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 prospoition is given:
1: the PM notation with dots.
2: the notation with parentheses
3: the Polish (with Lukasiewicz symbols) notation

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$\ast 2{\cdot}06 \vdash :.\, p \supset q \,.\supset:\, q \supset r \,.\supset.\, p \supset r$
$\ast 3{\cdot}47 \vdash :.\, p \supset r \,.\, q \supset s \,.\supset:\, p \,.\, q \,.\supset.\, r \,.\, s$
$\ast 4{\cdot}22 \vdash :\, p \equiv q \,.\, q \equiv r \,.\supset.\, p \equiv r$
$\ast 4{\cdot}41 \vdash :.\, p \,.\vee.\, q \,.\, r :\equiv.\, p \vee q \,.\, p \vee r$
$\ast 4{\cdot}43 \vdash :.\, p \,.\equiv:\, p \vee q \,.\, p \vee \sim q$
$\ast 4{\cdot}44 \vdash :.\, p \,.\equiv:\, p \,.\vee.\, p \,.\, q$
$\ast 4{\cdot}87 \vdash :.\, p \,.\, q \,.\supset.\, r :\equiv:\, p \,.\supset.\, q \supset r :\equiv:\, q \,.\supset.\, p \supset r :\equiv:\, q \,.\, p \,.\supset.\, r$
$\ast 4{\cdot}88 \vdash :.\, p \,.\, q \,.\supset.\, r \,.\equiv:\, p \,.\supset.\, q \supset r :\equiv:\, q \,.\supset.\, p \supset r :\equiv:\, q \,.\, p \,.\supset.\, r$
$\ast 5{\cdot}33 \vdash :.\, p \,.\, q \supset r \,.\equiv:\, p : p \,.\, q \,.\supset.\, r$
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
$\ast 9{\cdot}2 \vdash :\, (x) \,.\, psix \,.\supset.\, psiy$
$\ast 9{\cdot}21 \vdash :.\, (x) \,.\, psix \supset phix \,.\supset:\, (x) \,.\, psix \,.\supset.\, (x) \,.\, phix$
$\ast 9{\cdot}22 \vdash :.\, (x) \,.\, psix \supset phix \,.\supset:\, (\exists x) \,.\, psix \,.\supset.\, (\exists x) \,.\, phix$
$\ast 9{\cdot}31 \vdash :.\, (\exists x) \,.\, phix \,.\vee.\, (\exists x) \,.\, phix :\supset.\, (\exists x) \,.\, phix$

$*9{\cdot}401 \vdash :: p : \vee : q \,.\, \vee \,.\, (\exists x) \,.\, psix :. \supset :. q : \vee : p \,.\, \vee \,.\, (\exists x) \,.\, psix$
$*10{\cdot}35 \vdash :. (\exists x) \,.\, p \,.\, psix \,.\, \equiv : p : (\exists x) \,.\, psix$
$*11{\cdot}2 \vdash : (x, y) \,.\, phi[x, y] \,.\, \equiv \,.\, (y, x) \,.\, phi[x, y]$
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
$*99{\cdot}99 \vdash :. \sim (\exists x) : \sim psix \,.\, \supset \,.\, (x) \,.\, \sim psix$