

# $\Gamma$ , $\lambda$

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$$E_l(\lambda; \omega) := \exp(l\lambda) \exp(i\omega) \quad E_s(\lambda, \omega) = l(e^\lambda) e^{i\omega}$$

$$E_l(\lambda; \omega) = E_s(\Gamma(\lambda); \omega)$$

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$$E_l(\lambda) := e^{l(\lambda)}$$

$$E_l(\lambda) = E_s(\Gamma(\lambda))$$

$\lambda, \Gamma$   
are

$$E_s(\lambda) := l(e^\lambda)$$

$$E_s(\lambda) = E_l(\Gamma(\lambda))$$

non-linear  $\downarrow$

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$$\frac{d}{dt} E_s(t\lambda) = l\left(\frac{d}{dt} e^{t\lambda}\right) = l(\lambda e^{t\lambda})$$

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$$\frac{d}{dt} E_l(\Gamma(t\lambda)) = \frac{d}{dt} e^{l(\Gamma(t\lambda))} =$$

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$$\begin{aligned} \frac{d}{dt} E_l(t\lambda) &= \frac{d}{dt} e^{t l(\lambda)} = l(\lambda) e^{t l(\lambda)} = l(\lambda) E_s(\Gamma(t\lambda)) \\ &= l(\lambda) l(e^{\Gamma(t\lambda)}) \end{aligned}$$

$$\frac{d}{dt} E_s(\Gamma(t\lambda)) = l\left(\frac{d}{dt} e^{\Gamma(t\lambda)}\right)$$