

t1_twoscomp
(TMYJRp15uJGZJ8LFhxW4GeA4zk39QCfMCKs)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_margrel1 : \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_twoscomp : \iota$ be given. Let $k10_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_margrel1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_twoscomp : \iota$ be given. Let $k9_margrel1 : \iota \Rightarrow \iota$ be given. Let $k4_twoscomp : \iota$ 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 $k4_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$(v1_funct_1 \ k4_twoscomp) \wedge ((v1_funct_2 \ k4_twoscomp \ (k4_finseq_2 \ np_2 \ k6_margrel1) \ k6_margrel1) \wedge (m1_subset_1 \ k4_twoscomp \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ (k4_finseq_2 \ np_2 \ k6_margrel1) \ k6_margrel1)))) \quad (1)$$

Assume the following.

$$(v1_funct_1 \ k3_twoscomp) \wedge ((v1_funct_2 \ k3_twoscomp \ (k4_finseq_2 \ np_2 \ k6_margrel1) \ k6_margrel1) \wedge (m1_subset_1 \ k3_twoscomp \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ (k4_finseq_2 \ np_2 \ k6_margrel1) \ k6_margrel1)))) \quad (2)$$

Assume the following.

$$(v1_funct_1 \ k2_twoscomp) \wedge ((v1_funct_2 \ k2_twoscomp \ (k4_finseq_2 \ np_2 \ k6_margrel1) \ k6_margrel1) \wedge (m1_subset_1 \ k2_twoscomp \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ (k4_finseq_2 \ np_2 \ k6_margrel1) \ k6_margrel1)))) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_funct_1 \ X0) \wedge ((v1_funct_2 \ X0 \ (k4_finseq_2 \ np_2 \ k6_margrel1) \ k6_margrel1) \wedge (m1_subset_1 \ X0 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ (k4_finseq_2 \ np_2 \ k6_margrel1) \ k6_margrel1)))))) \Rightarrow ((X0 = k4_twoscomp) \Leftrightarrow \\ & (\forall X1. (m1_subset_1 \ X1 \ k6_margrel1) \Rightarrow (\forall X2. (m1_subset_1 \ X2 \ k6_margrel1) \Rightarrow (k1_funct_1 \ X0 \ (k10_finseq_1 \ X1 \ X2) = k10_margrel1 \ (k9_margrel1 \ X1) \ (k9_margrel1 \ X2)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 (k4_finseq_2 np_2 \\
& k6_margrel1) k6_margrel1) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 \\
& (k4_finseq_2 np_2 k6_margrel1) k6_margrel1)))))) \Rightarrow ((X0 = k3_twoscomp) \Leftrightarrow \\
& (\forall X1.(m1_subset_1 X1 k6_margrel1) \Rightarrow (\forall X2.(m1_subset_1 \\
& X2 k6_margrel1) \Rightarrow (k1_funct_1 X0 (k10_finseq_1 X1 X2) = k10_margrel1 \\
& (k9_margrel1 X1) X2))))
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 (k4_finseq_2 np_2 \\
& k6_margrel1) k6_margrel1) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 \\
& (k4_finseq_2 np_2 k6_margrel1) k6_margrel1)))))) \Rightarrow ((X0 = k2_twoscomp) \Leftrightarrow \\
& (\forall X1.(m1_subset_1 X1 k6_margrel1) \Rightarrow (\forall X2.(m1_subset_1 \\
& X2 k6_margrel1) \Rightarrow (k1_funct_1 X0 (k10_finseq_1 X1 X2) = k10_margrel1 \\
& X1 X2))))
\end{aligned} \tag{6}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 k6_margrel1) \Rightarrow (\forall X1.(m1_subset_1 \\
& X1 k6_margrel1) \Rightarrow ((k1_funct_1 k2_twoscomp (k10_finseq_1 X0 X1) = \\
& k10_margrel1 X0 X1) \wedge ((k1_funct_1 k3_twoscomp (k10_finseq_1 X0 \\
& X1) = k10_margrel1 (k9_margrel1 X0) X1) \wedge (k1_funct_1 k4_twoscomp \\
& (k10_finseq_1 X0 X1) = k10_margrel1 (k9_margrel1 X0) (k9_margrel1 \\
& X1))))))
\end{aligned}$$