Demonstration of Tests of Conversion of PM Dot Notation to Parentheses

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SECTION 0. VERIFICATION TESTS (of dot to paren dot icn)
For each proposition is given:
1: the PM notation with dots.
2: the notation with parentheses
3: the Polish (with Lukasiewicz symbols) notation

$\ast 2{\cdot}06 \vdash \therefore p \supset q \,.\, \supset : q \supset r \,.\, \supset \,.\, p \supset r$
$\ast 3{\cdot}47 \vdash \therefore p \supset r \,.\, q \supset s \,.\, \supset : p \,.\, q \,.\, \supset \,.\, r \,.\, s$
$\ast 4{\cdot}22 \vdash : p \equiv q \,.\, q \equiv r \,.\, \supset \,.\, p \equiv r$
$\ast 4{\cdot}41 \vdash \therefore p \,.\, \vee \,.\, q \,.\, r : \equiv \,.\, p \vee q \,.\, p \vee r$
$\ast 4{\cdot}43 \vdash \therefore p \,.\, \equiv : p \vee q \,.\, p \vee \sim q$
$\ast 4{\cdot}44 \vdash \therefore p \,.\, \equiv : p \,.\, \vee \,.\, p \,.\, q$
$\ast 4{\cdot}87 \vdash \therefore p \,.\, q \,.\, \supset \,.\, r : \equiv : p \,.\, \supset \,.\, q \supset r : \equiv : q \,.\, \supset \,.\, p \supset r : \equiv : q \,.\, p \,.\, \supset \,.\, r$
$\ast 4{\cdot}88 \vdash \therefore p \,.\, q \,.\, \supset \,.\, r \,.\, \equiv : p \,.\, \supset \,.\, q \supset r : \equiv : q \,.\, \supset \,.\, p \supset r : \equiv : q \,.\, p \,.\, \supset \,.\, r$
$\ast 5{\cdot}33 \vdash \therefore p \,.\, q \supset r \,.\, \equiv : p : p \,.\, q \,.\, \supset \,.\, r$
From Landon D. C. Elkind's Paper in Russell: Vol. 43, no. 1, page 44
$\ast 431{\cdot}441 \vdash \,.\, p \vee q \,.\, \equiv \,.\, r \supset s$
$\ast 431{\cdot}442 \vdash : p \,.\, \vee \,.\, q \equiv r : \supset : s$
$\ast 431{\cdot}443 \vdash : p \vee q \,.\, \equiv \,.\, r : \supset : s$
$\ast 431{\cdot}444 \vdash : p : \vee : q \equiv r \,.\, \supset \,.\, s$
$\ast 431{\cdot}445 \vdash : p : \vee : q \,.\, \equiv \,.\, r \supset s$
From same, page 54
$\ast 431{\cdot}54 \vdash : p \,.\, q : r \,.\, s : \supset : p \,.\, s : r \,.\, q$
check longer prop name
Propositions involving quantifiers
$\ast 9{\cdot}2 \vdash : (x) \,.\, psix \,.\, \supset \,.\, psiy$
$\ast 9{\cdot}21 \vdash \therefore (x) \,.\, psix \supset phix \,.\, \supset : (x) \,.\, psix \,.\, \supset \,.\, (x) \,.\, phix$
$\ast 9{\cdot}22 \vdash \therefore (x) \,.\, psix \supset phix \,.\, \supset : (\exists x) \,.\, psix \,.\, \supset \,.\, (\exists x) \,.\, phix$
$\ast 9{\cdot}31 \vdash \therefore (\exists x) \,.\, phix \,.\, \vee \,.\, (\exists x) \,.\, phix : \supset \,.\, (\exists x) \,.\, phix$
$\ast 9{\cdot}401 \vdash :: p : \vee : q \,.\, \vee \,.\, (\exists x) \,.\, psix \therefore \supset \therefore q : \vee : p \,.\, \vee \,.\, (\exists x) \,.\, psix$
$\ast 10{\cdot}35 \vdash \therefore (\exists x) \,.\, p \,.\, psix \,.\, \equiv : p : (\exists x) \,.\, psix$

$*11{\cdot}2 \vdash : (x,y) \,.\, phi[x,y] \,.\equiv.\, (y,x) \,.\, phi[x,y]$
One Step in proof of 11.55 I wanted example of 2 adjacent quantifiers - hard to find.
$*11{\cdot}551 \vdash :. (x) :. (\exists y) \,.\, psix \,.\, phi[x,y] \,.\equiv: psix : (\exists y) \,.\, phi[x,y]$
From same, page 46
$*431{\cdot}46 \vdash : (x) \,.\, psix \,.\, phix \,.\supset.\, (x) \,.\, psix$
Other Tests
$*99{\cdot}99 \vdash :. \sim(\exists x) : \sim psix \,.\supset.\, (x) \,.\, \sim psix$