F14-Exercise

Course in Semantics · Ling 531 / 731

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1 Abstract functions

1. Complete the following applications/β-reductions, until you run out of arguments.

1. [$\lambda f \in D_{\langle e,t \rangle}$. f(x)](Q) =
2. [$\lambda g \in D_{\langle e,t \rangle}$. g(x)](Q) =
3. [$\lambda f \in D_{\langle e,t \rangle}.\lambda x \in D_e$. g(x)](Q) =
4. [$\lambda f \in D_{\langle e,t \rangle}.\lambda x \in D_e$. g(x)](Q)(x) =
5. [$\lambda f \in D_{\langle e,t \rangle}.\lambda x \in D_e$. g(x)](x)(Q) = (watch out!)
6. [$\lambda f \in D_{\langle e,t \rangle}.\lambda x \in D_e$. g(f(x))](A)(b) =

2 Similar but with natural language

1. [$\lambda f \in D_{\langle e,t \rangle}$. f(y)]($\lambda x \in D_e$. cat(x)) =
2. [$\lambda f \in D_{\langle e,t \rangle}$. f(x)]($\lambda y \in D_e$. happy(y)) =
3. [$\lambda f \in D_{\langle e,t \rangle}$. f(Marie)]($\lambda x \in D_e$. happy(x)) =
4. [$\lambda g \in D_{\langle e,t \rangle}.\lambda x \in D_e$. g(x)]($[\![$ *broad* $]\!]$)(the Mississippi River) =
5. [$\lambda f \in D_{\langle e,t \rangle}.\lambda x \in D_e$. Q(f(x))]($\lambda y \in D_e$. Greek(y))(Apollo) =