Test Cases for Lambda Calculus Simulator

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1 ?- [lambda].
true.

2 ?- test0.
--> (Lx.x p)
--> p
true .

3 ?- test1.
--> Lx.((p q) x)
--> (p q)
true .

4 ?- test2.
--> ((Lx.Ly.(x y) m) n)
--> (Ly.(m y) n)
--> (m n)
true .

5 ?- test3.
--> ((Lx.Ly.(x y) (Lx.x p)) Lx.(t x))
--> (Ly.((Lx.x p) y) Lx.(t x))
--> ((Lx.x p) Lx.(t x))
--> (p Lx.(t x))
--> (p t)
true .
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6 ?- test4.
--> (Lm.((m Lx.Ly.x) dummy) Lc.Ln.((c tom) ((c ding) ((c hari) n))))
--> ((Lc.Ln.((c tom) ((c ding) ((c hari) n))) Lx.Ly.x) dummy)
--> (Ln.((Lx.Ly.x tom) ((Lx.Ly.x ding) ((Lx.Ly.x hari) n))) dummy)
--> ((Lx.Ly.x tom) ((Lx.Ly.x ding) ((Lx.Ly.x hari) dummy)))
--> (Ly.tom ((Lx.Ly.x ding) ((Lx.Ly.x hari) dummy)))
--> tom
true .

7 ?- test5.
--> ((Ln1.Ln2.Lf.(n1 (n2 f)) Lf.Lx.(f (f x))) Lf.Lx.(f (f (f (f (f x))))))
--> (Ln2.Lf.(Lf.Lx.(f (f x)) (n2 f)) Lf.Lx.(f (f (f (f (f x))))))
--> Lf.(Lf.Lx.(f (f x)) (Lf.Lx.(f (f (f (f (f x))))) f))
--> Lf.Lx.((Lf.Lx.(f (f (f (f (f x))))) f) ((Lf.Lx.(f (f (f (f (f x))))) f) x))
--> Lf.Lx.(Lx.(f (f (f (f (f x))))) ((Lf.Lx.(f (f (f (f (f x))))) f) x))
--> Lf.Lx.(f (f (f (f (f ((Lf.Lx.(f (f (f (f (f x))))) f) x))))))
--> Lf.Lx.(f (f (f (f (f (Lx.(f (f (f (f (f x))))) x))))))
--> Lf.Lx.(f (f (f (f (f (f (f (f (f (f x)))))))))))
true .
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