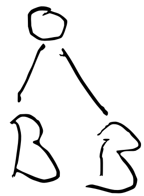
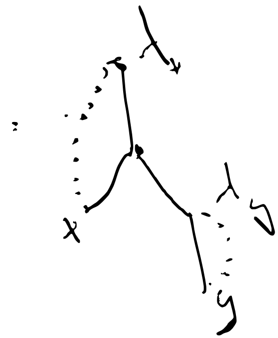
$L = aL \mid bL \mid \varepsilon \iff \mathcal{L} = (a+b)\cdot\mathcal{L} + \varepsilon$

$B = \square +$  $\iff$ binary tree

linear lambda term:



$\iff \lambda_x(x.(\lambda_y\, y))$

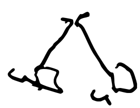
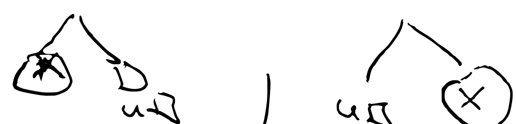
$L =$ 

linear terms fx

$u\Box \simeq \bullet$	x.
	$x . y$
	$\lambda_x . x$.

$$L = u\Box + \circ L^2 + \triangle \partial_u L .$$ ⇐ describs linear lambda terms

$=$

∂_u () $=$ {  }

$$\begin{cases} L_0 = 0 \\ L_{n+1}(z,u) = uz + z \cdot L_n^2(z,u) + z\,\partial_u L_n(z,u) \end{cases}$$

$$L(z,u) = \sum a_{n,k} \cdot u^k \cdot z^n$$

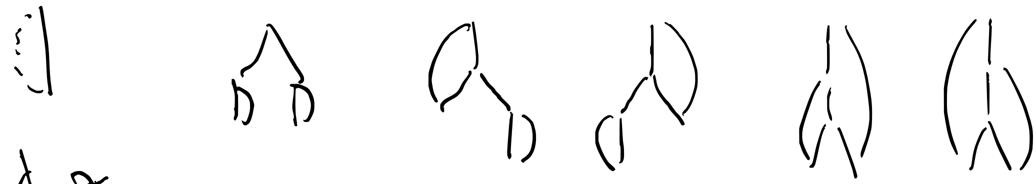
$a_{n,k}$ = # linear lambda terms of size n and with k free vars.

$$L(z,u) = uz + z^2 + \cdots$$

$L(z,0)$ = generating function for closed linear lambda terms.

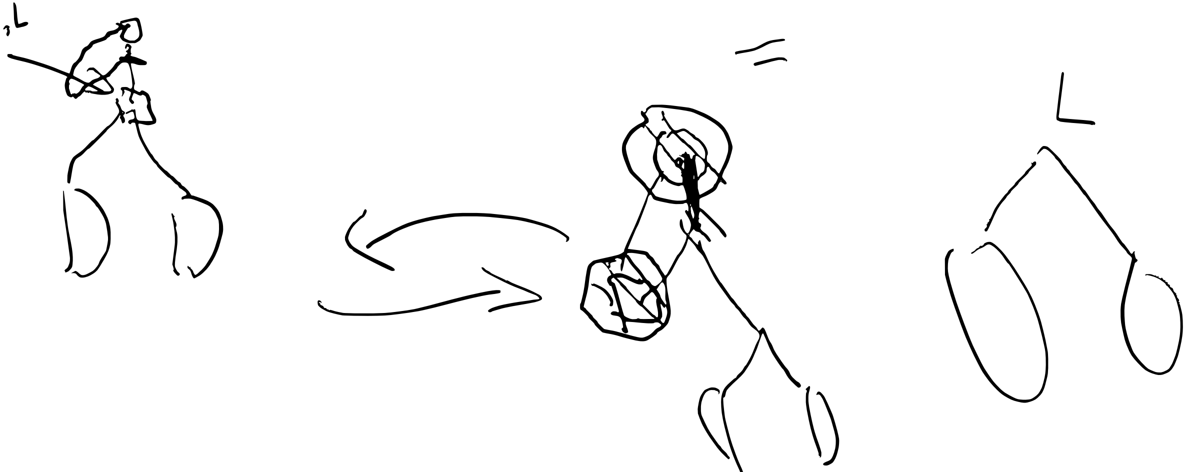
$L(z,0)$ follows also an algebraically differential equation.

$$L(z,0) = z^2 + 5z^5 + 60z^8 + \dots$$



$\lambda_p \alpha$

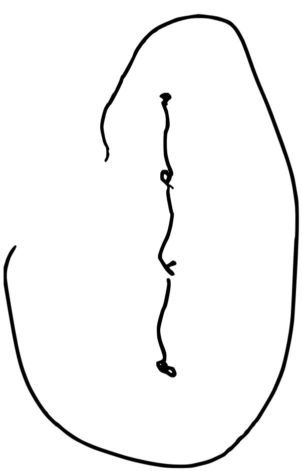
selected L



$$L(z,0) = z^2 + zL^2 + \{z \cdot z^2 \cdot \;\; \partial_z L$$

$$\boxed{L = z^2 + zL^2 + 2z^4\, \partial_z L}$$

$$\boxed{L(z) = z_0^2 + z\, L(z)^2 + 2 z_0^4 \partial_z L(z)}$$



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