

Consequence A1. Already demonstrated (by George) $1 = A\#B, (A,B)\#1, (A\#1, B\#1)\#1$

A2. Demonstration:

$A\#B$	$= A\#B, 1\#1$	Axiom 2: $x \# x = 0$
	$= A\#B, (A\#B, (A,B)\#1, (A\#1, B\#1)\#1)\#1$	By A1 above
	$= A\#B, ((A,B)\#1, (A\#1, B\#1)\#1)\#1$	Axiom 3
	$= (A, ((A,B)\#1, (A\#1, B\#1)\#1)\#1)\#B, ((A,B)\#1, (A\#1, B\#1)\#1)\#1$	Axiom 3
	$= (A, ((B)\#1, (1, B\#1)\#1)\#1)\#B, ((A,B)\#1, (A\#1, B\#1)\#1)\#1$	Axiom 3
	$= (A, B)\#B, ((A,B)\#1, (A\#1, B\#1)\#1)\#1$	Axiom 1, Axiom 2 (twice)
	$= B\#(A,B), ((A,B)\#1, (A\#1, B\#1)\#1)\#1$	Implicit assumption that # commutes
	$= (B, ((A,B)\#1, (A\#1, B\#1)\#1)\#1)\#(A,B), ((A,B)\#1, (A\#1, B\#1)\#1)\#1$	Axiom 3
	$= (B, ((A)\#1, (A\#1, 1)\#1)\#1)\#(A,B), ((A,B)\#1, (A\#1, B\#1)\#1)\#1$	Axiom 3
	$= (B, A)\#(A,B), ((A,B)\#1, (A\#1, B\#1)\#1)\#1$	Axiom 1, Axiom 2 (twice)
	$= (A,B)\#(A,B), ((A,B)\#1, (A\#1, B\#1)\#1)\#1$	Implicit Assumption that # commutes
	$= 0, ((A,B)\#1, (A\#1, B\#1)\#1)\#1$	Axiom 2.
	$= ((A,B)\#1, (A\#1, B\#1)\#1)\#1$	$0, X = X.$

Demonstration Complete.

Same Demonstration – Using Hybrid Notation

(Note, this hybrid notation is completely un-sanctioned by LoF, MFL, etc. but makes it infinitely easier for a human who is already familiar with Laws of Form to follow)

Consequence A1. Already demonstrated (by George) $\top = A\#B \overline{AB} \overline{A\overline{B}}$

A2. Demonstration: $A\#B = \overline{AB} \overline{A\overline{B}}$

$A\#B = A\#B \top$	Axiom 2 ($x \# x = 0$)
$= A\#B \overline{A\#B \overline{AB} \overline{A\overline{B}}}$	A1 above
$= A\#B \overline{AB} \overline{A\overline{B}}$	Axiom 3
$= (\overline{AB} \overline{A\overline{B}}) \# B \overline{AB} \overline{A\overline{B}}$	Axiom 3
$= (\overline{B} \overline{\overline{B}}) \# B \overline{AB} \overline{A\overline{B}}$	Axiom 3 (several times)
$= (\overline{B} \overline{\top}) \# B \overline{AB} \overline{A\overline{B}}$	Axiom 1 ($X, 1 = 1$)
$= (B A)\#B \overline{AB} \overline{A\overline{B}}$	Axiom 2 (twice)
$= B\#(B A) \overline{AB} \overline{A\overline{B}}$	$X\#Y = Y\#X$
$= (\overline{AB} \overline{A\overline{B}}) \# (B A) \overline{AB} \overline{A\overline{B}}$	Axiom 3
$= (\overline{A} \overline{A\overline{\top}}) \# (B A) \overline{AB} \overline{A\overline{B}}$	Axiom 3 (several times)
$= (\overline{A} \overline{\top}) \# (B A) \overline{AB} \overline{A\overline{B}}$	Axiom 1 ($X, 1 = 1$)
$= (A B)\#(B A) \overline{AB} \overline{A\overline{B}}$	Axiom 2 (twice)
$= (A B)\#(A B) \overline{AB} \overline{A\overline{B}}$	$X, Y = Y, X$
$= \overline{AB} \overline{A\overline{B}}$	Axiom 2 ($x \# x = 0$)

Demonstration Complete.