

t12_twoscomp (TMJHYLWzpZRVAZdmB- tAGA91pro7AcDdeUeG)

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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 $k17_twoscomp : \iota$ be given. Let $k11_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_margrel1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k18_twoscomp : \iota$ be given. Let $k9_margrel1 : \iota \Rightarrow \iota$ be given. Let $k19_twoscomp : \iota$ be given. Let $k20_twoscomp : \iota$ 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 $np_3 : \iota$ 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.

$$(v1_funct_1 \ k20_twoscomp) \wedge ((v1_funct_2 \ k20_twoscomp \ (k4_finseq_2 \ np_3 \ k6_margrel1) \ k6_margrel1) \wedge (m1_subset_1 \ k20_twoscomp \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ (k4_finseq_2 \ np_3 \ k6_margrel1) \ k6_margrel1)))) \quad (1)$$

Assume the following.

$$(v1_funct_1 \ k19_twoscomp) \wedge ((v1_funct_2 \ k19_twoscomp \ (k4_finseq_2 \ np_3 \ k6_margrel1) \ k6_margrel1) \wedge (m1_subset_1 \ k19_twoscomp \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ (k4_finseq_2 \ np_3 \ k6_margrel1) \ k6_margrel1)))) \quad (2)$$

Assume the following.

$$(v1_funct_1 \ k18_twoscomp) \wedge ((v1_funct_2 \ k18_twoscomp \ (k4_finseq_2 \ np_3 \ k6_margrel1) \ k6_margrel1) \wedge (m1_subset_1 \ k18_twoscomp \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ (k4_finseq_2 \ np_3 \ k6_margrel1) \ k6_margrel1)))) \quad (3)$$

Assume the following.

$$(v1_funct_1 \ k17_twoscomp) \wedge ((v1_funct_2 \ k17_twoscomp \ (k4_finseq_2 \ np_3 \ k6_margrel1) \ k6_margrel1) \wedge (m1_subset_1 \ k17_twoscomp \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ (k4_finseq_2 \ np_3 \ k6_margrel1) \ k6_margrel1)))) \quad (4)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 (k4_finseq_2 np_3 \\
& k6_margrel1) k6_margrel1) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 \\
& (k4_finseq_2 np_3 k6_margrel1) k6_margrel1)))))) \Rightarrow ((X0 = k20_twoscomp) \Leftrightarrow \\
& (\forall X1.(m1_subset_1 X1 k6_margrel1) \Rightarrow (\forall X2.(m1_subset_1 \\
& X2 k6_margrel1) \Rightarrow (\forall X3.(m1_subset_1 X3 k6_margrel1) \Rightarrow (k1_funct_1 \\
& X0 (k11_finseq_1 X1 X2 X3) = k10_margrel1 (k10_margrel1 (k9_margrel1 \\
& X1) (k9_margrel1 X2)) (k9_margrel1 X3))))))
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 (k4_finseq_2 np_3 \\
& k6_margrel1) k6_margrel1) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 \\
& (k4_finseq_2 np_3 k6_margrel1) k6_margrel1)))))) \Rightarrow ((X0 = k19_twoscomp) \Leftrightarrow \\
& (\forall X1.(m1_subset_1 X1 k6_margrel1) \Rightarrow (\forall X2.(m1_subset_1 \\
& X2 k6_margrel1) \Rightarrow (\forall X3.(m1_subset_1 X3 k6_margrel1) \Rightarrow (k1_funct_1 \\
& X0 (k11_finseq_1 X1 X2 X3) = k10_margrel1 (k10_margrel1 (k9_margrel1 \\
& X1) (k9_margrel1 X2)) X3))))))
\end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 (k4_finseq_2 np_3 \\
& k6_margrel1) k6_margrel1) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 \\
& (k4_finseq_2 np_3 k6_margrel1) k6_margrel1)))))) \Rightarrow ((X0 = k18_twoscomp) \Leftrightarrow \\
& (\forall X1.(m1_subset_1 X1 k6_margrel1) \Rightarrow (\forall X2.(m1_subset_1 \\
& X2 k6_margrel1) \Rightarrow (\forall X3.(m1_subset_1 X3 k6_margrel1) \Rightarrow (k1_funct_1 \\
& X0 (k11_finseq_1 X1 X2 X3) = k10_margrel1 (k10_margrel1 (k9_margrel1 \\
& X1) X2) X3))))))
\end{aligned} \tag{7}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 (k4_finseq_2 np_3 \\
& k6_margrel1) k6_margrel1) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 \\
& (k4_finseq_2 np_3 k6_margrel1) k6_margrel1)))))) \Rightarrow ((X0 = k17_twoscomp) \Leftrightarrow \\
& (\forall X1.(m1_subset_1 X1 k6_margrel1) \Rightarrow (\forall X2.(m1_subset_1 \\
& X2 k6_margrel1) \Rightarrow (\forall X3.(m1_subset_1 X3 k6_margrel1) \Rightarrow (k1_funct_1 \\
& X0 (k11_finseq_1 X1 X2 X3) = k10_margrel1 (k10_margrel1 X1 X2) X3))))))
\end{aligned} \tag{8}$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k6_margrel1) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 k6_margrel1) \Rightarrow (\forall X2.(m1_subset_1 X2 k6_margrel1) \Rightarrow ((\\ & k1_funct_1 k17_twoscomp (k11_finseq_1 X0 X1 X2) = k10_margrel1 \\ & (k10_margrel1 X0 X1) X2) \wedge ((k1_funct_1 k18_twoscomp (k11_finseq_1 \\ & X0 X1 X2) = k10_margrel1 (k10_margrel1 (k9_margrel1 X0) X1) X2) \wedge \\ & ((k1_funct_1 k19_twoscomp (k11_finseq_1 X0 X1 X2) = k10_margrel1 \\ & (k10_margrel1 (k9_margrel1 X0) (k9_margrel1 X1)) X2) \wedge (k1_funct_1 \\ & k20_twoscomp (k11_finseq_1 X0 X1 X2) = k10_margrel1 (k10_margrel1 \\ & (k9_margrel1 X0) (k9_margrel1 X1)) (k9_margrel1 X2)))))) \end{aligned}$$