\alpha_1} \to \eta, \dots\dots, -\eta_2 \xi_1 \to \tau][W e^{L+Q+P}]$$

$\Phi_*(\partial_x) = \partial_x + y\partial_z$

$\Phi_*(\partial_y) = \partial_y + x\partial_z$

$\Phi_*(\partial_x^3 \partial_y^3) = (\partial_x + y\partial_z)^3 (\partial_y + x\partial_z)^3$

$[\partial_x, x\partial_z] = \partial_z$

$[\partial_x + y\partial_z, \partial_y + x\partial_z] = 0$

$e^{\partial_x} e^{y\partial_z} e^{\partial_y} e^{x\partial_z} =$

Pushforward thm, V1.

$Z = \exp \sum a_{ij} \partial_{x_i} \partial_{x_j}$ $\Phi : \mathbb{R}^n_{x_i} \to \mathbb{R}^m_{y_j} \times \mathbb{R}_t$ by $y_j = \sum c_{ji} x_i$

and $t = \sum b_{ij} x_i x_j$

Then $\Phi_* Z =$