

t11_qc_lang3 (TMLPgyqPMpgGgqXGguLx- AiNhLbknDGXnqgV)

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Let $m1_qc_lang1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_qc_lang1 : \iota \Rightarrow \iota$ be given. Let $v5_qc_lang1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k24_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_qc_lang1 : \iota \Rightarrow \iota$ be given. Let $k22_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarSKI : \iota \Rightarrow \iota$ be given. Let $k21_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12_qc_lang1 : \iota \Rightarrow \iota$ be given. Let $v2_qc_lang1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_qc_lang1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k18_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_qc_lang1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k19_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k20_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_subset_1 : \iota \Rightarrow \iota$ be given. Let $k23_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k17_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let

$k4_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1 : \iota \Rightarrow \iota \Rightarrow \iota. \forall X2 : \iota \Rightarrow \iota \Rightarrow \iota. \forall X3 : \\
& \quad \iota \Rightarrow \iota. \forall X4 : \iota \Rightarrow \iota. \forall X5. \forall X6 : \iota \Rightarrow \iota. \forall X7. \\
& \quad \forall X8. ((\forall X9. (m1_subset_1 X9 (k9_qc_lang1 X8)) \Rightarrow (\forall X10. \\
& \quad (m1_subset_1 X10 X7) \Rightarrow ((X10 = X6 X9) \Leftrightarrow (\exists X11. ((v1_funct_1 \\
& \quad X11) \wedge ((v1_funct_2 X11 (k9_qc_lang1 X8) X7) \wedge (m1_subset_1 X11 (\\
& \quad k1_zfmisc_1 (k2_zfmisc_1 (k9_qc_lang1 X8) X7)))))) \wedge ((X10 = k3_funct_2 \\
& \quad (k9_qc_lang1 X8) X7 X11 X9) \wedge (\forall X12. (m1_subset_1 X12 (k9_qc_lang1 \\
& \quad X8)) \Rightarrow (\forall X13. (m1_subset_1 X13 X7) \Rightarrow (\forall X14. (m1_subset_1 \\
& \quad X14 X7) \Rightarrow (((X12 = k12_qc_lang1 X8) \Rightarrow (k3_funct_2 (k9_qc_lang1 X8) \\
& \quad X7 X11 X12 = X5)) \wedge ((v2_qc_lang1 X12 X8) \Rightarrow (k3_funct_2 (k9_qc_lang1 \\
& \quad X8) X7 X11 X12 = X4 X12)) \wedge (((v3_qc_lang1 X12 X8) \wedge (X13 = k3_funct_2 \\
& \quad (k9_qc_lang1 X8) X7 X11 (k18_qc_lang1 X8 X12))) \Rightarrow (k3_funct_2 (k9_qc_lang1 \\
& \quad X8) X7 X11 X12 = X3 X13)) \wedge (((v4_qc_lang1 X12 X8) \wedge ((X13 = k3_funct_2 \\
& \quad (k9_qc_lang1 X8) X7 X11 (k19_qc_lang1 X8 X12)) \wedge (X14 = k3_funct_2 \\
& \quad (k9_qc_lang1 X8) X7 X11 (k20_qc_lang1 X8 X12)))) \Rightarrow (k3_funct_2 (\\
& \quad k9_qc_lang1 X8) X7 X11 X12 = X2 X13 X14)) \wedge (((v5_qc_lang1 X12 X8) \wedge \\
