Lambda Calculus Week6

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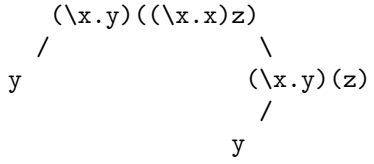
November 7, 2018

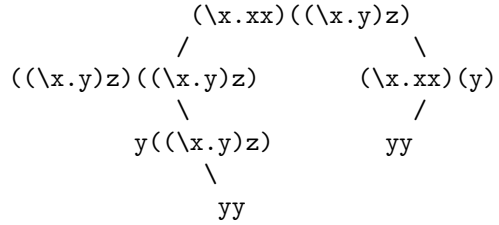
1 Do the exercises in items 3 to 8 of Lecture 8

3 • Why? Because N has a 0-step to N again on the left.

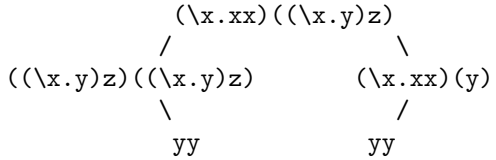
a $(\lambda x.y)((\lambda x.x)z)$



b $(\lambda x.xx)((\lambda x.y)z)$



4 $(\lambda x.y)((\lambda x.x)z)$



5 This has no Exercise written.

6 I'm lost.

7 1 I am having trouble thinking up examples, but rule 1 would be when you have a completed term on one side and the other side needs one more step, you would carry the other side one more time as a 0-step

2 Example is above from 4

3 I don't know what 3 means

4 I don't know what 4 means

8 Without examples in 7 I cannot continue 8...

2 Sel2013 Exercises 13, 17

13 Give a detailed proof that property (c) from Section 4.3 implies property (a).
I do not know how to say this but
Property a is 0 or more steps where as property c is 1 step.
But if you have at least the one step in a then c is a and a is c?

17 What changes have to be made to Section 4.4 to get a proof of the Church-Rosser Theorem for $\rightarrow \beta$, instead of $\rightarrow \beta\eta$?
Allow for multiple steps in one?