& \quad (X13 = k3_funct_2 (k9_qc_lang1 X8) X7 X11 (k22_qc_lang1 X8 X12))) \Rightarrow \\
& \quad (k3_funct_2 (k9_qc_lang1 X8) X7 X11 X12 = X1 X12 X13)))))) \wedge \\
& \quad (v5_qc_lang1 X0 X8)) \Rightarrow (X6 X0 = X1 X0 (X6 (k22_qc_lang1 X8 X0))) \\
& \quad (1)
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_qc_lang1\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (k9_qc_lang1\ X0)) \Rightarrow (\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (k3_qc_lang1\ X0))) \Rightarrow \\
& ((X2 = k24_qc_lang1\ X0\ X1) \Leftrightarrow (\exists X3.((v1_funct_1\ X3) \wedge ((v1_funct_2\ X3\ (k9_qc_lang1\ X0)\ (k1_zfmisc_1\ (k3_qc_lang1\ X0))) \wedge (m1_subset_1\ X3\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k9_qc_lang1\ X0)\ (k1_zfmisc_1\ (k3_qc_lang1\ X0)))))) \wedge ((X2 = k3_funct_2\ (k9_qc_lang1\ X0)\ (k1_zfmisc_1\ (k3_qc_lang1\ X0))\ X3\ X1) \wedge (\forall X4.(m1_subset_1\ X4\ (k9_qc_lang1\ X0)) \Rightarrow (\forall X5.(m1_subset_1\ X5\ (k1_zfmisc_1\ (k3_qc_lang1\ X0))) \Rightarrow (\forall X6.(m1_subset_1\ X6\ (k1_zfmisc_1\ (k3_qc_lang1\ X0))) \Rightarrow (((X4 = k12_qc_lang1\ X0) \Rightarrow (k3_funct_2\ (k9_qc_lang1\ X0)\ (k1_zfmisc_1\ (k3_qc_lang1\ X0))\ X3\ X4 = k1_subset_1\ (k3_qc_lang1\ X0))) \wedge (((v2_qc_lang1\ X4\ X0) \Rightarrow (k3_funct_2\ (k9_qc_lang1\ X0)\ (k1_zfmisc_1\ (k3_qc_lang1\ X0))\ X3\ X4 = k23_qc_lang1\ X0\ (k17_qc_lang1\ X0\ X4)) \wedge (((v3_qc_lang1\ X4\ X0) \wedge (X5 = k3_funct_2\ (k9_qc_lang1\ X0)\ (k1_zfmisc_1\ (k3_qc_lang1\ X0))\ X3\ (k18_qc_lang1\ X0\ X4))) \Rightarrow (k3_funct_2\ (k9_qc_lang1\ X0)\ (k1_zfmisc_1\ (k3_qc_lang1\ X0))\ X3\ X4 = X5) \wedge (((v4_qc_lang1\ X4\ X0) \wedge ((X5 = k3_funct_2\ (k9_qc_lang1\ X0)\ (k1_zfmisc_1\ (k3_qc_lang1\ X0))\ X3\ (k19_qc_lang1\ X0\ X4)) \wedge (X6 = k3_funct_2\ (k9_qc_lang1\ X0)\ (k1_zfmisc_1\ (k3_qc_lang1\ X0))\ X3\ (k20_qc_lang1\ X0\ X4)))) \Rightarrow (k3_funct_2\ (k9_qc_lang1\ X0)\ (k1_zfmisc_1\ (k3_qc_lang1\ X0))\ X3\ X4 = k4_subset_1\ (k3_qc_lang1\ X0)\ X5\ X6) \wedge (((v5_qc_lang1\ X4\ X0) \wedge (X5 = k3_funct_2\ (k9_qc_lang1\ X0)\ (k1_zfmisc_1\ (k3_qc_lang1\ X0))\ X3\ (k22_qc_lang1\ X0\ X4))) \Rightarrow (k3_funct_2\ (k9_qc_lang1\ X0)\ (k1_zfmisc_1\ (k3_qc_lang1\ X0))\ X3\ X4 = k7_subset_1\ (k3_qc_lang1\ X0)\ X5\ (k1_tarski\ (k21_qc_lang1\ X0\ X4))))))))))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((m1_qc_lang1\ X0) \wedge (m1_subset_1\ X1\ (k9_qc_lang1\ X0))) \Rightarrow (m1_subset_1\ (k24_qc_lang1\ X0\ X1)\ (k1_zfmisc_1\ (k3_qc_lang1\ X0))) \tag{3}$$

Theorem 1

$$\forall X0.(m1_qc_lang1\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (k9_qc_lang1\ X0)) \Rightarrow ((v5_qc_lang1\ X1\ X0) \Rightarrow (k24_qc_lang1\ X0\ X1 = k7_subset_1\ (k3_qc_lang1\ X0)\ (k24_qc_lang1\ X0\ (k22_qc_lang1\ X0\ X1))\ (k1_tarski\ (k21_qc_lang1\ X0\ X1))))))$$